
Dr Carole GILLING-SMITH (GB)
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Are we playing at God or with God?

Reflections from a Career in Assisted Reproduction

I would like to thank the Organisers, and in particular my friend Kathy Webb-Peploe, for inviting me to speak at this meeting. I always enjoy the opportunity to give a lecture on subjects that I have researched and become deeply involved with but this is a very different brief. I totally subscribe to the notion of the Physician treating the whole person, not just the disease, but shamefully admit that I have never given the topic sufficient analytically scrutiny to deserve a place on the Lecture podium. I am therefore deeply indebted to have been given the opportunity to dig deep into my own ethical beliefs and draw from my professional experience to share openly and honestly with you, as professional colleagues from different backgrounds, some of the most profound bio-ethical and moral issues thrown at both patient and physician in the rapidly changing field of assisted reproduction. I will first present an overview on assisted reproductive technology and its evolution and then through case studies attempt to address the fundamental ethical question of my talk: Are we playing at God or with God?

On 25th July 1978 the first child conceived through IVF, Louise Brown, was born in Oldham, Manchester, a small town in the north of England. The press coined the phrase 'test tube baby' as she had been conceived in a laboratory. A new Era in Medicine had also been born. The scientist behind her creation, Robert Edwards had begun his research in the 1950's and by 1970 had teamed up with Gynaecologist Patrick Steptoe. Working together in Cambridge, they faced huge ethical barriers in their quest to create life from an egg and sperm in a laboratory. Funding had been refused from the Medical Research Council on moral grounds and many religious leaders, ethicists and scientists had demanded that their project be stopped. Edwards and Steptoe were determined to find a cure for infertility realising the enormity of human suffering it provoked and battled for their patients believing in the right of every human to have child if medical science could find a solution. They created their own ethics committee in Cambridge to oversee and approve their work and their research continued supported solely by private donations. After over 100 unsuccessful attempts at replacing embryos in infertile women, they tried a new approach with Lesley and John Brown. Lesley had blocked fallopian tubes and could never have conceived naturally. A single mature

egg was collected laparoscopically from her ovary and mixed with John's sperm in vitro to create a single embryo which was then replaced in Lesley's womb.

IVF technology has evolved massively over the last 30 years and the modern approach involves stimulating a woman's ovaries over a two week period with subcutaneous injections of follicle stimulating hormone to produce a number of eggs which are then collected by ultrasound guided needle aspiration, fertilised *in vitro* with the partner's sperm to create embryos that are grown in the laboratory. The best one or two embryos are then selected to be transferred into the woman's womb between two and five days after fertilisation. Spare embryos can be frozen and then thawed out and transferred into a woman's womb as soon as a few months or as long as 50 years later to create a child. Ovarian stimulation to create multiple embryos has dramatically improved the chances of successful outcome in IVF with success rates of over 50% in women under 35 years old. One drawback has been high multiple pregnancy rates with consequent increases in maternal and fetal complications. In the early 90's intracytoplasmic injection or ICSI was introduced, a technique in which single sperm are injected into each egg collected to create embryos enabling men with very low sperm counts or complete azospermia to genetically parent their own child rather than turn to donor sperm treatments. Sperm can also be frozen in men with cancer prior to chemotherapy or radiotherapy or retrieved directly from the testicles of men with no sperm in the ejaculate and used in ICSI. Eggs can also be frozen in adolescent girls and women prior to cancer treatment or in those in whom a premature menopause has been predicted. A further development has been pre-genetic diagnosis or PGD, a technique in which a single cell biopsied from embryos can be sent for FISH analysis to look for specific chromosome defects or DNA abnormalities. Whilst the purpose of PGD is to diagnose fatal or life threatening genetic conditions such as Huntingdon's Chorea or sex related lethal conditions such as muscular dystrophy, it has been commercialised to benefit those looking to balance families through sex selection, a process currently illegal in Britain. Uncontrolled PGD has the potential of being further refined to develop the ultimate disease-free human. These latter examples serve to illustrate how easy it is for IVF technology to go beyond the purpose of healing the infertile and instead be exploited by individuals without moral values who are greedy for personal recognition or money.

