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Ethical Issues in the Application of Medical Technology to Paediatric Intensive Care: Two Views of the Newborn

Recent advances in medical technology have led to a marked improvement in the chances of survival of sick or preterm infants, thereby stimulating renewed ethical debate on the status of the newborn. Two contradictory attitudes to the medical care of preterm or congenitally malformed newborn infants can be discerned in our pluralistic society. The two attitudes have their historical roots in the classical Graeco-Roman and Judaeo-Christian ethical traditions respectively. The former views newborn infants as of potential value only whereas the latter emphasises the intrinsic worth and dignity of the individual made in God's image. Recent secular philosophical reflection has provided a rationale for infanticide of the sick or abnormal newborn. A Christian approach to the care of the newborn prohibits intentional killing yet may encompass the withdrawal of treatment that is inappropriate or unduly burdensome. Medical care should be based upon respect for the value of the individual, protection of the defenceless from abuse or exploitation, and wise stewardship of limited health-care resources.

Keywords: Newborn, Human, Intensive Care, Ethics, Infanticide, Graeco-Roman, Judaeo-Christian.

The last two decades have witnessed dramatic advances in medical technology and nowhere has this been more obvious than in the development of intensive care for newborn babies. Progress in neonatal physiology combined with the design of highly specialised monitoring and life support equipment for babies has led to a remarkable improvement in the chances of survival of sick or preterm infants. In most developed countries the survival of extremely preterm infants born at 24–25 weeks gestation, almost four months before term and weighing just 500–700 grams, is now a commonplace occurrence in major centres. Many babies with profound and even bizarre congenital malformations, (such as exomphalos in which the bowel grows completely outside the abdomen) may be surgically treated at birth leading to healthy survival into adulthood. Of course medical miracles such as these are not bought cheaply, either in personal, social or financial terms. For parents and family there is the trauma of watching helplessly as their child struggles week after week under the burden of intensive care procedures. For UK

health care purchasers the bill is up to £1000 per baby per day, with a total price tag of £50000 upwards for each survivor. The total cost to the National Health Service of providing intensive care for very preterm infants alone was estimated in 1993 at between £42 and £70 million per annum.[1]

The very success of technological innovation has added urgency to a long-standing debate about the whole enterprise of intensive medical care for newborn babies. Should an attempt be made to salvage all babies however immature or malformed? Is it appropriate to spend ever increasing amounts of public money to ensure the survival of babies who would otherwise die shortly after birth and who may be at risk of permanent disability? Is euthanasia an acceptable alternative for malformed or unwanted babies? Is the expansion of neonatal intensive care driven by compassion for the vulnerable or by medical machismo?

Those of us who care for newborn babies are frequently aware of an uncomfortable ambivalence within society to the abnormal or preterm infant. On the one hand our society is highly sensitised towards the needs of babies and children. Charities and individuals donate hundreds of thousands of pounds to buy intensive care equipment. Prominent publicity campaigns feature dramatic pictures of babies festooned with intensive care machinery. Newspapers and television run prominent articles on the newest 'gee-whizz' medical technology as well as heart-warming human interest stories about the latest child survivor. (At the time of writing this article there was sustained national media interest at the fate of conjoint or 'Siamese' twins born in Liverpool). Parents and visitors to neonatal units are frequently moved to tears by the sight of tiny babies struggling for life and the concentration of resources and expertise devoted to their care. Behind this public interest and support there lies more than sentimentality. Babies, especially those who are sick and vulnerable, are seen in our society as infinitely precious beings, unique and defenceless individuals who are to be nurtured, cared-for and protected.

But an entirely contradictory view towards the abnormal or preterm baby is also widespread, although frequently unspoken. According to this perspective, however we may be moved by the abnormal baby's plight, we have to realise that he or she is in reality one of 'Nature's rejects', the unfortunate consequence of a complex biological process which is frighteningly fallible and prone to accidents. If Nature in her wisdom has decided that this particular baby has no viable future and should be discarded, who are we to use the panoply of modern intensive care techniques to thwart her wishes? Why waste scarce financial resources and emotional energy on this individual? Far better to ensure that the baby does not survive, and suggest to the parents that they try to have another. In my experience this attitude to the sick or abnormal newborn baby is not unusual in our society, although the implications of this view are rarely spelled out or analysed. Firstly, unlike adults or older children who require medical care, the implication is that sick or abnormal newborn babies are

1 Griffin, J. *Born Too Early*. London: Office of Health Economics (1993).

disposable. In other words there is no fundamental duty upon the rest of society to preserve their lives. Secondly, in distinction to adults who have a unique character and life-history, the sick baby has no genuine individuality or personality. 'It' cannot be regarded as a person, and so each baby may be viewed as fundamentally *replaceable*. Another infant can always be conceived to substitute for the abnormal and unwanted one. Thirdly there is the implicit acceptance of what might be termed a Darwinian biological imperative. From this perspective it is clearly desirable that only the healthy should survive in order to procreate, so that the human gene pool can be preserved and harmful genes eliminated. To believe that 'Nature knows best' is to believe that only the fittest should survive. The parents may have a 'selfish' wish to ensure the survival of their sick or abnormal baby, and this is understandable, but from a eugenic perspective it may be fundamentally against the best interests of humanity as a whole. From this perspective the whole enterprise of neonatal intensive care for abnormal or premature babies can be seen as misguided, wasteful of scarce resources and ultimately futile. It is 'against Nature',—a modern version of medical *hubris*.

