

# The morning-after pill

Uncovering the truth

John R Ling



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## **About the author**

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## **Standard abbreviations**

EHC	Emergency hormonal ‘contraception’
ESV	English Standard Version of the Bible
IUD	Intrauterine device
IVF	In vitro fertilisation
KJV	King James Version of the Bible
LH	Luteinizing hormone
MAP	Morning-after pill
OTC	Over-the-counter
PGD	Patient group direction
STI	Sexually-transmitted infection



# Foreword

At first glance it may appear to be just another pill, available at chemists throughout the land. But the morning-after pill is having a vast impact on the lives of adults and children alike; on both human sexual behaviour and on life in the womb. It is being promoted as never before; even to girls at school.

In this book John Ling uncovers the truth about the morning-after pill in a compelling way. He surveys medicine, biology, law, politics, statistics, theology and ethics. Nothing like it has ever been published before.

John Ling explains what the morning-after pill is and reveals how it works; its place in the drive to cut the number of teenage pregnancies and its link to increased rates of sexually-transmitted infections. He shows how words have been redefined to obscure the true effects of the morning-after pill and he counters opposing arguments.

At the heart of the issue is the nature and status of the human embryo. When does life begin? Does an embryo deserve equal treatment to life outside the womb? There are many voices sowing confusion, but the Bible is clear that life begins at conception. Part 2 of the book demonstrates this in a wide-ranging explanation of biblical truth and the historical Christian perspective.

The morning-after pill is an issue which demands a robust Christian response. This comprehensive yet readable book is an urgent call to prayer and action.

Colin Hart  
Director, The Christian Institute  
November 2006

Part 1  
The impact of the MAP

# 1.1 Introduction

Human life begins when a man's sperm fertilises a woman's ovum – as a result of this irreversible event, a new, genetically-unique entity, technically known as a zygote, is created. So, the fertilisation of an ovum results in the conception of a new human life – fertilisation and conception are synonyms that describe this most amazing starting-point.

## 1.1.1 What is contraception?

On the other hand, contraception is the separation of sperm and ovum so that fertilisation is prevented, conception cannot occur – this is the plain meaning of the word from its roots: *contra* (against) and *conception*.<sup>1</sup>

There are many, many ways of preventing conception.<sup>2</sup> Most methods can be conveniently classified into one of three groups.

First, there are behavioural contraceptives. These depend upon men and women controlling certain aspects of their behaviour. Examples are abstinence (saying “No”, which is the only 100% reliable method) and withdrawal (which, with a typical success rate of less than 80%, is one of the least effective methods).<sup>3</sup>

Second, there is the group of permanent contraceptives, which continually prevent the delivery of either sperm or ova, so that conception is impossible. Examples include the surgical procedures of vasectomy and female sterilisation.

Third, there are several physical and chemical devices designed to prevent conception. These can ensure that sperm and ova remain separated, and can be either simple and physical, as provided by male condoms and female diaphragms, or they can be complex and hormonally-induced, as produced by some versions of the female contraceptive pill, which result in the suppression of ovulation, or the production of sperm-resistant cervical mucus.

All of these methods are intended to work *before* fertilisation occurs and therefore are correctly called contraceptives.

### **1.1.2 What is *not* contraception?**

However, there are methods that are called ‘contraceptive’ but which can actually work *after* fertilisation. Although these are often referred to as post-coital contraceptives or ‘emergency contraceptives’, these should *not* be called ‘contraceptive’ because they can act after fertilisation. The test is simple – a true contraceptive works by somehow keeping sperm and ova apart; all other methods are not, and cannot ever correctly be called, contraceptives.

One of the earliest types of this post-fertilisation ‘contraceptive’ is the copper intrauterine device (IUD), also known as ‘the coil’, though it can also operate pre-fertilisation. More recently, an entirely different type of post-fertilisation ‘contraceptive’ has been introduced. It is referred to as emergency hormonal contraception (EHC), to be used after contraceptive failure or unprotected sexual intercourse. More commonly it is known as the morning-after pill (MAP).

### **1.1.3 What is the MAP?**

There have been several types of MAP. First introduced in the 1970s and 1980s, older varieties, such as Schering PC4 in the UK, and the Yuzpe regimen in the USA, contained a combination of hormones, an oestrogen plus a progestogen.<sup>4</sup> These had unpleasant side effects which were particularly widespread – 51% of users experienced nausea and as many as 19% vomited within a week of use.<sup>5</sup> Then, in February 2000, a new type of MAP, called Levonelle-2, which contained just a progestogen, known as levonorgestrel, became available in the UK as a prescription-only product, with no age restriction on the user. It caused nausea in 23% of users and only 6% of women vomited.<sup>6</sup> In the USA, it is marketed as Plan B.<sup>7</sup> In January 2001, changes to UK law allowed the sale of an over-the-counter (OTC) version called Levonelle, which could be sold without prescription in pharmacies to girls aged 16 years and over.<sup>8</sup> Then, in November 2004, a single dose of levonorgestrel, known as Levonelle One-Step, replaced the two-pill format of Levonelle for OTC pharmacy sales.<sup>9</sup> Levonelle 1500 is the one-pill version which, in November 2005, replaced Levonelle-2 as the prescription-only form of the drug with no age restriction.<sup>10</sup> Levonelle One-Step can be bought at pharmacies for between £22 and £25, and Levonelle 1500 is free when obtained through the NHS, for example from a GP or a family planning clinic.

Levonelle One-Step and Levonelle 1500 are manufactured by Schering Health Care Ltd and these have become the brands of MAP available throughout the UK.

*The progestogen-only morning-after pill in the UK*

<b>Date introduced</b>	<b>Name</b>	<b>Availability</b>	<b>Age restriction</b>	<b>Dose</b>
February 2000	Levonelle-2	Prescription-only	No restriction	2 × 0.75 mg
January 2001	Levonelle	OTC	16 and above	2 × 0.75 mg

Levonelle was rebranded when the two 0.75 mg doses of levonorgestrel were replaced by a single 1.5 mg dose.