Worldwide, between 10 to 15% of couples are believed to suffer from infertility at one point in their lives and since Louise Brown, over 4 million babies have been born through IVF, providing joy to many desperate couples who would otherwise have been unable to procreate, one of the most basic and unquantifiable biological, human needs. However the creation of life *in-vitro*, even using the most simplistic model described by Edwards and Steptoe, remains a subject of huge controversy amongst different religious groups with repercussions on the physicians and scientists who practice in the field who, still to this day, face accusations of 'playing at God'. In October 2010, the Vatican, in an official statement, announced that awarding Robert Edwards the Nobel Prize for his pioneering work on IVF was 'completely out of order'. Recognising the benefit of a successful treatment in those wanting to conceive, the major criticism of IVF from a Catholic perspective has always been that it leads to the creation of unwanted and unused embryos representing potential lives, which either fill laboratory freezers or are destroyed needlessly and promotes other undesirable and immoral activities such as the 'trading of eggs'. The Catholic stance is particularly severe in dealing with those in roles earmarked as serving the Church. Earlier this year a teacher in an American Catholic school was sacked for turning to IVF to have a child.

Assisted reproductive technology has the potential of being misused by those with the expertise to carry out the procedures, either through financial exploitation of the vulnerable patient or by attempting for example to generate the perfect biological race through cloning, something that Edwards and Steptoe never intended to facilitate. However the radical viewpoint taken by the Vatican voices only one side of the argument and does not hear the cries of those desperate couples longing for a child of their own, to love and nurture and to live on beyond them or indeed of those physicians who carry out their work honestly and decently bound by both their own ethics and those set by regulatory bodies. One must not forget that running in parallel to the changing pace of new technology, the world has also seen radical changes in moral values over the last 30 years and the gradual acceptance of 'New Age parenting', all of which has compounded the ethical conundrums facing both doctor and patient.

To practice *Medicine of the Person* you must give yourself in a holistic way to your mission so I will now describe the person behind the Physician who stands before you. I was brought up by a French mother and English father a strict catholic, attending sung Latin Mass every Sunday from birth evolving through my own choice and desire to worshipping at folk mass as I grew up and the liturgy changed. As a teenager I had made up my own mind and chose to be confirmed, to attend church and to make God and Jesus a central part of who I was and planned to be. Career-wise, as a child, becoming a Doctor never crossed my mind as I found all matters relating to blood vulgar and illness, hospitals and suffering unbearable. During my first term at University, where I was reading Natural Sciences, it gradually dawned on me during physiology lectures that I had found my vocation. I was fascinated by the inner workings of the human body and realised that if you understood the science behind the beauty of the human being you could see way beyond the pain and suffering of illness, the horrors of open wounds and your knowledge and passion could be used to treat the sick. I transferred to study medicine and my subsequent route into reproductive medicine was a series of similar events where I don't recall making choices but the path seemed clear and cut for me. I will never forget the first baby I delivered as a medical student, the feeling of holding new life and its immense beauty. Nor did I overlook the gaze of the mother and father as they saw their child for the first time, that look of unquantifiable love. I became passionate about reproductive physiology and as the story of IVF began to unfold in Cambridge where I was studying first as a student and then as a specialist, I was no doubt influenced by the pioneers around me. However it was during my specialisation that the conflicts between my professional life and God began. As a trainee in Obstetrics and Gynaecology I was expected to support contraceptive practice, perform terminations of pregnancy, prescribe fertility drugs and refer infertile couples for IVF treatment. None of these procedures were accepted by the Catholic faith. A fundamental pillar of Catholic teaching is that we are all created in the image of God and that man and woman are created one for another. Children are seen as the supreme gift of marriage, not as a right or as something owned but arising from a mutual giving of the couple to each other. There should be no artificial barriers used during sexual intercourse and life should neither be aborted nor created by artificial means. I questioned not so much my Christian faith but the Vatican approach to the sanctity of life and eventually stopped attending the Catholic Chaplaincy in Cambridge where I had been a very active member. As a Christian I found myself wondering about in no man's land for a number of years feeling that I no longer belonged to or was welcome in the church that I had known all my life. When I met my husband who is Anglican I found a route that led me back into Christian worship. I made the conscious decision to marry in an Anglican church where our children were subsequently raised spiritually and baptised and for the first time in many years felt that my faith and professional life were no longer in conflict. We were blessed to have three wonderful children, all conceived naturally. The birth of my first child was for me the most magical moment of my life equalled only by the arrival of our two sons two and eight years later. Nothing

can vocalise the feeling of becoming a parent and the daily joys each child brings to one's life. I have no difficulty sharing the grief of those patients who find themselves childless and often ponder on what I would have done had I been dealt that card. But showing empathy and sharing grief is part of my work. Understanding that infertility is an illness and causes immeasurable pain that can lead to depression and the breakdown of marriages and relationships is what moves me to do what I do, believing fundamentally that I am only one instrument in God's huge orchestra and my role is simply to follow his baton.