In addition to advances in neonatal care, the last 20 years have seen a rapid development and application of screening techniques to detect abnormal fetuses before birth. Using newly available technology, including high resolution antenatal ultrasound scanning as well as genetic probes, a wide variety of fetal abnormalities can now be detected before birth. Even minor abnormalities, such as cleft lip and palate, extra fingers or other cosmetic defects, may be detected in major centres. But in a large number of cases the end result of early detection is not treatment but destruction. Several thousand fetuses are aborted annually in the UK because of congenital abnormalities. Some of these fetuses have major abnormalities such as anencephaly, failure of development of the cerebral hemispheres, which is incompatible with survival after birth. Some have lethal or major chromosomal abnormalities. Some have an increased risk of an inherited disorder, such as male fetuses at risk of an X-linked recessive condition. But some of these infants have abnormalities which are not lethal and may be correctable by surgery after birth.

Parents react in many different ways when they receive the tragic news that their unborn child has a congenital abnormality. For many there is a natural instinct of protection towards their unborn child and a painful conflict between the desire to protect and the desire to spare their child a life of suffering. But a minority of modern parents react more with horror than grief to the discovery that their unborn child has even a relatively minor congenital abnormality. They perceive the goal of medical care before birth as the production of a 'perfect' baby. The knowledge that their own child is less than perfect may drive them to demand an abortion. As a result a significant number of fetuses are aborted because of relatively minor congenital malformations which may be corrected by surgery after birth. And due to a recent change in the law in the UK, while many infants

who receive intensive care may survive if born at 24 weeks of gestation, it is entirely legal to perform an abortion because of a congenital malformation at any stage of development until term. The letter of the law states that an abortion may be performed after 24 weeks if there is a *substantial* risk of *serious* handicap, although because these terms are not defined, their exact interpretation varies widely and their meaning has not yet been tested in court. A recent survey of obstetricians in the UK found that over 95% would perform an abortion at beyond 20 weeks of gestation for Down's syndrome or spina bifida and the percentage who would perform an abortion beyond 24 weeks were 13% for Down's syndrome, 21% for spina bifida and 64% for anencephaly.[2] 13% also agreed to the statement that 'The state should not be expected to pay for the specialised care of a child with a severe handicap in cases where the parents had declined the offer of prenatal diagnosis'. The ethical basis of abortions beyond 24 weeks is a matter of considerable debate at the moment. Some have argued that more obstetricians should be prepared to perform late abortions for handicapping conditions because of the recent change in the law,[2] whereas an opposite view, that late abortion is only justified for conditions which are inevitably fatal, has also been forcibly stated.[3] It is clear that many obstetricians feel uneasy about agreeing to a request to perform a late abortion under these circumstances. However the widespread practice of abortion of perfectly normal fetuses for social reasons in the UK may mean that some obstetricians find it hard to refuse to perform an abortion at the parent's request when the fetus is abnormal.

Imagine the scene in two adjacent operating theatres in one of our major National Health Service hospitals. In one operating theatre a group of highly trained professionals are engaged in a sophisticated medical procedure whose sole aim is to salvage an unborn baby whose life is seen as precious and uniquely valuable. In the adjacent operating theatre there is a group of highly trained professionals who are engaged in a sophisticated medical procedure whose sole aim is the destruction of an identical baby who is seen as disposable and whose life has effectively been rejected by both parents and society. The contradictory activities in the two operating theatres may collide in an even more startling way. Suppose the fetus in the second operating theatre instead of being killed within the womb should accidentally be delivered alive. There is now a living but critically unwell baby whose life is technically protected both by law and by traditional medical ethics. Do the doctors have a duty to preserve his or her life now that the baby is delivered? Should the paediatricians from the first operating theatre be called to initiate intensive care of this baby who just moments previously was under sentence of death? How is it possible for one medical system, one body of law and one society to encompass and approve of such mutually contradictory procedures? I shall argue that in

2 Green, J. M. Obstetricians' views on prenatal diagnosis and termination of pregnancy: 1980 compared with 1993. *British Journal of Obstetrics & Gynaecology*, (1995), 102, 228–232.

3 Chervenak, F. A., McCullough, L. B., Campbell, S. Is third trimester abortion justified? *British Journal of Obstetrics & Gynaecology*, (1995), 102, 434–435.

one operating theatre the view of the newborn is derived ultimately from the Judaeo-Christian tradition, whereas in the adjacent theatre the ethical viewpoint is much closer to the ancient Graeco-Roman perspective.

Historical Perspectives

'If you don't know where you are going,' said Archbishop William Temple, 'it is sometimes helpful to know where you've come from'. Our contemporary social and professional attitudes have been irrevocably moulded by the ancient ethical and philosophical traditions on which our Western society is founded. In particular Western medical ethics has grown out of the twin roots of the Graeco-Roman tradition (seen for instance in the Hippocratic oath) and the Judaeo-Christian tradition (in the development of modern hospitals from medieval Christian communities for example). I shall aim to look at each ancient ethical tradition in turn, focusing on their attitudes to the sick or malformed newborn.

