Fetal rights

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When I was in the Royal Navy during the last War we were always told that we had no rights to insist on, only privileges to be earned. Nowadays, rightly or wrongly, it is generally accepted the world over that everyone has rights: the right to life, to liberty, and to the pursuit of happiness. What then of the human fetus? As far as happiness is concerned I suppose we can never know for sure whether a fetus is, or indeed can be, happy or unhappy. Nevertheless those who through the ages have pondered our existence in the womb, whether poets or philosophers, saints or scientists, have usually regarded intrauterine life as a little paradise and the expulsion at birth into the outer world as a trauma or even a tragedy. As Wordsworth put it:

‘Our birth is but a sleep and a forgetting:
The Soul that rises with us, our life’s Star, Hath had elsewhere its setting, And cometh from afar: Not in entire forgetfulness, And not in utter nakedness, But trailing clouds of glory do we come From God, who is our home’.

Similar ideas were also expressed by the English metaphysical poets of the 17th century. One of these, Thomas Traherne, an unpretentious country parson, long before the controversies of the 19th century about the relative importance of heredity and environment in the shaping of the individual, had come to the conclusion that ‘our misery proceedeth ten thousand times more from the outward bondage of opinion and custom than from any inward corruption or depravation of nature; it is not our parents’ loins’, he declared, ’so much as our parents’ lives that enthral and binds us. The pure and virginal apprehensions and the divine light wherewith I was born, are the best unto this day wherein I can see the Universe. By the gift of God they attended me into this world and by His special favour I remember them from now . . .’. Few of us I fear have been vouchsafed Traherne’s special favour. Perhaps just as well! — for although most antenatal experiences may well be pleasant, birth itself is hardly likely to be so. In the late 19th century this intrauterine paradise of the poets and mystics was invaded and shared by somewhat improbable partners when Sigmund Freud and his school of psychoanalysts used the concept of an intrauterine paradise lost to explain the whole wide variety of human neuroses. For them, anxiety first afflicts the individual during the process of birth, partly as the result of its attendant physical hurts and discomforts and partly in consequence of the concomitant
change from a highly pleasurable environment in the womb to an extremely uncomfortable one in the cold, noisy, odorous, boisterous, often painful outside world. They taught that this birth-provoked anxiety was the first content of perception — the first physical act, so to speak, and throughout life, just as this birth-malaise underlies every subconscious fear, so every pleasure anticipates the re-establishment of the intrauterine primary pleasure, the return to that dark unconsciously remembered place of comfort and peace where, in the words of another cleric-poet, the Jesuit Gerald Manley Hopkins:

'... no storms come,
   Where the green swell in the havens dumb
   And out of the swing of the sea'.

It may be that we obstetricians sometimes aggravate this natal suffering with our oxytocin and our prostaglandin, our forceps and our scalpels; and recent suggestions that babies would be happier and healthier if born spontaneously into warm water may have some scientific or at any rate some psychological basis after all.

With regard to freedom from the womb I suppose no one in his right mind and not seduced by a serpent would want to leave or be liberated from paradise. But unfortunately the womb is not always paradise and can become a death trap. All obstetricians and perinatologists would certainly take this view and at least one poet regarded the womb as a prison.

No doubt John Donne was influenced by his own unhappy circumstances at the time. Early in 1631 the ill-starred Charles I was still on the throne and Donne, then Dean of St Paul’s, was in rapidly failing health. On February 12th at the beginning of the penitential season of Lent he was terminally ill and barely able to drag himself up to Whitehall to preach before the King’s Majesty the famous sermon soon to be published posthumously as ‘Death’s Duell’. He died shortly afterwards and is commemorated in St Paul’s Cathedral by a macabre statue depicting him wrapped in a winding sheet standing on a funeral urn, with his eyes closed, his cheeks fallen in, his nose sharp as a pen. In his last sombre sermon Donne spoke of birth as an ‘exitus a morte, an issue from death’. ‘For’ said he ‘we have a winding sheet in our mother’s womb, which grows with us from our conception, and we come into the world wound up in that winding sheet for we come to seek our grave’.