Assisted reproduction could rapidly have become uncontrolled but for the establishment of regulatory bodies. In 1990 in England, the Human Embryology Authority or HFEA as it has become known was established to regulate centres offering IVF treatment. The HFEA stemmed from the Warnock Report, a Government White Paper entitled 'Human Fertilisation and Embryology: A framework for Legislation. The HFEA was the first independent public body of its type in the world and many other countries followed suit in legislating the activities of IVF centres. Today my own practice is heavily regulated by the 8th HFEA Code of Practice published in 2009 and regularly updated. My clinic is licensed by the HFEA and all its activities regularly inspected. I am required to report every single cycle of IVF, donor sperm or egg treatment to the HFEA electronically and my outcomes are constantly monitored. I must assess the Welfare of every Child that could be born through treatment and must question the suitability of all prospective parents. For example if a woman is deemed to have a psychiatric history or physical condition which could put the future child at risk, I must assess that child's welfare and, if I consider this to be potentially in jeopardy, refuse treatment. This perhaps is the one area where I sometimes feel I could be playing at God but no patient can be refused treatment by a single person. These complex cases must be brought to a multidisciplinary team meeting and, if there is uncertainty, to the clinic's Ethics Committee which should be prepared to meet regularly and advise on all controversial matters. Every patient should have access to an independent counsellor and all patients undergoing treatment with donor eggs or sperm should first have implications counselling. Every step in the mixing of a woman's eggs and a man's sperm must be witnessed to ensure no mistakes can happen and both parties involved in creating a human life *in vitro* must give written consent to everything that is done. There is also a limit to the number of embryos that can be replaced in a patient and we must not willingly create multiple pregnancies. If my practice falls below the standard expected, I could have my licence withdrawn. If my clinic is found guilty of any unlawful activity such as charging patients for freezing embryos that do not in fact exist, or replacing embryos into the wrong patient, not only would my license be withdrawn, but as the Medical Director and HFEA Person Responsible, I would be prosecuted and potentially face a jail sentence. I like being regulated, as it takes away that potential for autonomy or playing the role of creator. My patients too feel reassured that no harm will knowingly be done and that legally, their future child is protected. The problem is that not all countries have such tight regulation leaving the path wide open for exploitation of this technology for financial gain. The HFEA has been accused of having too narrow a remit in terms of regulation as its Ethics committee consists of only 5 members. Many European countries have independent bio-ethics committees of between 15 and 35 members whose duties include both advising Governments on legislation within the framework of assisted reproduction and actively engaging the public in their deliberations and seeking the views of a whole range of organisations including religious ones.

I will now address the issue of faith, assisted procreation and conflicts with God from a patient's perspective. Liz turned to egg donation after many failed attempts at IVF using her own eggs and