The Graeco-Roman Ethical Tradition

In many respects attitudes to babies and children within the classical Graeco-Roman world were startlingly different from our own. In a society that prized athleticism, strength and 'masculine virtues', there was a tendency for children to be despised for their weakness, dependence and immaturity. The significance and worth that society tended to place on an individual child was in proportion to his or her future contribution to society as an adult. The intentional killing of malformed or unwanted newborn babies, by exposure, strangling or drowning for instance, was a widespread practice.[4] In fact the practice was so common that one contemporary historian Polybius, writing in the second century BC, concluded that it had contributed to the serious depopulation that had occurred in Greece at the time![5] There were no laws prohibiting the killing of malformed or sick infants and even healthy newborn babies were frequently unprotected by legal statute or social custom. Infanticide was such a natural and common event that it is mentioned frequently in comedies and plays of the period.

Far from condemning infanticide the vast majority of philosophers and writers of the period supported and defended it. Both Plato and Aristotle (in company with most classical writers) accept the morality of the exposure of infants on eugenic or economic grounds. In Plato's description of the ideal state in *The Republic* infanticide is essential to maintain the quality of the citizens. 'The offspring of the inferior and any of those of the other sort who are born defective, they will properly dispose of in secret, so that no one will know what has become of them'.[6] For Plato, children were

4 Amundsen, D. W. 'Medicine and the birth of defective children, approaches of the ancient world.' in McMillan, R. C., Engelhardt, H. T., & Spicker S. F. (eds) *Euthanasia and the newborn*, Dordrecht: D. Reidel (1987) pp. 3–22.

5 Polybius, *The Histories*, 36.17.

6 Plato, *The Republic*, 460C.

valued according to their approximation to the ideal adult. They must be 'malleable, disposed to virtue and physically fit'.[7] Physical deformity or illness led almost inevitably to rejection and abandonment.

In his work *Politics* Aristotle supported a law to ensure the compulsory exposure of all malformed babies, 'As to exposing or rearing the children born let there be a law that no deformed child shall be reared'.[8] Aristotle also supported child exposure as a means of population control but advised that abortion was an alternative if 'local customs hinder any of those born being exposed'.[9] Seneca, in his treatise *On Anger*, wrote, 'Mad dogs we knock on the head; the fierce and savage ox we slay; unnatural progeny we destroy; we drown even children who at birth are weakly and abnormal. Yet it is not anger, but reason that separates the harmful from the sound'.[10]

The practical procedures for deciding which baby should live varied according to local customs. Plutarch described how in Sparta, 'each offspring was not reared at the will of the father but was taken to a place where the elders officially examined the infant and if it was well-built and sturdy, they ordered the father to rear it . . . but if it was ill-born and deformed, they sent it to a chasm-like place at the foot of Mount Taygetus, in the conviction that the life of that which nature had not well equipped at the very beginning for health and strength, was of no advantage, either to itself or to the state'.[11]

In other places it was the midwife's responsibility to examine the newborn child. Soranus, a Roman physician in the first and second centuries A.D., wrote a treatise for midwives including a passage entitled 'How to Recognise the Newborn That is Worth Rearing'. He advised that, firstly, the mother's health during pregnancy should be assessed, together with the gestational age of the infant. Subsequently the newborn baby is examined to see if 'when put on the earth it immediately cries with proper vigour' , and also to ensure that 'it is perfect in all its parts, members and senses; that its ducts, namely of the ears, nose, pharynx, urethra, anus are free from obstruction; that the natural functions of every member are neither sluggish nor weak; that the joints bend and stretch; that it has due size and shape and is properly sensitive in every respect . . . And by conditions contrary to those mentioned, the infant not worth rearing is recognised'.[12] Similar practices were recognised in other regions in the classical era.

Like infanticide, abortion appears to have been widely practised

7 Quoted in Amundsen, D. W. *op. cit.* p. 4.
8 Aristotle, *Politics*, 1335, quoted in Amundsen, D. W. *op. cit.* p. 10.
9 Quoted in *ibid* p. 10.
10 Seneca, *On Anger*, 1:15.
11 Plutarch, *Life of Lycurgus*, quoted in Amundsen, D. W. *op. cit.* p. 10.
12 Soranus, *Gynecology*, Temkin, O. (trans), Baltimore, Maryland, USA: John Hopkins University Press, (1956) pp. 79–80.

throughout the Graeco-Roman world.[13,14] Professional abortionists existed in many societies, using herbs, surgical instruments or abdominal manipulation, to practise their trade. Not all the classical philosophers and writers approved of the widespread practices of infanticide and abortion. The Stoic philosopher Epictetus criticised the exposure of children saying that even a sheep or a wolf does not abandon its own offspring.[15] The Hippocratic oath prohibited the use of a pessary to procure an abortion but several other texts within the group of Hippocratic writings report with apparent approval a variety of methods, including drugs, for procuring an abortion.[16] The overwhelming witness of the classical Graeco-Roman period is that both infanticide and abortion were reasonable, rational and socially responsible reactions to the presence of a baby who was malformed, sickly or merely unwanted.

What were the fundamental beliefs and assumptions that lay behind this acceptance of infanticide? First was the belief that the value of an individual human life was not inherent but was acquired after birth. No child had an intrinsic right to life after birth. Secondly it was assumed that the value of a life depended upon official acceptance as a member of society and upon the ability to make a worthwhile contribution. Thus the value of the fetus or the newborn resided entirely in their *potential* to make a future contribution to society. Failure to make a contribution to society rendered one worthless. Third was the generally accepted belief that health and physical wholeness were essential to human dignity. In a culture that gloried in the 'masculine virtues', the weak, the disabled and the malformed were always likely to be seen as less than fully human.