<b>Date introduced</b>	<b>Name</b>	<b>Availability</b>	<b>Age restriction</b>	<b>Dose</b>
November 2004	Levonelle One-Step	OTC	16 and above	1 × 1.5 mg
November 2005	Levonelle 1500	Prescription-only	No restriction	1 × 1.5 mg

# 1.2 The MAP in society

## 1.2.1 Why has the MAP become so important?

When the MAP was originally licensed in the UK during the 1980s, in the form known as Schering PC4, it was with reassurances that it would be used only in exceptional circumstances, only occasionally<sup>11</sup> and that it would remain as a prescription-only drug, under the care and control of doctors.<sup>12</sup> How things have changed! Now, some 7% of women aged between 16 and 49 in Britain use the MAP at least once a year. That is close to one million users – some take it regularly, many buy it over-the-counter at chemists, and some get it free at school.<sup>13</sup>

The MAP has now taken on a new and greater significance because it is currently regarded by the Government's Teenage Pregnancy Unit as a major means of achieving its target, first published in 1999, to: "Halve the rate of conceptions among under 18 year olds in England by 2010; and set a firmly established downward trend in the conception rates for under 16s by 2010."<sup>14</sup> The Government's objective is clear: "Improving teenagers' access to contraceptive advice, including emergency contraception, is a key strand of the Government's teenage pregnancy strategy."<sup>15</sup> And the Government's thinking is equally



clear: “Emergency contraception is a safe and effective method of preventing unplanned pregnancy.”<sup>16</sup>

Figures from the Office for National Statistics show that in England and Wales, during 2004, there were over 42,000 conceptions among girls aged under 18. Of these, 7,613 were under 16 years old, and 341 under 14.<sup>17</sup> The rate of teenage conceptions of girls under 18 is about 42 per thousand girls, though the rate of teenage maternities falls to something like 23 per thousand girls because about 46 per cent of these pregnancies are terminated by abortion.<sup>18</sup> Figures continue to show that the UK has the highest teenage birth rate in the EU.<sup>19</sup>

### **1.2.2 Sex education and the MAP**

No responsible person could be other than alarmed at these statistics. Many would question the wisdom and efficacy of the Government’s so-called cure for this huge crisis among our young people. In June 2002 the Government re-emphasised its commitment to the provision of “full contraception and sexual health services” for secondary schools in England and Wales.<sup>20</sup> Its strategy is based on more sex education, a wider availability of advice a greater access to contraceptives, especially free condoms,<sup>21</sup> plus a more widespread use of the MAP.

But such a policy is doomed to failure. It teaches girls and boys that pills and condoms will make sex safe, and so these children become not only sexually aware, and ‘sexually available’, but also sexually active. And if they do not take the pill properly, or the condom bursts, or they use no contraceptive, then the MAP will come to their aid, and if that fails, then there is always abortion.

This is a counsel of despair. The Government’s overall philosophy and action plan are both gravely mistaken. Research published in 2002 studied the impact of access to family planning services on teenage conceptions and abortions in sixteen British regions over a period of fourteen years. It found evidence that pregnancy rates actually

went up when access to such services was increased: “They certainly don’t decrease, which is what the Government wants. It seems family planning seems to encourage more people to have sex...” concluded David Paton, the author of the study.<sup>22</sup>

Over halfway through the Government’s 10-year national strategy, and more than £168m later, there should now be some evidence that it is working.<sup>23</sup> The Government can point to a 1.4% fall in the under-18 conception rate between 2003 and 2004, but the current rate still stands at 41.7 per thousand girls. Given that in 1998 the equivalent rate was 47.1, the small reduction still falls far short of its target for halving this rate by 2010, which would be 23.6 per thousand.<sup>24</sup>

Even the Teenage Pregnancy Unit’s *Progress Report* of 2005, had to admit that while the majority of local authorities were beginning to show some decrease in teenage pregnancies, around a fifth had bucked the trend and actually increased their pregnancy rates in girls under 18<sup>25</sup>; they have increased by over a third in some parts of London.<sup>26</sup> These are not good results – the Government’s current strategy is plainly not working.

Though overall the *rate* of under-18 conceptions has shown a slight decrease, the actual *number* of under-18 conceptions per year has remained static since 1999.<sup>27</sup> As *The Daily Telegraph* reported: “Critics said the fall in pregnancy ‘rates’ – the number of pregnancies per thousand – could be attributed in part to an increasing population.”<sup>28</sup>

### **‘Conception’ figures in government statistics**

‘Conceptions’ are defined by government statisticians as: “Conceptions leading to maternities or legal abortions – those which result in spontaneous miscarriage are not included.”<sup>29</sup> The figures simply add together the number of recorded births and the number of recorded abortions.

Therefore the definition of ‘conception’ used in government statistics does *not* include conceptions destroyed by the MAP at the age of a few days old – no-one knows what that figure is.<sup>30</sup>

Government ‘conception’ figures underestimate the real number of conceptions because they discount embryos which are miscarried, either naturally or because of the action of ‘contraceptives’ which act after fertilisation, such as the MAP.

In light of the current failure of the Government’s Teenage Pregnancy Strategy there have been calls for the closure of the Teenage Pregnancy Unit. David Paton has said: “The taxpayers’ money spent by the Teenage Pregnancy Unit seems to have had no impact. The Government should look closely at the Unit’s future. Closing it should be seriously thought about...Most of the measures that have been introduced have had no effect on conception rates at all.”<sup>31</sup>

The only strategy guaranteed to reduce teenage pregnancies must be based on chastity, or so-called ‘abstinence programmes’, but the Government and its policy advisers continue to reject such schemes (see pages 68-72).

# 1.3 The consequences for health

## 1.3.1 STIs, ectopic pregnancies and the MAP

This high-level of state-sponsored promotion of the MAP is associated with another serious public health problem. While the MAP ostensibly deals with unwanted pregnancies, it inevitably encourages the notion that casual sex is OK and that such activity is safe, yet it does nothing to protect against, or combat, the alarming rises in sexually-transmitted infections (STIs). Indeed, it is an incontestable fact that as casual sexual activity increases, so does the spread of STIs.