There is no doubt that in obstetrics the fetus for its own good must not infrequently be released, freed prematurely from the potentially lethal environment of the uterus, e.g. in placental failure or antepartum haemorrhage. Over the past 20 years there have been notable changes in the technique and incidence of induction of labour. The use of castor oil or quinine has been superseded by synthetic oxytocin and prostaglandins which are much pleasanter and much more effective. Older methods, involving the insertion through the cervix of foreign bodies like seaweed tents and rubber tubes, which relied largely if not intentionally on infection for their efficiency have been replaced by simple anterior amniotomy. And today induction-delivery times are measured in hours, not days. Infections are rare and caesarean section when necessary can succeed safely where induction has failed.

Apart from improvements in methodology there has been a remarkable ebb and flow in the volume of active interference in late pregnancy. As with most forms of therapy, fashion has played a considerable part in the use of induction of labour,
especially in the gray areas of obstetric practice. No one has any doubts today of the wisdom of premature delivery in placenta praevia with a mature fetus. And few would dispute the use of premature termination of pregnancy in severe pre-eclampsia or diabetes. With prolonged pregnancy perhaps there is less consensus. Even more controversial is induction of labour for mere convenience whether of the patient or her accoucheur. Of recent years, high rates of induction, especially for such reasons of convenience, have raised howls of protest from consumer associations aided and abetted by the media in search of a good controversy.

I must confess that during my active obstetric life I always leaned towards action rather than inaction, having grown up at a time when it seemed to me that too often the obstetrician was over-anxious to be seen to be doing the right thing. If something had to go wrong, let it be Nature's doing, not mine, was his prayer! But of course there are sins in obstetrics as in life generally of omission as well as of commission. Unfortunately the latter are more likely to attract social and legal censure than the former. It is what we do wrongly, rather than what wrongly we leave undone, that we are blamed for.

In 1963 the induction rate at the Royal Maternity Hospital (Fig. 1) was just over 30% associated with a total fetal wastage of nearly 7½% including IUDs and abortions at all stages of pregnancy. By 1970 the induction rate had reached an all-time high of nearly 60% whilst the fetal wastage had fallen to under 3½%. In other words, although the induction rate had nearly doubled, the total fetal loss had more than halved. Figures like this persuaded me at the time that our high induction rate was not only tolerable but even desirable, at least as far as obstetric indications were concerned.

There had meanwhile appeared in some areas of British obstetric practice a tendency to induce labour as a matter of convenience for patient or obstetrician

**FIG. 1**

| Year | Incidence | Fetal Loss |
|------|-----------|------------|
| 1963 | 30%       | 5%         |
| 1967 | 40%       | 10%        |
| 1970 | 50%       | 15%        |
| 1973 | 60%       | 20%        |
| 1976 | 50%       | 15%        |
| 1979 | 40%       | 10%        |
| 1982 | 30%       | 5%         |

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or both. So far as I know, no definite harm had been shown often to have come of this, although the possibility of mistaken fetal maturity always existed and gave reason for pause to more cautious minds. Here in Northern Ireland the 'Troubles' beginning in 1968 and the civil strife occurring thereafter in Belfast, especially in the areas from which the RMH derived many of its patients, resulted in an environment unique in European obstetric practice in which unparalleled risks had to be faced if patients needed to be admitted urgently. We had lost one unfortunate mother with antepartum haemorrhage who insisted on going home and subsequently bled; whereupon local rioting prevented the ambulance from reaching her in time. We felt justified therefore in attempting to assess a technique which we called selective planned induction of labour, i.e. induction in normal patients after 38 weeks by which worried mothers were not hospitalised and separated from their families any longer than was absolutely necessary. Experience showed that fetal disaster due to unexpected prematurity was rare, but could be avoided with certainty only by the meticulous application of selective criteria, which unfortunately very significantly reduced the number of acceptable patients. However, provided these criteria were adhered to, no significant fetal or maternal harm ensued.

Probably our most important finding was the small proportion — only 16% — of patients who were suitable for selective planned induction if the necessarily strict criteria were adhered to. The reaction of the patients concerned is also interesting. It seems that each group liked what it got. Was it Lewis Carroll who said somewhere 'if you like what you get, you get what you like'? Certainly when asked before leaving hospital after their recovery 60% of the SPI (selective planned induction) group said they preferred induction, whilst 66% of the controls declared that they preferred spontaneous labour!