Within the context of these fundamental beliefs it is clear that the value of the life of the unwanted fetus or the malformed or weak newborn was severely limited. In such cases abortion or infanticide was not only permissible but positively desirable. It appears that the morality of the killing of sickly or deformed newborns appears not to have been questioned. It is also understandable that the care of sick or defective newborns was of no concern to the medical profession and that the physicians of that period concentrated their efforts on the adults whose lives were of greater value and significance.

The Judaeo-Christian World

a) The Old Testament Period

The Jewish world of the same period had a radically different attitude to the newborn infant. This stemmed from the Torah which taught unequivocally that all human beings bore the divine stamp, the *imago Dei*

13 Gorman, M. J. *Abortion and the Early Church*, Illinois, USA: InterVarsity Press, (1982) pp. 1–32.
14 Riddle, J. M., *Contraception and abortion from the ancient world to the Renaissance*, (1992) Cambridge, Mass: Harvard University Press.
15 Epictetus, *Discourses*, quoted in Amundsen D.W. *op. cit.* p. 8.
16 Nutton, V., 'What's in an oath?', *Journal of Royal College of Physicians of London*, (1995), 29, 518–524.

(Genesis 1:27). Thus every human being, whether newborn or adult, deformed or healthy, slave or free, had an *intrinsic* value as a unique expression of God's image. The deliberate destruction of any human life was an affront to the dignity of Yahweh, as the ancient prohibition of murder, the *lex talionis*, enshrined in Genesis 9:6 stated, 'Whoever sheds the blood of man, by man shall his blood be shed, for God made man in his own image.' Thus the Jewish belief in the absolute sanctity of human life arose from the central concept of the *imago Dei*.[17] The Mishnah, which enshrined traditional rabbinic teaching, declared that God created but a single man in order to teach mankind that 'whoever destroys a single individual God imputes it on him as if he had destroyed the entire world, and whoever saves the life of a single individual God imputes it on him as if he had saved the entire world'.[18]

In ancient Jewish thought the high value attached to human life extended to the fetus which was regarded as the creation of Yahweh, who formed it for his own purpose, as in Psalm 139, 'You created my inmost being, you knit me together in my mother's womb . . . your eyes saw my unformed body' (Psalm 139: 13–16). Nonetheless the protection afforded to the fetus was not absolute. The rabbis taught that the fetus could be destroyed before birth if it was necessary to save the life of the mother.[19] But from the moment of birth, once the head had emerged from the body of the mother, the baby was regarded as a full member of society with the same rights and protection as any fully-grown person.

The second major element in Jewish attitudes to the newborn was the repeated injunction within the Scriptures of the need to protect the defenceless within society. Yahweh was revealed as the mighty God who 'defends the cause of the fatherless and the widow, and loves the alien, giving him food and clothing' (Deut 10:17). The Torah contained many statutes which defended the rights of the weak, the poor, the blind, the deaf, widows, orphans and even foreigners who were outside the covenant community. It was because these groups were vulnerable, and therefore at risk of being despised and abused by the strong and unscrupulous, that God declared himself their Defender and commanded that special provision should be made for them within Israel's society. Far from despising weakness and vulnerability, the Jewish law singles out these characteristics as being the hallmark of those that Yahweh is particularly concerned to protect. Although the Torah does not contain many specific references to babies, there is no doubt that the newborn infant was seen as one of those especially vulnerable whom God was concerned to protect from abuse.

The pagan ritual of sacrificing children was explicitly condemned in the Torah (Deut 18:10). The practice of infant exposure was, not surprisingly,

17 See Ferngren, G. F., 'The Imago Dei and the sanctity of life' in McMillan, R. C., Engelhardt, H. T., & Spicker S. F. (eds) *Euthanasia and the newborn*, Dordrecht: D. Reidel (1987) pp. 23–45.
18 Quoted in *ibid* p. 27.
19 Mishna, Oholot 7:6, quoted in Ferngren, G. F., *op. cit.* p. 28.

viewed with abhorrence within Israel, yet it was a sufficiently common practice in the surrounding nations to be referred to by the prophets. In Ezekiel 16 the abandonment of the nation of Israel by God is graphically compared to a newborn baby 'thrown out into the open field, for on the day you were born you were despised', and as lying on the ground 'kicking about in your blood'. Philo, a well known Jewish apologist, writing at the time of Christ, confirmed the orthodox Jewish view of child exposure when he stated that 'infanticide undoubtedly is murder, since the displeasure of the law is not concerned with ages but with a breach to the human race'.[20]

The Roman historian Tacitus, who frequently commented in his writings on the strange and exotic practices of foreigners, felt that the unusual attitude of the Jews to newborn infants was worthy of comment. He wrote, with an unmistakable air of astonishment, that infant exposure was unknown among Jews; in fact 'they regard it as a crime to kill any recently-born child'.[21]

b) The Attitude of Jesus and the New Testament Christian Church

Jesus affirmed the Old Testament view of the significance of young children and in some senses he took a more radical position. Living in our modern child-orientated society we find it hard to appreciate just how revolutionary was Jesus' teaching that unless you become like a little child you cannot enter the kingdom of God (Matthew 18:1–4). The 'welcoming' of a little child in Jesus' name was equivalent to welcoming Christ himself and the Father who sent him (Matt 18:5, Mark 9:36,37). On the other hand those who caused a little child to 'stumble' would be punished with great severity (Matt 18:6). Unlike the religious teachers of the day, Jesus clearly emphasised the importance of children and it is obvious that he had a special affection for them. He rebuked his disciples for preventing children from coming to be blessed by him and went out of his way to make time for them (Matt 19:13–16, Mark 10:13–16).