This connection is well illustrated in a paper presented in 2004 by David Paton who found “that recent increases in the number of youth family planning clinic sessions did not lead to reductions in teenage pregnancy rates, but lead to significantly higher rates of diagnoses of STIs amongst teenagers.” In particular, he found “that the shift towards greater promotion of emergency birth control appears to have worsened the impact on STI rates since 2000.”<sup>32</sup>

The incidence of STIs is currently a massive problem in the UK, and it is a growing one. In 2003, a committee of MPs drew attention to “...the crisis in [the] sexual health of the nation.” It found that: “Around one in ten sexually active young women (and many

men) are infected with chlamydia. Syphilis rates have increased by 500% in the last six years and those for gonorrhoea have doubled.”<sup>33</sup> *Chlamydia trachomatis* is now the most common STI in the UK<sup>34</sup> – with a 52% rise in the number of new diagnoses since 2000. In 2004, it was diagnosed in 103,932 cases at genitourinary medicine clinics throughout England, Wales and Northern Ireland – an 8% increase on the 2003 figure.<sup>35</sup> Though mostly treatable, STIs represent a sinister threat to health. For instance, chlamydia is often asymptomatic in women yet, if it remains undiagnosed and untreated, it can cause pelvic inflammatory disease and infertility.<sup>36</sup>

This crisis has been caused by the rejection of Christian teaching on sex and marriage. The Bible is manifestly plain. Sex is a precious gift from God and sexual intercourse is reserved for within marriage, that lifelong exclusive union between one man and one woman.<sup>37</sup> Marriage has always been foundational to decent and civilised societies. But for many years now, the institution of marriage has suffered not only public denigration but also the passing of laws that have weakened this honourable estate. When marriage is promoted and upheld, society does not face the vast problems of promiscuous sex, STIs and so on – with all the associated multiple lies and cover-ups. Contrast this with the sort of society that the MAP helps to create – particularly that inexorable escalation of premature and promiscuous sexual activity among teenagers. One study found that 17% of children aged 13-15 had been sexually active.<sup>38</sup> And such young teenagers are especially at risk – they are insufficiently mature in their bodies and their minds for the physical and emotional burdens of early sexual activity, and yet this is the very group targeted by proponents of the MAP.

And there are other health problems. The MAP is associated with an increase of ectopic pregnancies. It seems likely that the MAP can cause a developing embryo to implant in the fallopian tube instead of in the endometrium (the lining of the womb). Such ectopic pregnancies

are life-threatening for the mother as well as for the unborn child. In January 2003, the Chief Medical Officer, Sir Liam Donaldson, sent a memorandum to all doctors. It reported that within a group of 201 women who had used the MAP and for whom it had failed to prevent pregnancy, an unexpectedly high number, twelve (or 6%), had had ectopic pregnancies.<sup>39</sup> It is well known that the progestogen-only contraceptive pill, the ‘mini pill’, can also increase a woman’s risk of developing an ectopic pregnancy,<sup>40</sup> so it is not surprising that the MAP’s massive dose of this same type of hormone may have a similarly devastating effect.

This begs some pertinent questions. Is the MAP really safe? Are there other harmful side effects yet to be revealed? Have there been large clinical trials to study the long-term effects of the MAP? Answer – No. Have there been trials to study the repeated use of the MAP? Answer – No. Have there been studies to assess the known side effects of the MAP in young girls, say, under the age of 16? Answer – No.<sup>41</sup> Yet the Government continues to stand by its blithe statement, “Emergency contraception is a safe and effective method of preventing unplanned pregnancy.”<sup>42</sup> You may wish to ask, “On what grounds?”

The Government’s decision in 2001 to make the MAP also available OTC has brought about additional health risks. The result has been that doctors are no longer in control of who gets the MAP. The MAP is certainly not suitable for all girls and women. For example, those with acute porphyria or severe liver disease should not use it, nor should those with disease of the bowel causing malabsorption such as Crohn’s disease.<sup>43</sup> It is also known that at least ten drugs interact with the MAP, some of which may reduce its efficacy.<sup>44</sup> The recommendation of a leading women’s healthcare organisation is that, “A sexual health history should be obtained from all women requesting EC [emergency contraception] to allow assessment of risk of STIs and discussion of other sexual health issues.”<sup>45</sup> But who will

assess such risks and warn the patient now that the MAP is available away from the doctor's surgery and in the absence of the patient's medical notes? How can a pharmacist determine if the girl asking for the MAP is under 16, or if she is even the intended user? How can a pharmacist, say, at a crowded counter on a Saturday morning, ask the relevant questions about the girl's or woman's general health as well as her sexual history? And would she answer knowledgeably, or, for that matter, truthfully?

Some professional groups have recognised the inherent dangers of this largely unfettered 'dishing out' of the MAP. For example, in April 2003 the Royal College of Nursing "...questioned the ability of pharmacies and supermarket chemists to provide the privacy, confidentiality and advice needed by emergency contraception users."<sup>46</sup> It is obvious that pharmacists are unable to carry out proper health checks and that many MAP purchasers are perilously unaware of the hazards they face from STIs after episodes of promiscuous and unprotected sexual activity. Yet worryingly, the proportion of MAP-users obtaining it from chemists or pharmacies has almost doubled in Great Britain. In 2003/04, 27% of women obtained the MAP from a chemist or pharmacy; this figure increased to 50% in 2004/05.<sup>47</sup> The Royal Pharmaceutical Society said the trend "...marks a quiet revolution in access to this type of contraception..."<sup>48</sup>

The MAP is not licensed for use more than once in a menstrual cycle and when it is misused in this way increased failure rates have been reported.<sup>49</sup> It is also well known that the repeated use of the MAP is less effective than the more conventional methods of contraception.<sup>50</sup> In one study, when packs of the MAP were freely provided to nearly 18,000 women, about 25% of them gave away at least one course to their friends.<sup>51</sup> But what, or who, is to stop girls and women misusing the MAP in these ways? Several agencies are already distributing the MAP in advance of need<sup>52</sup> – girls are carrying spare supplies in their handbags.

And there is yet one more unhealthy aspect of the MAP to consider – it is not free from side effects. The following conditions have been experienced by MAP users: nausea, 23%; vomiting, 6%; fatigue, 17%; dizziness, 11%; headache, 17%; breast tenderness, 11%; low abdominal pain, 18%.<sup>53</sup> This is a collection of pretty nasty side effects, though they are temporary. However, they are nowhere near as serious and permanent as the MAP’s capability of ending the life of a human embryo – after all, as a post-fertilisation ‘contraceptive’, that is its purpose.