Since the time of this study some seven years have passed; local conditions have improved and obstetric fashions have changed, including the popularity of high induction rates. By 1976 in the RMH the incidence of premature induction of labour has fallen to under 40% with an associated total fetal loss of 1.2%. Between 1963 and 1976 the total fetal loss for the Hospital as a whole has also fallen, from 10.5% to 2.3%. The causes for this are complex and by no means entirely medical. But whatever they are the effect on fetal survival is gratifying.

Fetal happiness then, and fetal liberty, but what of fetal life itself? In the earlier decades of this century stillbirth and perinatal death rates had remained disappointingly high despite the advances that had been made in the prevention of fetal morbidity and mortality during the previous hundred years or so. The Belfast Lying-In Hospital, which was to become in due course the RMH, opened its doors to the women of Belfast in 1794, one of the 16 maternity hospitals founded in the British Isles during the previous 50 years or so. Obstetrics and especially the care of the newborn was at that time very much the province of the midwife. As a medical art, midwifery was regarded as barely respectable and certainly no occupation for a physician and a gentleman.

Even after obstetrics had become established in medical practice, it largely involved the management of abnormal cases such as APH or prolonged labour due to pelvic contractions. How little attention was paid to the wellbeing of the fetus at this time is indicated by the fact that in the Sydenham edition of William Smellie's excellent Treatise on midwifery, published in 1751, only some 28 pages out of 1171 are devoted to the problems of the newborn infant. This need
hardly astonish us as at the time most surviving infants were born without medical assistance. Where the latter was required the fetus was often dead or dying and the mother was also in dire straits. In such circumstances even the most humane and expert obstetrician was helpless on behalf of the fetus and only too often on behalf of the mother also. Malnutrition frequently resulted in pelvic distortion and consequently cephalo-pelvic disproportion. The only method available for the treatment of this in the early years of the 19th century was accouchement forcée, the forcible extraction of the child usually after destructive operations had reduced his bulk and rendered his removal possible. Caesarean section, so readily available today, was frequently fatal before the 20th century. The French obstetrician Pagot, writing in 1875, declared that ‘the operation had cost the lives of all the unhappy ignorant women who had undergone it in Paris since the beginning of the century!’

Early attitudes to the unborn child and even the newborn infant are based, at least in western cultures, on Aristotle’s views on embryological development. He taught that the newly conceived individual passed through vegetative and animal stages of development, only later becoming fully human. Such ideas are reflected in Hebrew and Islamic theology and later indirectly influenced mediaeval Christian thought on fetal rights, since obviously a vegetable or an animal does not command the same respect as a human being. The early Christian Church had evolved in a pagan society where slavery and brutality of all kinds were the norm and where the unborn child and the young infant were regarded as mere chattels of their fathers who had absolute rights over them. With no rights of their own, they were not infrequently done away with by abortion or infanticide on the flimsiest grounds.

The early Christians with their strong sense of the sanctity of human life condemned unconditionally all such acts of aggression against the human fetus at all stages of its development. Later on, unfortunately, the Church became bogged down in Aristotelian arguments about the time of ensoulment of the fetus, and the more important aspects of its humanity were lost sight of for many centuries. Thus by 1642 Sir Thomas Browne could still write ‘we live, move, have our being and are subject to the actions of the elements and the malice of disease in . . . the womb of our mother . . . . In which obscure world the embryo awaits the opportunity of objects and seems to live . . . , but in its roots and soul of vegetation’. He thus appears to regard the fetus in utero as something less than fully human ‘still in its root and soul of vegetation’ for, he continues, ‘only after birth do we arise up and become another creature performing the reasonable actions of man’.