The concept of the *imago Dei* was reinforced and strengthened in the New Testament doctrine of the Incarnation. Christ was seen as the supreme and perfect representation of God, in whom the fullness of the Godhead dwelt in human form (Col. 1:15–20). The practical implications of the Incarnation were inescapable for the early Christian church. This was spelt out in the *Clementine Homilies* written in the second century after Christ. 'He who wishes to be pious towards God does good to man, because the body of man bears the image of God . . . Therefore it behoves you to give honour to the image of God, which is man—in this wise: food to the hungry, drink to the thirsty, clothing to the naked, care to the sick, shelter to the stranger, and visiting him who is in prison, to help him as you can'.[22]

Christ's example of self-sacrificial love became the model for Christian behaviour. Love of God and devotion to Christ provided the motivation for

20 Philo, quoted in Ferngren, G. F., *op. cit.* p. 28.
21 Tacitus, *Histories* 5.5.
22 Clement of Alexandria, *Homilies*, quoted in Ferngren, G. F., *op. cit.* p. 33.

self-giving and practical care of the needy. From its inception the Christian church collected funds for distribution to the poor and the sick and appointed deacons to supervise their care (Acts 6:1–6). The early Church Fathers frequently emphasised the importance of visiting the sick and the poor, and they uncompromisingly attacked the contemporary Graeco-Roman morality with its acceptance of the elimination of unwanted human life and its cruelty to the weak and despised. Early Christians showed special concern for the protection of fetal and newborn life and they condemned both abortion and infanticide in the strongest terms. Whereas the Romans drew a distinction between abortion and infanticide, early Christians tended to speak of them both as 'parricide'. In the Roman world 'parricide' was the name given to the killing of a parent or close relative and it was regarded as the most shocking, because it was the most unnatural of crimes. It is significant that Christians applied this scandalous term to both abortion and infanticide, equating the destruction of an unwanted newborn child to the murder of a parent.

The rescue and care of orphans and foundlings was regarded by early Christians as a particular Christian duty, since it involved in many cases saving those babies who had been exposed by their parents. As the attitude of Christians became more widely known, babies were often abandoned by their parents at the doors of churches where it was hoped that they would be cared for. Personal adoption of foundlings was common among Christian families but as the numbers were large, Christian orphanages were established for their care. As Christianity took over as the official religion of the Roman Empire, following the conversion of Constantine in AD 313, it is fascinating to see the change in the State's attitudes to the newborn.[23] In 318 Constantine made it a punishable offence for a father to kill his child and in 331 he decreed that those who raised exposed children could legally adopt them. In 374 infanticide and infant exposure were made punishable by law and every parent was required to care for their own offspring. Subsequently Justinian extended the protection of newborns by prohibiting their subjection to any form of servitude by those who rescued them. Christian hospitals began to be established towards the end of the fourth century AD and many of the hospitals had a section (called the Brephotropheion) specifically set apart for foundlings.

Christian reflection on the newborn was extended by Augustine in his treatise *Contra Iulianum*.[24] According to Augustine, all infants, even those with deformities, are God's creation. Birth malformations were evidence of the fallen creation. Deformities can be transmitted from parents to children, for God in creating persons does not act contrary to the laws that he has established in human generation. Even though a child is born feeble minded because of an accidental defect he is nevertheless created a man by

23 Ferngren, G. F., 'The status of defective newborns from late antiquity to the Reformation.' in McMillan, R. C., Engelhardt, H. T., & Spicker S. F. (eds) *Euthanasia and the newborn*, Dordrecht: D. Reidel (1987) pp. 47–64.

24 Augustine, *Contra Iulianum*, quoted by Ferngren, G.F. *op. cit.* p. 52.

the work of God. Augustine believed that those with birth defects would be raised up on the last day with perfect bodies that will replace their malformed ones. Augustine's teaching is clearly a restatement of the Judaeo-Christian belief that the value of every newborn, even the severely malformed individual, is *intrinsic*

The Modern Era—the Secular Pluralistic Society

Modern Western societies are both secular and pluralistic. They encompass many traditions and influences. Yet both our legal and ethical systems are heavily influenced by the twin major sources of Western civilisation, the Graeco-Roman and the Judaeo-Christian. The condemnation of infanticide, which has been a feature of all Western nations, is Judaeo-Christian in origin. In our own legal system, the murder of a helpless newborn baby only a few minutes old, would be viewed with equal seriousness as the murder of a leading politician for instance, a concept which would be completely incomprehensible to a Roman or Greek of the classical era. Here the belief in the intrinsic value of the newborn is clearly expressed. Similarly the development of sophisticated medical services for newborn infants depends on the belief that each individual baby has unique and irreplaceable significance and is clearly consistent with the Judaeo-Christian perspective.

Yet the widespread practice of medical abortion, especially the destruction of fetuses who are potentially viable, represents a quite different ethical tradition, with its historical roots in the Graeco-Roman world. The fetus is viewed merely as a *potential* member of society who may be disposed of if unwanted or malformed. If the fetus close to birth may be legally destroyed, the logical extension of this viewpoint is to allow intentional killing of the newborn who is malformed, sickly or brain-damaged. Although in the early Christian era abortion and infanticide were viewed as virtually identical, our present law has made the two quite separate in their legal implications. Many have commented on the fundamental absurdity of the current law and it is hardly surprising that in the last decade or so several influential writers have challenged the concept that the newborn's life should be regarded as inviolable.