The MAP is a further step in the chemicalisation of human life. “You have a problem – take this.” “You are in trouble – swallow that.” What are we doing to ourselves in terms of damaging personal health and promoting destructive behaviour? What are we doing to women and, above all, to young girls?

### **1.3.2 The MAP philosophy and our children**

The stubborn fact is that our poor children have been duped. Indeed, we have failed them. We have given them more and more sex education that has become more and more explicit. We have presented our children with a value-free, no-consequences moral framework – “It’s your life, what’s right for you is right.” We have told them that sex can be safe – “Sex with condom, good; sex without condom, bad.” We have encouraged them to experiment sexually – “If it feels right, do it.”

And we now have to deal, somehow, with the sad consequences of such a disastrous social experiment. This deliberate sexualisation of children has been a wicked policy – it is a form of child abuse. And now we, and especially they, our dear children, are beginning to pay for it. Simply handing out the MAP was not, is not, and never will be a proper response.

Furthermore, handing out the MAP has undermined the child-parent relationship. The Government’s idea is that: “It [emergency



contraception] also brings young people into contact with a health professional where they can discuss their relationship...”<sup>54</sup> Instead of communicating with, and seeking advice from their parents, the MAP has encouraged children to lead secret lives. Indeed, the MAP can be given to a teenage girl, even if she is below the legal age of consent of 16, without the permission or knowledge of her parents.<sup>55</sup> Is this any way to strengthen child-parent relationships and family life?

And girls under 16 no longer need visit their doctors to acquire the MAP. For though it has been available for many years from a variety of sources, such as family planning clinics, hospital genitourinary medicine clinics, and some accident and emergency departments, there is now yet another supplier. Since 2000 health authorities have been permitted to issue so-called patient group directions (PGDs).<sup>56</sup> These are “...documents which make it legal for medicines to be given to groups of patients...without individual prescriptions having to be written for each patient.”<sup>57</sup> PGDs have been issued allowing school nurses, and other health professionals, to supply girls, including those under 16 years old, with the MAP. Chemists operating under a PGD scheme can also distribute the MAP to girls *under* 16, as well as to those over 16.<sup>58</sup>

The number of MAPs distributed, girls supplied, or schools involved in these PGD schemes are facts and figures that are not available to the general public.<sup>59</sup> One can only guess at the extent – and fear for the damage being done. We do know, though, that the MAP is being handed out on a vast scale by family planning clinics. Girls under 16 were given the MAP on over 24,000 separate occasions at such clinics in the NHS year 2004-05.<sup>60</sup>

The situation is now to be made even worse. In March 2006 it was revealed that by 2010 the Government wants every school in England to have access to a nurse who can give out the MAP to children.<sup>61</sup>

# 1.4 The science of the MAP

## 1.4.1 How effective is the MAP?

According to the figures usually quoted, if the MAP is taken as recommended, that is within less than 24 hours after unprotected sexual intercourse, then 95% of expected pregnancies are prevented. If it is taken between 25 and 48 hours, then the prevention figure is 85%, but if the treatment interval is 49 to 72 hours, then only 58% of pregnancies are stopped.<sup>62</sup>

But doubt has now been cast on these figures.<sup>63</sup> As Anna Glasier, Director of Family Planning and Well Woman Services in Lothian, has said: “It’s generally perceived to be 95 per cent effective, and it simply isn’t...Recent research shows that the efficacy of the morning-after pill has been hugely overestimated. I doubt that it prevents more than 50 per cent of pregnancies.”<sup>64</sup>

So the MAP is not as effective as we are often led to believe. This raises another question – what happens to those women and girls who take the MAP, but who still become pregnant? They will probably be recommended to undergo a surgical abortion, with its attendant psychological and physical dangers for all women, but especially so for young girls. And what if they change their minds and decide to go through with the pregnancy – would the MAP have had some

deleterious effect upon their unborn child? Such teratogenic effects (anomalies in the formation of the embryo) have not been reported, but that is not to say they do not exist.

### **1.4.2 How does the MAP work?**

In February 2000 Levonelle-2 was introduced on prescription. One treatment pack consisted of two pills, each containing 0.75 mg of levonorgestrel. The recommendation was that one MAP tablet should be taken as soon as possible, but no later than 72 hours, following unprotected sexual intercourse, and the other taken 12 hours after the first.<sup>65</sup> However, a trial published in 2002 reported that a single 1.5 mg dose can substitute for the two 0.75 mg doses.<sup>66</sup> Such findings resulted in the latest MAP products, Levonelle One-Step (OTC) and Levonelle 1500 (prescription-only).<sup>67</sup>

The active ingredient in these two products is 1.5 mg of levonorgestrel, a progestogen hormone. One treatment pack of a single pill contains a dose of progestogen that is equivalent to approximately 50 times that of the ‘mini-pill’, one of the common forms of oral contraceptive.<sup>68</sup>

Progestogens are known to have at least three modes of action.<sup>69</sup> First, they can have an anti-ovulatory effect, preventing or delaying the production of ova. Second, they can impede the migration of gametes, sperm in particular, but also any ova released, so that they are less likely to come into contact. Third, progestogens can change the lining of the uterus, the endometrium, making its environment hostile so that any embryo present cannot implant.

Of course, this latter mode can only operate if fertilisation has already occurred. It is an abortifacient activity, because it halts the normal development of a human embryo. This is why the MAP is so controversial. It is not simply a pre-fertilisation contraceptive, it is also a post-fertilisation ‘contraceptive’. It is therefore an abortifacient

because it can prevent implantation and thereby bring to an end a real human life.

### **1.4.3 Evidence for the MAP's three modes of action**

At times the scientific literature can be so disappointing. For instance, it contains no definitive studies that provide numerical estimates of the relative importance of these three modes of action of progestogens. On the other hand, considering the biological complexities of human reproduction and the variations in human responses to any drug, it would be naïve to think that a fixed ratio existed for every episode of MAP usage. Furthermore, this general lack of quantitative research is perhaps not surprising since the MAP manufacturers have evidently adopted the pragmatic view that if the MAP mostly works, discovering the predominant mode of action is not so important. But this is a reprehensible attitude – we should all care how it works, because so much is at stake.