successfully conceived her daughter, Georgie. Liz and I have kept in touch as she works at the Medical School where I teach. When I spoke to her about the subject of this talk, she shared with me her thoughts. She too had a background of going to church regularly of her own free will as a child, teenager and young adult. She lost her virginity at 22 having met the man with whom she believed she would spend the rest of her life and have children. The relationship failed and at this point in her life, her faith began to waver and she gradually stopped going to church. She longed to have children and believed she had what it took to be the perfect mother so could not understand how a loving God, whom she felt she had served so well through her youth, could deny her the thing she wanted most. When she finally met her husband Rob, she asked for God's blessing in their marriage. At this stage she felt she had jumped the final hurdle and children would be an inevitable part of God's plan. The pain of infertility hit her hard as she faced the fact that God, having denied her a husband for so long, now did not seem to want her to have children. This prompted her to take matters into her own hands and go down the assisted reproduction path. Liz admits that in coming to me for help she was asking me to play at God; to do what he didn't seem to be able to do for her. As IVF cycle after IVF cycle failed, Liz faced even more emotional trauma. I advised her to consider egg donation as her eggs were in my view the major obstacle. A close friend of hers, Amy, then made a wonderful gift to Liz by donating her eggs. As a bystander in the process I am always in awe of the altruistic egg donor, taking no gain financially but giving up time, going through painful injections and an egg collection process to donate their eggs and be involved in creating new life for another person to nurture. Amy's eggs were fertilised with Rob's sperm to create embryos and a single embryo was transferred into Liz's uterus. Nine months later Georgie was born. With the gift of a healthy daughter in her arms, Liz found she could view things from a different perspective and argued to herself that it was meant to happen this way. She recognises that she is a very different person from the 22 year old who wanted children by the time she was 25 and is a better mother for all the experiences she went through over the 20 years before her daughter was born. She now feels that maybe this was God's plan and fertility treatment was Him giving her a child when the time was right. Using the same logic that led her to having her marriage blessed, she has started to take Georgie to church over the last year and admits to giving God the benefit of the doubt and has thanked him for her daughter. As for my role in Georgie's life, I don't believe for a minute I played at God, as far too many hurdles had to be overcome that were not my doing, such as finding Amy. I believe that God has given us the knowledge and technology as physicians and scientists to help us treat patients like Liz. Our role is to use that knowledge wisely.

New Age Parenting is an area where the bio-ethical boundaries are far less clear as technology can facilitate scenarios that would from an evolutionary perspective be impossible. Most major religious groups preach tolerance, kindness and respect for one another yet few accept the concept of either homosexual or transgender parenting. The Islamic faith for example recognises that all life and death happens according to the will of God and accepts IVF but only on condition that the sperm and egg originate from a man or woman who are married to each other. Third party assisted conception involving egg or sperm donation or surrogacy or the use of post-humous sperm to create life after the death of a spouse are forbidden. A similar view is taken in Hinduism.

Six years ago I moved to Brighton and established my own fertility clinic. Brighton has one of the highest Gay and Lesbian populations in the UK. I am not sure I was really prepared for the diversity of cases I would encounter there over the next few years. The question of whether it is right or wrong for single women or

Gay women to conceive through donor sperm, or for Gay men to parent children through egg donation and surrogacy is now far less of an issue in terms of western society acceptance and published research on the subject has shown that children born into these families fare as well if not better than those born into traditional heterosexual families. On the other hand, in Britain, to refuse a gay couple treatment can be regarded as discriminatory and potentially lead to legal action against the clinic despite the fact that Article 12 of the European Human Rights Act: the right to marry and found a family, specifically does not recognise same-sex or transgender parenting. Whether creating life through sperm donation or surrogacy is part of God's plan is a difficult debate and within the Christian faith, even the Anglican Church remains in conflict over gay parenting. I empathise with these men and women who find themselves biologically outcast in a reproductive sense through no fault of their own yet feel the same longing to parent as those in heterosexual relationships. In my experience of treating lesbian women, I have witnessed loving relationships and as strong a desire to nurture children as those in heterosexual relationships. This is in stark contrast to the accidental pregnancy experienced by many heterosexual couples and the inevitable after-shock reaction to abort the pregnancy. Therefore, irrespective of the position of the Church, I don't feel I can justify denying treatment to gay men and women on the grounds of their sexual orientation alone.