Infanticide as a Modern Ethical Option

The modern arguments in favour of infanticide are based principally on a redefinition of personhood. In traditional Western thought personhood was intrinsic to membership of the human race. But several modern philosophers have argued that personhood, along with its social rights and obligations, should only be attributed if a number of criteria are met. Central to these is self-awareness. The philosopher Michael Tooley, for example, has suggested that the ability to see oneself as existing over time or as 'a continuing self', is a necessary condition of possessing a right to life. To kill a being who has no concept of self has quite different moral and ethical

implications from killing a self-aware person.[25] Peter Singer, the influential Professor of Philosophy at Monash University, Australia accepts Tooley's position and draws out the implicaitions. 'It is obvious that on Tooley's definition, personhood is not identical with membership of the species *Homo sapiens*. Neither human fetuses nor newborn infants nor humans with very severe retardation or brain damage could be viewed as persons. On the other hand chimpanzees might be and so might some other non-human animals'.[26]

Singer argues trenchantly that personhood does not commence until some stage in early childhood. 'When I think of myself as the person I now am, I realise that I did not come into existence until some time after my birth'.[27] A newborn can only be viewed as a *potential* person and because of this no newborn infant has an absolute right to life. 'The decision to kill a newborn infant is no more—and no less—the prevention of the existence of an additional person than is a decision not to reproduce'.[28] Singer argues strongly for a policy of legalised infanticide in the case where babies are malformed or unwanted by their parents. Against the criticism that this policy would undermine the legal protection of all human life he replies, 'Infanticide carried out by parents or with their consent poses no threat to anyone in the community who can understand what is happening ... Infanticide threatens none of us for once we are aware of it we are not infants'.[29]

Other influential writers have supported the legalisation of infanticide where there is severe congenital malformation or brain damage. Professor John Harris of Manchester University has argued that active euthanasia of severely malformed newborn infants is morally preferable to the withdrawal of treatment[30] and Jonathan Glover, a moral philosopher at Oxford University, has similarly argued for the legalisation of malformed babies who are rejected by their parents. 'Where the handicap is sufficiently serious, the killing of a baby may benefit the family to an extent that is sufficient to outweigh the unpleasantness of the killing . . .'.[31] Like Glover, other modern writers have stressed the adverse effects on a family of the survival of a handicapped infant. In particular they point out that parents are much less likely to have further children if they have a handicapped child to care for. As a result potentially normal future children are not conceived. Conversely if the handicapped child is killed at birth, the parents are more likely to conceive again leading to the birth of a normal child who can act as a 'replacement' for the handicapped one.[32] From a

25 Tooley, M. *Abortion and infanticide*. Oxford: Clarendon Press, (1983).
26 Kuhse, H. & Singer, P. *Should the baby live?* Oxford: Oxford University Press, (1985) pp. 129–139.
27 *ibid.*, p. 133.
28 *ibid.*, p. 134.
29 *ibid.*, p. 138.
30 Harris, J. *The Value of Life* London: Routledge & Keegan Paul, (1985) pp. 28–47.
31 Glover, J. *Causing Death and Saving Lives* London: Penguin Books, (1977) pp. 164.
32 See, for example, Kuhse, H. & Singer, P. *op. cit.* pp 155–161.

utilitarian perspective infanticide of an abnormal infant is desirable, especially if it will be 'replaced' by a subsequent normal individual. Several writers have pointed out the absurdity of accepting a liberal abortion policy and yet providing absolute protection from the moment of birth, and have used the general public's acceptance of abortion to argue for a change in legislation regarding the medical termination of the life of a newborn child.[33]

It can be argued that Singer, Harris and Glover are propounding an ethical position which has many features in common with the classical Graeco-Roman tradition, although there are of course substantial differences in the basic presuppositions from which they start. Both the fetus and the newborn are regarded as having potential value but this is severely diminished if there is malformation or if the child is unwanted by the parents. The intentional destruction of a newborn life cannot be seen as morally or practically equivalent to the killing of a self-aware and autonomous adult. Infanticide with proper legal controls is not a barbaric primitive practice but a rational and reasonable response to a distressing dilemma. Conversely, the expenditure of substantial resources in intensive medical care to ensure the survival of a malformed or unwanted child may be seen as irrational and inappropriate.

It would be misleading to suggest that all or even the majority of modern philosophers or ethicists would give whole-hearted support to the positions of Singer, Harris and Glover. They represent an influential but extreme position within the spectrum of attitudes represented within the academic community. Others have argued forcibly that the deliberate destruction of the viable fetus or newborn infant represents a violation of the duty of beneficence which doctors owe to their patients and the justice-based obligation on society to look after its disabled and to maximise their potential so that they can live fulfilling lives.[34] Nonetheless it seems to me that the positions of Singer, Harris and Glover are logically consistent with their basic philosophical presuppositions, and demonstrate the logical implications of a rigorous utilitarian approach. The ongoing debate is not so much about logical consistency as about fundamental presuppositions.[35]