For the MAP to work at all, it must be taken within ‘a window of opportunity’. In a typical menstrual cycle there are only about six fertile days when intercourse can result in conception. These are the day of ovulation and the five preceding days. However, if the cycle is irregular or uncertain, then it is not possible to say that any day is ‘safe’. Nevertheless, sperm will typically have to ‘wait’ between one and five days before encountering a released ovum. Therefore it is the case, perhaps surprising to some, that fertilisation can be so difficult to achieve – even when sexual intercourse occurs at the most fertile time (around the time of ovulation, on days 10 to 17 of the cycle)<sup>70</sup>, the estimated chances of conceiving range from 10% to 33%.<sup>71</sup> Indeed, the overall pregnancy rate following one act of unprotected sexual intercourse at any time in the menstrual cycle is estimated to be only between 0 and 9%.<sup>72</sup> In conclusion, this means, “The way in which the emergency pill...works depends on where you are in your cycle at the time.”<sup>73</sup>

So, if there is such a dearth of quantitative data available, is there still sufficient qualitative evidence to demonstrate how the MAP can, and does, function? Yes, there is.

#### **1.4.4 The effect of the MAP on ovulation**

The first mode of the MAP's action, the anti-ovulatory effect, occurs because it can inhibit, or suppress, or postpone the release of a hormone called luteinizing hormone (LH), which is released monthly and is essential for the stimulation of the ovaries and hence production of ova.<sup>74</sup> Furthermore, the MAP can inhibit the rupture of the ovarian follicle, so that no ovum is released, and it can also interfere with the formation of the corpus luteum.<sup>75</sup>

This anti-ovulatory mode of action depends on when the MAP is taken in relation to the menstrual cycle. To be most effective it must be taken prior to the monthly LH surge. It should be noted that any of these effects, which prevent the release of an ovum, are truly contraceptive modes of action – no ovum, no fertilisation. However, if the MAP merely delays, rather than prevents, ovulation, then conception might still occur. A survey of three separate studies showed that the MAP has only a limited effect, less than 15%, on preventing ovulation, even when it is taken just before the LH surge.<sup>76</sup>

#### **1.4.5 The effect of the MAP on the migration of sperm and ova**

In assessing the relative importance of the MAP's second effect, namely on the migration of gametes, timing is again a crucial factor. The MAP should be administered within 72 hours after sexual intercourse. On the other hand, sperm have been detected within the uterus 1 minute or so after sexual intercourse.<sup>77</sup> So fertilisation, which could occur during the intervening period, would be unaffected by any action of the MAP on the migration of sperm or ova.

The MAP can affect sperm migration within 3 to 9 hours – it can decrease the actual numbers of sperm; it can increase the pH of the uterine fluid, which can immobilise sperm; and it can impede the migration of sperm, as well as that of ova, by increasing mucosal viscosity.<sup>78</sup> Although sperm can be detected in the uterus within minutes after sexual intercourse they have also been identified there up to 7 days later<sup>79</sup>, though whether such sperm are capable of fertilising an ovum is a moot point.<sup>80</sup> On the other hand, a released ovum can remain viable for only around 12 to 24 hours.<sup>81</sup> Thus the timing of the menstrual cycle, sexual intercourse, and MAP administration become crucial if the MAP is to have any effect on sperm or ova motility.<sup>82</sup> If ovulation occurs after a woman has taken the MAP, then its interference with gamete migration may reduce the probability of conception. However, overall, this mode of action seems likely to be minor, if not minimal.<sup>83</sup>

#### **1.4.6 The effect of the MAP on implantation**

The MAP's third mode of action is on implantation. Implantation is essential if the human embryo is to continue to develop. And implantation is a hugely complex process. Before physical attachment actually commences, there is a cascade of changes occurring within, and between, both the embryo and the mother. It has been likened to the preparation required for a rendezvous between an orbiting satellite and the mother spaceship. Early on, complex communications are established between the two. Genes are activated and various hormones and cell surface receptors are produced (synthesised) in order that the embryo matures in tandem with an increasingly-receptive endometrium so that the embryo can 'dock' successfully.<sup>84</sup>

It is important to understand that once fertilisation has occurred a whole train of these new physiological and biochemical changes are set in motion – human life is truly a continuum from conception to natural death. Indeed, when one sperm has penetrated an ovum, the

permeability of the ovum's outer layer, the zona pellucida, changes so that no other competing sperm can enter – something genuinely significant has started!

Clearly, the pre-implanted human embryo is not merely some inert, foreign body, or just a collection of undifferentiated, non-functioning cells – the mother and her embryo are already communicating and bonding. To describe the whole enterprise of pregnancy, and especially these first few days, as astonishing is an obvious understatement. Yet the administration of the MAP, with its progestogenic action, can deliberately cause this 'docking' to fail. 'An aborted mission' is a most apt description.

So how can the MAP block implantation? During each menstrual cycle the follicle ripens and discharges its ovum. The remaining follicular tissue, called the corpus luteum, is initially maintained by luteinizing hormone (LH) from the brain. In a cycle when fertilisation does *not* occur, the concentration of LH then declines rapidly leading to degeneration of the corpus luteum, which is discarded in the flow phase of menstruation. However, if fertilisation occurs and the embryo implants in the womb, it produces its own hormone, human chorionic gonadotrophin (hCG), which takes over from LH in sustaining the corpus luteum. Why is the corpus luteum important? It produces two hormones, oestrogen and progesterone, which are essential for the maintenance of the lining of the uterus (the endometrium). When there is no implantation the endometrium is discarded at menstruation. But when implantation occurs, because of the hormones produced by the corpus luteum, the endometrium is not shed, but rather survives and develops.

What the MAP can do is disrupt this sequence of events. There is good evidence that progestogens can alter the structure and biochemistry of the endometrium.<sup>85</sup> The precise mechanisms are not known, but the MAP could act at several points during the implantation process. For example, an anti-LH activity by the

MAP would interfere with the formation of the developing corpus luteum and cause it to be discarded. Without a corpus luteum there is insufficient production of oestrogen and progesterone, and without these hormones the endometrium is undeveloped and unreceptive so the embryo cannot implant and therefore the pregnancy cannot continue.