Nearly two centuries later, as we have noted, the wellbeing of the fetus was still very much a secondary concern in early 19th century practice. Nevertheless because the deliberate destruction of the living fetus was abhorrent both to the conscience of the obstetrician and to the law of the land it was of great importance to the accoucheur to be able to know for certain whether the fetus in utero was alive or dead. In the 1820s Laennec’s new invention the stethoscope in the hands of physicians like the Breton, Kergaradec, and the Ulsterman, Ferguson, constituted a major advance towards the solution of this important forensic and ethical problem. Armed and skilful with the stethoscope the obstetrician, said Ferguson, ‘who valued not only his good name but his conscience — was now able to pronounce with certainty whether the fetus be living or dead’. If the latter, then the child could in good conscience be fragmented and extracted. But if the
former, if the fetus still lived, the teaching accepted by Church, State and Society was that the operation must be delayed until after his death in order to avoid the 'great misprision' of fetocide which, if not murder as some would have it, was certainly manslaughter in the eyes of the law. At this stage then, the emphasis was on early diagnosis of fetal death to the advantage of the mother; for 'the obstetrician', as Collins of the Rotunda noted in the 1830s, 'sure that the child was dead, could with an easy conscience deliver her before she was exposed to the most torturing pain and not infrequently death, or — worse than death — extensive sloughing of the urethra'.

Later the emphasis was to shift from fetal death to fetal life and, in the 1840s, Sir James Simpson, advocating the use of forceps and intrauterine version instead of destructive operations in patients with disproportion, emphasised the value of fetal auscultation 'in determining the presence of life in the infant; which could be a contra-indication to delay and destructive operations and an indication . . . for early intervention on behalf of the living fetus'.

This shift in emphasis from early interference on behalf of the mother, the fetus having been shown by auscultation to be dead, to early interference on behalf of the fetus, the latter having similarly been shown to be living, was of the utmost significance in subsequent obstetric practice resulting as it did in considerable amelioration in fetal prognosis during the latter decades of the last century. Thereafter progress slowed and the neonatal death rate for England and Wales showed little change in the first 30 years of this century, remaining stubbornly over 35 per thousand. The main causes were trauma, infection and prematurity, each of which was responsible for about a third of neonatal deaths.

Even as recently as the 1930s and '40s, caesarean section was still regarded as much more hazardous for the mother and her infant and more difficult for the obstetrician than a high- or mid-cavity forceps delivery. When I first became Tutor in the RMH in 1944 I was allowed to attempt almost any kind of vaginal delivery on my own, but caesarean section had at least to be supervised, and was usually performed, by a consultant obstetrician. Gradually after the last War, however, with improved blood transfusion, antibiotic therapy, anaesthesia and surgical technique, caesarean section became progressively easier and safer than ever before and its more frequent use resulted in a very significant improvement in fetal morbidity and mortality. A less desirable result perhaps has been a tendency to abuse this operation, especially of recent years for fetal indications. But it should always be remembered that although the fetal results may be better where the operation is used in the management of conditions such as prematurity, multiple pregnancy and malpresentations there is undoubtedly a higher maternal risk. Nevertheless it must be conceded that the maternal and fetal results are both very much better in certain conditions when caesarean section is freely used. The most obvious example of this is of course disproportion. But, with the gradual disappearance of pelvic abnormalities due to nutritional causes, disproportion has become of much less importance than hitherto. Other conditions have, as a result, become relatively more important.

Placenta praevia is a condition in the management of which this hospital has played a leading part. When I began my obstetric career here in 1944, C.H.G. Macafee was a clinical lecturer in Professor Lowry's department. He was preparing for publication his classic paper on the conservative treatment of placenta praevia on which he had been working for seven years. His objective had been to lower
the fetal without adversely influencing the maternal mortality rate. The poor fetal results that characterised the treatment of bleeding from placenta praevia in the past were attributable to two main causes; first, prematurity — inevitable as long as the received doctrine was that there should be no expectant treatment of low-lying placenta; second, traumatic hypoxic vaginal delivery — also inevitable with manipulative procedures such as internal version and breech extraction or the application of Willetts forceps to the fetal head through an incompletely dilated cervix. The experience in the RMH (Fig. 2) for 1932-36 illustrates the risks involved: during that period nearly 3% of the mothers and over 50% of the babies died. As we see, this had altered little since Simpson's time a hundred years earlier. The next series from the Hospital shows the immediate improvement by Macafee's new attitudes to when and how these patients should be delivered. Between 1937 and 1944 the maternal mortality had been reduced nearly fivefold to 0.6% and the fetal mortality more than halved from 51.3% to 23.5%. A subsequent series reported by Grant in 1955 comprised 200 patients with no maternal deaths and a fetal mortality of 12%. It is noteworthy that the caesarean section rate in this series had increased from 39% to 76%. Subsequently reviews of these results of treatment in the RMH of placenta praevia show continuing improvement, the fetal mortality rate falling gradually to 3.5% in 1978-82. There have been no maternal deaths. Amongst the most important factors operating here are a high caesarean section rate and the help afforded by the paediatric service in managing the often premature infants of these mothers.