Attitudes of Parents

By contrast I am frequently struck by the depth and intensity of the emotional involvement of parents when confronted with their own newborn infant who is struggling for life in an intensive care unit. Perhaps not surprisingly, the emotional response of parents to their *visible* newborn baby is very different from that to their *invisible* fetus. It seems that the very fragility and dependence of the sick or malformed newborn infant, far from weakening the degree of involvement, increases the emotional bond

33 Kuhse, H. & Singer, *op .cit.* p 137.
34 Chervenak, F. A., McCullough, L. B., Campbell, S., *op. cit.*
35 Long, T. A. Infanticide for handicapped infants: sometimes it's a metaphysical dispute. *Journal of medical ethics*, (1988), 14, 79–81.

between parent and child. Parents of sick babies attach great importance to naming and establishing their unique identity. The loving physical contact with their babies, the hours they willingly spend at the cotside in the intensive care unit and the depth of the emotions of joy mingled with anxiety and sadness all indicate that parents view their own newborn infant as a unique and precious individual with their own life history and significance. Although understandably concerned about the possibility of permanent damage and the restriction of future potential, parents react with anger to any suggestion that their sick or preterm newborn can be viewed as disposable or replaceable. Although parents will frequently talk about the possibility of having a future child, they rarely, if ever, view that subsequent child as a *replacement*. A unique individual can never be replaced. Thus it seems that, in our society at least, most parents' intuitions are much closer to the Judaeo-Christian ethical tradition than the Graeco-Roman or its modern utilitarian counterpart.

A Christian Approach to Ethical Dilemmas in the Care of the Newborn

I have argued here, and elsewhere,[36] that the development of modern technological neonatal intensive care is consistent with the traditional Judaeo-Christian concern for the newborn. However this does not mean that intensive care can be applied without thought or ethical reflection. The fact that a particular medical technology exists does not imply that it should be used in every individual case. The thoughtless use of intensive support techniques where there is little or no prospect of cure may lead to unnecessary suffering and injustice, as well as inappropriate use of scarce resources in the name of medical care. Medical technology can become an abusive evil as well as a life-enhancing resource. So what Christian principles can be applied to aid ethical reflection in the medical care of the newborn? I want to suggest three fundamental principles: firstly, respect for the image of God, secondly, protection for the defenceless, and thirdly stewardship of limited resources.

1) Respect for the Image of God

At the heart of the Christian perspective is respect for the dignity of every unique individual made in God's image. Human beings are God-like beings and this image, albeit marred and distorted, is present in every newborn infant however malformed. From a Christian viewpoint each of us is less than perfect, a marred and flawed image of God's unseen reality, and thus we should respond to those affected by congenital malformations with solidarity and care rather than with rejection. As a paediatrician I am frequently moved by the realisation that Jesus too was once a vulnerable and defenceless baby, like those I have the privilege to care for. I am called to treat each of my patients with the same sense of wonder and respect that

36 Wyatt, J. S. & Spencer, A. *Survival of the Weakest* London: Christian Medical Fellowship, (1992).

moved Joseph and Mary in that stable in Bethlehem. The consistent witness of the orthodox Judaeo-Christian tradition is that respect for the image of God prohibits the deliberate destruction of human life, however malformed or diseased. Yet respect for the dignity and value of each newborn baby also forces us to acknowledge that medical treatment that is unduly burdensome, or which carries little prospect of success, may be inappropriate. If it is apparent that there is no hope of meaningful long-term survival and that intensive support is merely prolonging the process of dying, withdrawal of support, following full discussion and with the agreement of the parents, is most consistent with a genuine respect for the dignity of the individual. The diagnosis that the infant is 'actively dying' is fundamentally a clinical one, based upon progressive and irreversible deterioration of major organ systems, especially cardiovascular and neurological decompensation. The withdrawal of intensive support techniques does not however mean the withdrawal of all care. I believe that every infant deserves food and water, pain relief, and 'tender loving care' as the minimum level of care which is consistent with respect for dignity of the individual made in God's image.

2) Protection of the Defenceless

Newborn infants are probably the most defenceless and vulnerable members of our human community and from a Christian perspective there is a clear duty for the rest of us to protect them from abuse and exploitation. Instead of a eugenic concern that only the fittest should become members of society, we should be concerned to ensure the survival and the protection of those who are the most vulnerable. The risk of exploitation can come from parents and relatives who may put their own interests above those of their child, from doctors or managers who may wish to use their patients to increase power or academic status, or from health care purchasers who wish to redirect funds to other patient groups because of political expediency or utilitarian conviction. Our duty as Christians is to act as advocates on behalf of all the weak in our society, to ensure that their voice is heard and their interests are preserved. Of course our concern for the care of the newborn must be matched by a *practical* concern for the plight of the disabled within our society, an area of practical caring in the community on which I believe the Christian churches could place far more emphasis.

3) Stewardship of Resources

A concern for the wise distribution of limited resources is integral to the biblical view of the role of human beings within the creation. Thus hard decisions on the allocation of health-care resources between competing patient groups cannot be avoided by a utopian idealism. However those decisions should be consistent with Christian presuppositions rather than a crude secular utilitarianism. From a Christian perspective I would suggest that health-care priorities should place the care of the weak before the strong, effective treatments before ineffective, and life-preserving

interventions before minor or cosmetic ones. If resources are severely limited, as in many developing countries, it may be inappropriate to attempt to save a small number of very sick or malformed individuals at the expense of a larger number who would benefit to a greater extent. But in developed countries, resources are potentially available to provide intensive care for all the vulnerable members of our society who can benefit from it. The apparent scarcity of health care facilities in many Western countries is probably related more to political and economic decisions about the total level of health care funding rather than to a genuine lack of economic wealth. It is noticeable that in the current climate there is a continuing public debate about rationing and priorities in the use of limited health care resources, but there is virtually no debate about the overall level of spending on health-care in relation to the total economic activity of the country. In other words the debate concentrates on how to slice the health-care cake between different demands, whereas more emphasis needs to be placed on the size of the cake itself. Our responsibility is to persuade governments and health care managers that a Christian concern for the weak needs to be supported by adequate financial provision.