Proponents of the MAP tend to deny that this anti-implantation activity is an issue. Some say that the MAP affects implantation in theory but not in practice – “it doesn’t happen in real life”. Many others deny that the destruction of an embryo before implantation constitutes an abortion. They insist that the MAP cannot affect an established pregnancy, meaning that, once implanted, the MAP cannot dislodge an embryo from the endometrium. For example, Planned Parenthood is adamant that the MAP “...will not affect an existing pregnancy”, it “will not cause an abortion.”<sup>86</sup> This, of course, is ducking the entire issue.



# 1.5 The consequences for truth

## 1.5.1 Lexical engineering and the MAP

When people want to conceal the truth they often devise cunning words. Modern bioethics is rife with such artful dodges. For example, in the 1980s, proponents of destructive human embryo research coined the term ‘pre-embryo’ in an attempt to hide what they were proposing to destroy.<sup>87</sup> Nowadays, a similarly pejorative term for the early human embryo is a ‘fertilised egg’.

Such lexical engineering always precedes social engineering – camouflage some distasteful practice and the general public will almost certainly begin to find it more acceptable, and eventually, even regard it as virtuous. For example, the horrors of widespread abortion have been made almost respectable under the guise of ‘termination of pregnancy’, ‘removal of the products of conception’, or ‘a woman’s right to choose’. In the realm of post-coital ‘contraception’, lexical engineering has devised the terms ‘morning-after pill’ and ‘emergency contraception’.

The ‘morning-after pill’ is arguably a convenient nickname, but ‘morning-after’ is misleading – there is no need to rush out of bed the morning after the night before to obtain the MAP because it can actually be taken up to 72 hours after sexual intercourse, though its

effectiveness is significantly reduced with time. This nomenclature also suggests that any unwelcome consequences of a one-night stand can be easily remedied – two aspirins for the unwanted hangover, plus one MAP for the unwanted pregnancy, as if sexual intercourse were merely a biological function, and as if sexual promiscuity were the expected custom. For this reason too, the use of the word ‘emergency’ is disingenuously ambiguous, for it brings with it the connotations of ‘disaster’ and ‘must-have’, as if even the possibility of being pregnant were abhorrent or unnatural. But far more serious than either of these misnomers, is the notion that the MAP is a true contraceptive.

Whether the MAP is an abortifacient has long been an area of hot debate and cover-up. Obviously MAP advocates fear that if this mode of action in women were to be widely broadcast then it would raise serious dilemmas for the ‘morally-sensitive’ prescribers, suppliers and especially users, followed by a slump in MAP sales. Therefore it is not uncommon to read diffident statements such as “Evidence supporting an effect on the endometrium that might inhibit implantation is poor”<sup>88</sup> and “An anti-implantation effect has been postulated, but there is little evidence to support this.”<sup>89</sup>

This is simply not true. There is serious evidence that demonstrates that the MAP can, and does, operate post-conceptually, and that it can, and does, disrupt implantation. MAP advocates cannot keep on dodging the truth. However, some have faced the issue. For example, Szarewski and Guillebaud, in their seminal book on contraception, state unequivocally: “If ovulation (releasing an egg) has not yet taken place, then the [morning-after] pill can delay it..If, on the other hand, you have already ovulated, then the emergency pill will prevent the embedding of the fertilized egg in the womb (implantation).”<sup>90</sup> Furthermore, a survey of the MAP literature concluded that “...the main effect of Levonorgestrel is on the endometrium acting to disrupt implantation rather than acting at the level of the cervical mucus or by inhibiting ovulation.”<sup>91</sup> In 2002 even the deputy medical director of

the MAP's manufacturer, Schering Health Care Ltd, was reported to have admitted that the MAP often acts post-fertilisation.<sup>92</sup>

Yet resolute denial still exists. For instance, a review by Croxatto concluded that there is "...no evidence that EC pills prevent pregnancy by interfering with implantation of fertilised eggs."<sup>93</sup> However, such anxious refutation has not always existed. When the MAP was first licensed, in the 1980s, there was never any doubt about its primary mode of action. *The Times* was clear: "...the process is not one of preventing conception itself, but of preventing a fertilised egg (if there is one) from becoming implanted in the wall of the womb."<sup>94</sup> *The Guardian* was equally adamant: "The way it works is by preventing a fertilised egg from implanting itself in the womb."<sup>95</sup> Even the Attorney-General was explicit: "Such pills are intended to be taken by women following unprotected intercourse to inhibit implantation in the womb of any fertilised ovum."<sup>96</sup> In 2005 the Government said, "...the prevention of implantation...is brought about by emergency contraception products..."<sup>97</sup>

This mode of the MAP's action is now tacitly acknowledged by several healthcare agencies. For example, the Family Planning Association's website states that the MAP "...may also stop a fertilised egg settling in your womb (implanting)"<sup>98</sup> and one Schering Health Care website similarly affirms that the MAP "...may stop a fertilised egg from attaching itself to the lining of the womb."<sup>99</sup> In fact Schering's Levonelle One-Step website has now made the most revealing statement so far: "...if a woman has already ovulated and the egg has been fertilised during or after intercourse, Levonelle One Step® will, *in most cases*, prevent that egg from attaching itself to the lining of the womb."<sup>100</sup> [emphasis added]

In conclusion, let the question be put (again): is one of the modes of action of the MAP that of preventing or disrupting implantation of a human embryo? The answer is a straightforward "Yes." And all those who disagree with this conclusion must recognise that they are

opposed by a considerable corpus of information generated from an impressive collection of members of the judiciary, bioethicists, MAP suppliers, the press, church groups, healthcare experts, scientists, and even the MAP manufacturers!

### **1.5.2 Implantation**

Is the anti-implantation effect of the MAP important? Some vocal people deny that it is because, they say, human life does not begin until implantation. But this is plainly not true. A refutation of this claim should begin with some explanation of basic human reproduction and embryology. An appropriate place to start would be *The Warnock Report*.<sup>101</sup> This was published in 1984 as the result of a Government committee of inquiry into human fertilisation and embryology. The Report was a landmark. It set the framework for the 1990 Human Fertilisation and Embryology Act, and therefore it has established the nature, status and use of human embryos in assisted reproductive techniques as well as scientific experimentation for the twenty-first century.