Fig. 2

RMH BELFAST
PLACENTA PRAEVIA
TOTAL FETAL LOSS

| Year       | Number of Cases |
|------------|-----------------|
| 1844       | 60              |
| 1936       | 50              |
| 1937-36    | 40              |
| 1937-44    | 30              |
| 1946-53    | 20              |
| 1963-67    | 10              |
| 1968-72    | 5               |
| 1973-77    | 2               |
| 1978-82    | 1               |

Ladies and gentlemen, I believe that Macafee's work was a model of clinical research ranking high in the medical advances of this prolific century. It has been universally applied and has saved the lives of thousands of mothers and babies. I do not think he received the public recognition he deserved during his lifetime but I am glad that his colleagues in the Royal College of Obstetricians and Gynaecologists and in the Royal Society of Medicine awarded him their gold medals for his distinguished work.

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It is interesting to recall that it was about this time that obstetricians were becoming increasingly dissatisfied with both their own and the paediatricians' efforts on behalf of the sick newborn. The obstetrician was often too preoccupied with the mother, who in such cases had usually been delivered surgically by forceps or caesarean section, to give the infant the immediate attention he obviously required; and the paediatrician was often not there at all! In any case neither of them was sufficiently skilled in the art and science of neonatal care, which was then in its infancy. Anaesthesia fortunately was increasingly becoming a highly skilled technology and the anaesthetist was always present — day and night — for operative deliveries, so what more natural than that the newborn be placed in his competent hands? As a result, neonatal morbidity and mortality diminished considerably but then remained static until the recent evolution of neonatology as a highly specialised, immediately available facility once more has improved the outlook for sick neonates.

Diabetes is another complication of pregnancy which, when I started obstetrics forty years ago, carried a very high fetal mortality. Here too, spectacular improvements have occurred over the years. Although these were less evidently determined by obstetric advances than was the case in placenta praevia, nevertheless improved obstetric techniques, especially a high rate of caesarean section, has played a part.

The Royal Maternity Hospital has for many years attracted most of the diabetic mothers of the province, and in 1956 Stevenson published the results in 119 diabetic pregnancies occurring during the 16 years from 1940-55. The fetal wastage overall was 30% and the caesarean section rate 55%. The latter figure, very high for that period, was the result of Peel's contention that the high fetal mortality rate, whatever its cause — whether poor diabetic control, pre-eclampsia or dystocia due to large babies — would be greatly reduced by terminating the pregnancies, often by a more extensive use of caesarean section at or before 36 weeks — it was generally recognised that many unexplained fetal deaths occurred during the last month of pregnancy.

In 1965 Professor Graham Harley reported on 115 babies born in the RMH from diabetic mothers during the eight years 1956-63. The results were greatly improved, with a fetal wastage nearly halved at 16.5%. The caesarean section rate was now 66% (85% in primigravidae). He emphasised the importance of good antenatal care and the avoidance of rigid schedules of time and method of delivery. Understandably he was not happy with 85% caesarean section in primigravidae! He also very properly pointed out the importance of good paediatric care of these premature and unpredictable newborns. Subsequently in 1964, after I had taken over from Professor Macafee, a special diabetic clinic with joint obstetrician-diabetician control by Professor Harley and Professor Montgomery was begun in the RMH with emphasis on the careful control of the diabetic condition of the mothers. Despite this, in 1963-67 the fetal wastage was 26.6% and in 1968-72 it was still 18.3%. I must emphasise that these statistics are derived from total raw figures including abortions, IUDs and fetal abnormalities. As with the placenta praevia data, no attempt at correction of any kind has been made.