Whilst same sex parenting is now legally and morally accepted in many parts of the Western World, assisting the transgender man or women to have a child is a far greater leap into questionable practice, both ethically and spiritually. Anastasia came to me with her mother to discuss egg freezing. She was 23 and had for a long time known that psychologically she was a man. When I first met her I saw a young girl still of indeterminate sex, painfully shy yet single minded about whom she wanted to be. She moved and even spoke like a man, yet physically despite her short hair still had the appearance of a woman. She had suffered from a complex disorder of personality throughout her childhood but thanks to her loving and supportive mother she was now stable psychologically, in a steady job and attending a transgender clinic in London. She had been living as a man for a couple of years before I met her and was due to start male hormones within the next 6 months. She would take these hormones for at least two years before undergoing bilateral salpingo-oophorectomy, hysterectomy and breast reduction and then at a later stage she would go through genital reassignment. We talked about egg freezing. Unlike embryo freezing which can lead to excellent pregnancy rates, I advised her that eggs are far more fragile and do not tolerate the process of rapid cryopreservation or thawing so for a woman of 23 like Anastasia to have a realistic chance of conceiving children in the future she would need to freeze over 50 eggs which equates to at least 3 IVF cycles. Anastasia was in a steady relationship with another woman at this time so we agreed together that in the future, even if this relationship broke down, it was highly likely she would want to procreate with another woman. Therefore to biologically parent a child she would need to donate eggs to her female partner and those eggs would need to be fertilised with donor sperm before being transferred to her partner's womb. After carefully talking through all the options with me and understanding the process she would need to go through, Anastasia elected to undergo IVF treatment with donor sperm in order to freeze embryos as this would give her the highest chance of achieving a child using her own eggs. The only set back we encountered was a legal one. Between first seeing me and starting treatment, Anastasia legally changed her name to Bruno. To be an egg donor her consent forms needed to be in her female name. After taking legal advice, I advised her to sign the forms in her female name Anastasia and retain her birth certificate in this name. She completed two cycles of treatment. Bruno now lives as a man and his embryos remain frozen until he finds the right partner and is ready to parent. Understandably you will ponder on the rights and wrongs of treating Bruno or others like him, but you should be aware that for some years now

many countries in the Western world, irrespective of the various religious views in existence, have accepted that the transgender should have equal access to assisted reproductive techniques to procreate so I am not there to sanction or deny treatment unless I feel there is a Welfare of the Child issue. I don't believe that in this case I was playing at God since once again I was only an instrument in his orchestra armed with the knowledge and skills to ensure that Bruno made the choices that would maximise his chances of becoming a good parent and to protect his future child. Provided I have assessed my patient thoroughly through careful history taking and assessment of the inner person, which I did over several consultations with Bruno and his mother, I believe I cannot be accused of having either played at God or done harm. But it is so easy for the technology that will allow Bruno to parent in the future to be maliciously exploited. In 2008, slashed across the front pages of every newspaper, was a photograph of an American man, Thomas Beattie, in the latter stages of pregnancy. He became known as the 'first pregnant man'. Thomas, like Bruno, was a female to male transgender but had elected not to have reconstructive surgery and kept his womb and ovaries. He paraded himself to the world as a man carrying a child in his uterus, gaining publicity as a freak and promoting his medical team. I draw the line at creating such unnecessary publicity as I believe it can only encourage further exploitation of reproductive science in those that wish to catch the public gaze and invariably will leave the future child irreparably damaged. Thomas has now had three children in this way, arguing that his decision to bear children was because his wife Nancy could not and that irrespective of his gender, it was his right to have a child.

In some countries, the treatment of the transgender is illegal. Angel came from Switzerland to my clinic with her female partner Barbara. She was slim, tall with a perfect complexion and looked stunningly beautiful with her long blond hair and blue eyes. I admit I drew a deep breath when she opened the conversation with 'Doctor, I am a man and we want you to help us have a child through IVF'. She went on to explain that she was a transgender, born a man but living as a woman now for over 10 years. She had taken female hormones during this time but had not had gender reassignment surgery. Two years previously, Angel had come off female hormone treatment and as a result could now ejaculate sperm. The couple had had regular intercourse but Barbara had not conceived. In Switzerland where they lived, any form of assisted procreation in transsexuals is illegal whilst in the UK it is not. Under the HFEA Act, there are no ethical restrictions to treating transsexuals provided the Welfare of the future Child has been taken into consideration. As Angel was still legally a man and had not changed her birth certificate to her female name, it was possible in Britain for her to be the legal parent of any child conceived through IVF with Barbara's eggs. The treatment was successful and the couple now have a daughter. In Switzerland however she cannot be this child's legal father as she entered the country with a passport in her female name and same-sex parenting is not recognised. Did I go a step too far in my quest to help Angel become a parent? Is the transgender part of God's plan to restrict childbearing to only heterosexual humans? Did I interfere with his plan or indeed the process of natural selection or was I part of that process and was this child meant to be? I would never do anything I feel is fundamentally against the best interest of a couple or future child and yet by the same argument I would not wish to be in conflict with God, whatever view the Church may currently voice. I spent enough time with Barbara and Angel to know they will be loving parents and their child will grow up in a stable and nurtured environment. It was too hard for them to get the treatment they needed and overcome the legal and geographical hurdles to have a child together for there to be any doubt in my mind about their motives. How society will treat them as a family is another story. They can expect to encounter much prejudice in the future but before embarking on treatment I provided them with independent specialist counselling to ensure they had the strategies and resources to deal with this.