The Use of Technology in Ethical Decision-making in Neonatal Medicine

Increasingly, new techniques for noninvasive investigation of the brain allow the reliable detection of brain injury and abnormality in the critical few hours and days after delivery. These techniques include cranial ultrasound, which may be performed at the bedside allowing good images of the brain to be obtained through the anterior fontanelle, magnetic resonance imaging and spectroscopy, and near infrared spectroscopy.[37,38] It is therefore currently possible to obtain information about the nature of any brain injury and its likely long-term consequences for the individual. With further technical developments it is likely that the accuracy of the prediction of long-term neurodevelopmental outcome will continue to improve. How should this information be employed in making decisions about the appropriateness of intensive care for the sick newborn?

It seems to me that in assessing the consequences of brain injury or abnormality the critical issue is not the degree of physical handicap which may result but the likely capacity to enter meaningfully into relationships —with family and friends, with the community, and ultimately with God himself. Richard McCormick argues that 'in Judaeo-Christian perspective, the meaning, substance, and consummation of life are found in human relationships, and the qualities of justice, respect, concern, compassion, and support that surround them'.[39]

37 Wyatt, J. S. Noninvasive assessment of cerebral oxidative metabolism in the human newborn. *Journal of Royal College of Physicians of London* (1994), 28, 126–132.
38 Levene M. I. & Lilford, J. L. (eds) Functional assessment of the developing brain in *Fetal and Neonatal Neurology and Neurosurgery* Edinburgh: Churchill Livingstone (1995), 29–189.
39 McCormick R. A. quoted in Higginson R, 'Life, death and the handicapped newborn: a review of the ethical issues'. *Ethics & Medicine*, (1987), 3, 45–48.

Therefore brain injury which causes impaired mobility or loss of visual or auditory function, but in which sufficient brain function is retained for some capacity for loving human relationships, does not constitute in my view adequate justification for the withdrawal of intensive care. On the other hand, brain injury of such severity that no capacity for meaningful relationships is apparently possible might be regarded as reducing human life to mere biological survival. While the presence of such brain injury would not prevent the infant from being regarded still as a human being worthy of respect and dignity, it does raise questions about the appropriateness of prolonging survival by intensive medical and technological support. In other words it is open to question whether the burden to the individual of intensive care outweighs the benefit that such treatment can bring. If it is possible to detect such severe brain injury while an infant is undergoing intensive care and is dependent on artificial life support techniques, in my view it may be justifiable to withdraw intensive support with the realisation that death will almost inevitably follow.

In practice, these criteria would imply brain injury of sufficient severity to cause global destruction of cortical and subcortical structures in both cerebral hemispheres. This degree of brain destruction may occur in severe bilateral haemorrhagic or ischaemic lesions such as bilateral intraparenchymal haemorrhagic infarction or generalised cystic periventricular leukomalacia. In a similar category come brain malformations involving a generalised failure of development of the cortex or subcortical connections. Most of these lesions may be detected with a high degree of accuracy by cranial ultrasound or magnetic resonance imaging in the first few days of life. Unfortunately some forms of perinatal ischaemic brain injury may not be detected by ultrasound until 2 weeks or more after they have occurred, but new forms of magnetic resonance imaging or, in future, near infrared spectroscopic imaging may allow the reliable detection of ischaemic injury to the brain at an earlier stage.

Thus technical advances in the investigation of the newborn brain are allowing the nature and severity of brain injury to be defined with an increasing degree of accuracy. Of course these techniques do not solve the painful ethical dilemmas concerning the appropriateness of intensive care for a malformed or critically sick newborn, but they provide objective information which can be discussed in detail with the parents and with other concerned individuals, and on which ethical decisions about intensive care can be based. In this way respect for the dignity and worth of the individual baby, and concern for their best interests, can be translated into practical decisions about medical care.

Conclusion

I have argued that the striking ambivalence towards the newborn infant and unborn child within our modern pluralistic society has historical roots in the contradictory attitudes of the Graeco-Roman and Judaeo-Christian

ethical traditions. As the secularisation of our society continues, the concept of the sanctity of human life, which is based on a theological doctrine about the image of God, is progressively weakened. It seems to me that an essential responsibility of the Christian community is to express and apply the concept of the sanctity of human life in a way that is both comprehensible to secular people and relevant to developed technological health-care systems. As Gary Ferngren, a historian at Oregon State University, has put it, 'one may doubt that the idea of the sanctity of life in its traditional form can continue to exist divorced from the theological concept of the *Imago Dei*. It is likely that it will maintain its influence in a pluralistic age like our own only so long as the Judaeo-Christian tradition that gave it birth continues to be a living force that is capable of relating in a meaningful way its belief in the transcendent value of all human life to contemporary issues in bio-medical ethics'.[40]

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40 Ferngren, G. F., *op. cit.* p. 42.