By 1973 an increasing awareness was developing of the importance to the fetus of a maternal environment tending to the hypo- rather than the hyperglycaemia. As a result, maternal blood sugars began to be rigorously controlled at much lower levels than had previously obtained. The effect of this regimen was

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So far I have dealt, however sketchily, with the remarkable improvements in perinatal mortality over the past 40 years during which the perinatal mortality rate has fallen from 48 in 1943 to 14 in 1983. I believe that very soon mortality figures in the developed world will be as meaningless for the fetus as for the mother and reports will refer to individuals and small groups and concentrate much more on morbidity. I need hardly emphasise that this is very far from the truth as far as the underdeveloped or third world countries are concerned. And I believe that, in all our thinking about the future of maternity and child welfare services in the more fortunate parts of the world, we must increasingly bear in mind our less fortunate neighbours whose plight grows worse as ours grows better. Funds everywhere for everything except armaments seem to be in short supply; it is all the more vital that we learn to share such as are available. We can only ignore our responsibilities to the rest of the world at our peril.

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But what of the future in our own countries? I believe that the general public has now accepted that babies are best born in properly equipped and staffed institutions. However, if we are not to give encouragement to the lunatic fringe who want babies to be born in domestic bathrooms or squatting in the public parks, we will have to make our hospitals pleasanter places to be in and to visit. Little expenditure will be needed for this once the idea is accepted. From the medical point of view the main problems that will confront the perinatologist in the next decade are low birth weight and abnormal babies. Unlike the third world, where low birth weight is largely due (through no fault of their own) to malnutrition, in the developed countries it is significantly contributed to by the the self-inflicted ills of unhealthy life-styles and the use of toxic substances like tobacco and alcohol. These are matters perhaps more for the priest and the paedagogue than the physician, but until such times as people in general learn to look after their own health, perinatologists and obstetricians will continue to be faced with the problem of what to do with the seriously underweight premature infant. We must never forget that modern medical care is a luxury, only possible if our industries and our agriculture produce enough excess wealth to provide more than the bare necessities of life: when shortages occur they affect the politically and physically weak first. The fetus in utero is bottom of the league in both these respects and in any fight for survival is liable to do badly, witness the incidence of legalised abortion in well-off countries today, mostly for indications that are rarely even remotely in the interest of the fetus and regrettably reminiscent of the late Roman Empire where they at least had the excuse that no effective contraceptive measures were available.

In planning the future — and it must be planned by us or someone else will do it — we must be careful not to insist too much on expensive high technology to be applied to seriously handicapped or underdeveloped babies. I believe our first duty at present is to those infants, at home and abroad, who have at least a reasonable chance of healthy survival, with a minimum expenditure at birth on intensive care which many disinterested people today regard, along with other forms of 'salvage' medicine, as approaching the point of diminishing returns, and therefore of low priority in competition for resources, financial and otherwise. In modern democratic medicine, many things that may be desirable are not expedient. Our first duty, bearing in mind that health and welfare costs continue to rise and that resources are finite, is to determine priorities. There is something absurd, some would say obscene, about a society which with one hand kills off thousands of normal but inconvenient fetuses and with the other hand expends scarce resources trying to produce artificial conceptions or to sustain seriously abnormal fetuses with little chance of anything approaching a reasonably normal existence. Even when such priorities have been agreed at government and professional level, they still have to be acceptable to society at large.

Experience with relatively simple matters, such as attempts at fluoridisation of drinking water or the use of safe and effective contraception, shows how difficult this latter process can be. Without doubt, universal knowledge is the key, and this depends upon education. There is nothing new in such ideas. Nearly a hundred and fifty years ago Charles Dickens described how the Spirit of Christmas-to-come 'sheltered in his garments two children, wretched, abject, frightful, hideous, miserable . . . No change and degradation, no provision of humanity in any grade has monsters half so horrible and dread. "They are man's", said the Spirit looking down upon them. "And they cling to me appealing from their fathers. This boy is

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Ignorance. This girl is Want. Beware them both but most of all beware this boy for in his brow I see that written which is Doom unless the writing be erased. Deny it. Slander those who tell it ye! . . . and bide the end". 'Today we seldom see these tragic children in our own streets, but alas they are still plentiful in the third world only a few hours' flight away. To impart knowledge costs money, but, Ladies and Gentlemen, 'if you think Education is expensive you should try Ignorance'.