As a newly appointed Consultant in charge of the IVF unit at Chelsea & Westminster Hospital in London, I faced my first and probably greatest challenge of my career. Chelsea & Westminster has the largest HIV clinic in Europe. In 1999 I was asked to develop a program to help HIV positive men conceive safely. Several years previously an Italian Gynaecologist, Enrico Semprini, had published a series of cases in the Lancet where he described 'sperm washing' as a technique to separate spermatozoa, which do not have receptors for HIV, from HIV contaminated seminal fluid and non-sperm cells and then to use the 'clean spermatozoa' to treat the HIV negative female partner by insemination. After visiting Semprini's Clinic in Milan and conducting further research in our own laboratories to establish the safety of the technique, our hospital Ethics Committee approved the program and we began treating HIV infected men. At this time the public view was still that men with HIV should acknowledge they had a life threatening illness and put aside any thoughts of having a child. However during the mid 1990's, HIV infected patients began to be treated with highly active antiretroviral drugs which could halt the replication of HIV and associated depletion of CD4 cells. Suddenly HIV wards were empty and the life expectancy of these individuals improved dramatically. It was no longer justifiable to deny these people the opportunity to procreate, provided it did not in any way pose risk to the uninfected partner or future child. Prejudice is a killer of logical thought. I have spent the last 12 years of my professional life educating professionals and the public on where we are with HIV and why these men and women should be offered the chance to reproduce safely. There are four fundamental principles in medical ethics; Primum non nocere: first of all do no harm; Beneficence: do good; Autonomy: respect the individual; Justice: provide honest and fair care. In assisting HIV positive men and women of reproductive age to have children safely, I believe I have upheld those four principles. In my clinic alone, over 200 healthy non-infected children have been born to HIV infected men and women over the last 12 years and I have been successful in my campaign to have this treatment state funded to support the global mission of reducing HIV transmission through intercourse. But more importantly I have got to know some of the most courageous people I will ever meet in my life. Perry Evans, a committed Christian is a man I truly believe God has put before us to quell any notion that we might harbour about being unfortunate. Perry is a haemophiliac, who was diagnosed with HIV and Hepatitis C following a transfusion of contaminated blood products in the early 80's. He is one of many haemophiliacs inadvertently infected with HIV by the medical profession before proper screening was introduced. Courageously, with limited life expectancy, he tried to live his life to the full. When he married his wife Heather, both knew that having children would not be part of their future. He was fortunate to trial some of the early protease inhibitors and then triple therapy regimes for HIV and was one of the first patients I treated. Their son Isaac was born in 2001 through insemination of Perry's washed sperm. Unfortunately soon after Isaac was born Perry developed Lymphoma. Many HIV patients, even on treatment, develop cancer as a result of their immunosuppression. We banked some washed sperm for him before he embarked on a rigorous course of chemotherapy. Fortunately he responded well and the couple's second child Cerian was born through ICSI using Perry's washed sperm a couple of years later. Over the last few years Perry has battled with progressive liver and kidney failure as well as bowel disease as a result of his multiple viral infections. I get regular email updates from Heather on how the family are doing. Despite having been on death's door a multitude of times, this unique man's determination, faith and sense of humour are unbelievable. Last year Heather wrote 'Perry is taking Isaac on a rite of passage up Mount Snowdon for his 10th birthday. This is something significant for Perry as he thought he wouldn't be here, and significant for Isaac as it is a line in the sand that he can remember as he starts his transition from childhood to adolescence and manhood. To celebrate and reflect on his life I wonder if you are able to write Isaac a simple letter' I told Heather and Perry that I just didn't know how much a 10 year old boy would understand of my role in his life. They

replied 'Isaac and Cerian both know who you are so you don't need to explain. They know that you had a hand (literally) on their lives and as they grow they may or may not understand the science and long odds that needed to be overcome to make them our own gifts from God'. Their words bring me comfort and reassurance that the role I played was for God's purpose in the wider context of their children's lives.