*The Warnock Report* describes the biology of early human development thus: “At fertilisation the egg and sperm unite to become a single cell.” It further explains how the embryo “...then passes down the fallopian tube into the cavity of the uterus over a period of four to five days.” The Report continues, “At first...it remains free-floating until it begins to attach to the uterine wall at the start of implantation. This is considered to begin on the sixth day following fertilisation. During implantation, which occurs over a period of six to seven days, the embryo enters the endometrium, the lining of the uterus; at the eleventh to thirteenth day after fertilisation, implantation is complete.”<sup>102</sup>

Implantation is one of the myriad of processes that takes place, remarkably rapidly, and in a beautiful sequence, once an ovum has been fertilised. Of course, implantation is essential to the continuing

growth and development of the embryo, but it marks neither the beginning nor the end of anything – it is simply one of the stages through which the human embryo must pass during pregnancy.

### 1.5.3 Pregnancy, conception and fertilisation

What is it to conceive? According to *The Oxford English Dictionary* it is to, “become pregnant with (young).”<sup>103</sup> So conception marks the start of a pregnancy. “Oh, no it doesn’t”, cry the MAP proponents. They all say that implantation is the significant event, the start of a pregnancy. So where did this different answer to that old question of when human life begins, come from? One of its earliest expressions came, almost unbelievably, from the British Council of Churches. In a 1962 Statement it declared: “A distinction must be drawn between biological and human life, and, in the absence of more precise knowledge, nidation (implantation) may most conveniently be assumed to be the point at which the former becomes the latter...A woman cannot abort until the fertilised egg cell has nidated and thus become attached to her body. Whilst therefore, we judge that any interference with the process of development after that date is wrong, we see no objection to the use of a technique which would prevent implantation.”<sup>104</sup>

This was an entirely novel way of thinking about the early days of human life. But it was also exactly what the MAP supporters had been searching for. Within twenty years it had become political dogma, the get-out clause, the ‘new biology’. Lexical engineering proves itself a useful tool once more.

Since then some have even redefined ‘conception’ to include implantation – so that a woman only ‘conceives’ if the embryo implants in the womb. But this sleight of hand would overturn the authoritative scientific and medical opinion of hundreds of years, which has held that ‘conception’ and ‘fertilisation’ are synonyms. Just two examples from the medical literature should be sufficient

to demonstrate this fact, defining ‘conception’ as: “The fertilization of the ovum by a spermatozoon...”<sup>105</sup>, and “The act of becoming pregnant, by the fertilization of an ovum.”<sup>106</sup> That is concise and clear, is it not? ‘Conception’ and ‘fertilisation’ are the same – let no-one drive a wedge between them. The real battle-ground here is over when ‘pregnancy’ begins.

#### 1.5.4 The ‘new biology’ and the MAP

Why did implantation become such a ‘hot button’ issue during the 1980s? Because it was used by the then Department of Health and Social Security (DHSS) to re-write basic human biology, as once we all knew it, and thereby to promulgate this ‘new biology’.

Advocates of the ‘new biology’ could now claim that conception and pregnancy were *not* the same. If a pregnancy cannot now be said to start until *implantation* has occurred, and the MAP can stop implantation, then, of course, the MAP ‘prevents pregnancy’.

Therefore, according to the ‘new biology’, a pregnancy does not now last on average forty weeks, but only thirty-nine weeks and one day. *Ipsa facto*, human life begins at day six, or thereabouts. Furthermore, this ‘new biology’ demands that the definition of the word ‘contraceptive’ be revised. Now a contraceptive must include any substance or device that works up to six days after fertilisation. Now ‘a contraceptive’ can include anything that can destroy the human embryo, prior to implantation. This is yet another mind-boggling, and disgraceful, example of lexical engineering preceding social engineering. A verbal cloak has been used to cover up the truth about the beginning of human life. We should not be fooled.

This ‘new biology’ was a mischievous invention by the DHSS to ensure that the MAP was no longer illegal. Because it can operate by preventing implantation, that is, as an abortifacient, rather than as a true contraceptive, its use would have contravened the Offences Against the Person Act 1861. Section 59 of that Act states: “Whosoever

shall unlawfully supply or procure any Poison or other noxious Thing, or any Instrument or Thing whatsoever, knowing that the same is intended to be unlawfully used or employed with Intent to procure the Miscarriage of any Woman, whether she be or be not with Child, shall be guilty of a Misdemeanor...”

It should be noted that the technical term ‘miscarriage’, as used here, is the equivalent of abortion – that precedent was enshrined in the 1803 Ellenborough Act, which speaks of ‘miscarriage or abortion’ as synonyms, and both denoting the forbidden deed. And it should be noted that the terminology, established by both the 1803 and the 1861 Acts, was unchanged by the 1967 Abortion Act. Furthermore, it should also be noted that ‘carriage’ is not the word used in the 1861 Act – rather the term used is ‘with Child’. So the word ‘miscarriage’ must mean ‘without Child’. Therefore a woman is ‘with Child’, a genetically-unique human being, as soon as fertilisation has taken place.

Since the 1861 Act prescribes penalties of up to life imprisonment when “any Poison or other noxious Thing” is used to procure a miscarriage, and the MAP fitted that description, the heat was on. In 1981, the DHSS was busy devising the ‘new biology’ in order to smuggle the MAP past this 1861 Act. Imagine some of the frenetic discussion in Whitehall. We know the human embryo is alive and that the MAP can work post-conceptually, and therefore it can prevent implantation, and therefore it can halt a pregnancy, and therefore it can procure a miscarriage, and therefore it can cause an early abortion, and therefore it is an abortifacient, and therefore it is illegal. Oh, what can we do? Why not say that pregnancy has not occurred until the embryo has implanted – then implantation, rather than conception, could be renamed as the start of a pregnancy, then all will be OK. Then the MAP cannot possibly be called an abortifacient – after all, how can it possibly procure a miscarriage, when there has been no pregnancy? ‘Early abortion’ can now be renamed ‘emergency

contraception'. Hooray, the MAP is legal – let's hope the general public doesn't notice our little lexical engineering.