I want to present a final case study which further illustrates how the gift of new life can have a massive impact on humans faced with life threatening illnesses. Last summer, as a young married couple in their early thirties, Kerry and Ant began to think about starting a family when Ant developed neurological symptoms. Tests revealed he had a brain tumour and following surgical removal, histopathology confirmed that he had metastatic malignant melanoma. He was given the opportunity to freeze sperm before undergoing palliative radiotherapy and chemotherapy. I first met the couple in February this year as they had been referred to me urgently with state funding for IVF treatment using Ant's frozen sperm. Ant had been advised to stop all chemotherapy and told he had only days or at most weeks to live. The disease had spread everywhere and when I first met him he had a nasogastric tube in place. He looked completely exhausted and was now living in a hospice with Kerry at his bedside daily. Our first meeting was perhaps one of the most difficult consultations I have ever done in my life. The subject of cancer was close to my heart as my husband was diagnosed with advanced prostate cancer two years ago and since we have lived with the daily uncertainty and fear that this disease invariably brings. I admit this may have influenced how I reacted to their plight and the strong sense of commitment I felt when they asked for help. I had wrongly assumed that Ant and Kerry had come to see me urgently to talk about how Kerry would be able, in the future, to have a child using Ant's frozen sperm when he had died. Once I had explained to the couple how the treatment would be used to create embryos from Ant's frozen sperm and Kerry's eggs, Kerry asked me how soon they could start the treatment. Ant then explained that each day he would set himself new goals and that now his most important goal was to see a picture of their embryo or embryos before he died. Before embarking down the route of agreeing to treatment starting now, I spent a long time with the couple assessing the Welfare of their future Child and ascertaining whether embarking on treatment at this stage with Ant so ill was the right course to take. I talked the couple through the various case scenarios we might encounter if Ant's condition worsened during the treatment cycle and even the possibility of having to cut short the treatment. Undergoing IVF treatment is stressful enough for any couple without adding in the uncertainty and fear that both Ant and Kerry must have been experiencing at this time. They were both incredibly brave as they sat in my consulting room, holding hands and talking calmly about the child that they wanted to have together, barely shedding a tear but just asking me to do my utmost to make this happen whilst Ant could still witness the miracle of that conception. I rarely share my husband's cancer with my patients but in this case it was inevitable. I used a protocol which allowed Kerry to start her drug regime almost immediately. I collected eggs from her just over 2 weeks later and Ant saw the picture of their embryo before I transferred it into Kerry's uterus. Ant sitting on a stool next to Kerry held her hand throughout the procedure and smiled. It was his birthday, another goal he had set himself to reach and an unforgettable day in my life as well as theirs. Sadly the embryo didn't implant and the disappointment of failure was immense not only for the couple but for all of us involved in their care. But they came back stronger and Kerry asked to start another cycle. We were only a week into the treatment when Ant's condition deteriorated. Kerry and I agreed to stop the cycle so she could be at his bedside. Ant died a few days later. So I ask myself, did my decision to treat the couple interfere with God's plan or was I doing the right thing? In my heart I know that Ant, Kerry, their family, their friends and every single member of staff in my clinic became enriched by the journey this remarkable couple took us down even though they did not achieve the much hoped for pregnancy. I believe this journey was part of God's plan and as a result, when

the time comes for Kerry to have further treatment on her own, she will look back and feel Ant holding her hand the whole way.

I have reached a point in my life where I feel at one with my faith and professional practice but empathise with the wide range of conflicts that my patients may feel about embracing scientific technology to assist them in procreation. I endeavour to question daily what I do, where the boundaries lie and how I can justify my actions but ultimately pray to God for guidance. In the case studies I have chosen, the theme of prejudice prevails. As I reflect over the many influences that have empowered me to practice *Medicine of the Person*, I conclude that one of the most poignant is the imagery painted by Atticus as he talks to his daughter Scout in Harper Lee's *To Kill a Mockingbird*. 'You never really understand a person until you consider things from his point of view, until you climb into his skin and walk around in it'. In answer to the question I posed at the start of this lecture, whilst I am in no doubt as to God's role in assisted procreation, I appreciate your views may be different. Whatever these may be, I hope to have opened your minds to a fascinating debate.

Dr Carole Gilling-Smith, MA, FRCOG, PhD

Consultant Gynaecologist & Fertility Specialist,
Medical Director,
The Agora Gynaecology & Fertility Centre, Brighton

Email address: cgs@agoraclinic.co.uk

Suggested Further Reading:

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