And that is exactly what has happened – words have suddenly been given new meanings. Despite the fact that the embryo is carried by the mother before implantation, they now say that 'carriage' does not begin until implantation. In defiance of common sense, they say something cannot be carried unless it is actually attached to the person. But what about the pound coin in my pocket? And what about the woman, who is carrying an embryo, between fertilisation and implantation – if, under the rules of the 'new biology', she is now not pregnant, then what is she?



## 1.6 Challenging the ‘new biology’

Those who espouse this ‘new biology’ are at loggerheads with the ‘old biology’. Typically, these new biologists raise, what they consider to be, four insurmountable problems with the ‘old biology’. They believe these prove, beyond all doubt, that pregnancy begins at implantation and not at fertilisation, and thus they eagerly reject the grand status of the early, unimplanted, human embryo. These so-called ‘problems’ will be dealt with now.

### 1.6.1 The non-problem of living gametes

Some ask, “What is so special about fertilisation? If it were to mark the beginning of human life, then what about the precursors of zygotes, namely, sperm and ova? Surely they should be regarded as the real beginning? After all, they are human and they are alive. Why disregard them? Why not give them special protection too?”

While it is true that human embryos, sperm and ova can all be considered to be alive, this raw statement needs a crucial addendum. The embryo is alive *and* growing – indeed, the processes of multiplication, differentiation and specialisation are diagnostic of this new human life. On the other hand, sperm and ova are unable to replicate, or reproduce, or genetically express themselves. They

will die rapidly unless they are kept alive artificially. And no matter how long they survive, sperm and ova will always remain as single cells. By contrast, the living human embryo is entirely different. It is already an embryonic member of the human race. It already possesses the intrinsic powers and potentialities to become a mature member of *Homo sapiens*. Nothing else needs to be added – all that is required is nutrition and a non-hostile environment.

So the truths of the ‘old biology’ can never be written off by playing the ‘gametes card’.

### **1.6.2 The non-problem of embryo loss**

The argument runs something like this – because not every human embryo results in a live birth, such natural wastage, they say, is indicative of a loss of some fairly unimportant human material.<sup>107</sup> ‘Mother Nature is prodigal’ is their typical slogan. Or put another way, they say, “If Nature can be so wasteful of early embryos, then surely so can we too? Why bother to protect something so tiny?”

This is a strange argument. At least three objections can be raised. First, just because something is tiny, does not make it invaluable – think of diamonds. Second, everyone knows that not all embryos result in born children – natural miscarriages occur. Is anyone therefore seriously suggesting that, because of such natural embryonic and fetal loss, we could, or even should, deliberately destroy the unborn at any time from fertilisation right up to birth? Third, the logical extension of this argument is that because we are all eventually going to die, why not legalise murder now?

It is also true to say that very little evidence has been produced to support the claim that many embryos are lost before implantation. The time between conception and implantation is not transparent to scientific study and little is known about it. Those who use this argument cannot be confident in what they claim.

### 1.6.3 The non-problem of twinning

Some have argued that the occurrence of identical, or monozygotic, twins, that is, when a zygote, or an early embryo, splits into two, proves that we cannot be sure that we are dealing with just one individual until that twinning process has ceased to occur, which is generally considered to be at implantation. Therefore, implantation rather than fertilisation, should be regarded as the start of the life of any individual human being.

At least three objections can be raised. First, if twinning does occur at a time subsequent to fertilisation, why does that matter? Now there are two individuals, two embryonic human beings. But before that, what was there? Since conception there was never none – there was always at least one. Natural cloning has occurred and one has somehow become two. But the ‘original’ was always a true living, human being – it was never a nothing waiting to become two somethings: “There are clearly two embryos with two destinies in the embryo which twins.”<sup>108</sup> Second, implantation cannot be regarded as the determining point on the basis that the twinning process is complete by then because Siamese twins remain joined beyond implantation, and indeed beyond birth. Third, our understanding of the twinning process is poor. Twinning may take place as early as the two-cell stage on day 1, or later. It may be that the ‘trigger’, or the determinant, for twinning is actually present at fertilisation. After all, it is clear that there is a genetic component in twinning, which must have been present at fertilisation. So what is more correct to say is, that twinning is observable later on, not that it necessarily commences later on.

### **1.6.4 The non-problem of in vitro fertilisation (IVF)**

Some claim that in assisted reproductive techniques, like IVF, because fertilisation occurs outside the womb, the mother cannot be considered to be pregnant until the embryos are transferred and they implant in her womb. Hence fertilisation and pregnancy must be different.

At least two objections need to be considered. First, it should be noted that fertilisation has occurred (after all, it is called *in vitro fertilisation*) and a human life has indeed begun, albeit outside of the mother. So although she has not conceived in the conventional sense, a living human embryo has certainly been conceived, otherwise just what is it that the embryologists are so carefully transferring to the mother a few days later? Second, consider what might one day become a technological reality – total extra-uterine gestation, the artificial bringing to term of a child outside the womb. The entire pregnancy would take place in artificial conditions, yet the child would still be a child from his or her conception.

### **1.6.5 The MAP and disinformation**

Most will agree that these four ‘new biology’ arguments are pretty feeble – they are certainly not sufficient to rewrite biology and re-educate us all.

Over the years these problems and falsehoods surrounding the MAP have been consistently challenged, yet never convincingly answered by MAP proponents. In particular, the crucial argument that pregnancy begins at implantation and therefore that the MAP does not have an abortifacient action, remains the outstanding focus of disinformation.

In February 2002 the Government was challenged over the lawfulness of the supply and use of the MAP. A Judicial Review was ordered, so the High Court had the opportunity to judge and comment upon these two outstanding issues. The judge ruled that

the supply and use of the MAP is lawful.<sup>109</sup> A press release issued by the Department of Health on 18 April 2002, reported that “In his decision Mr [Justice] Munby upheld the statement made to Parliament by the then Attorney-General, Sir Michael Havers, on 10th May 1983 confirming the lawfulness of the supply and use of emergency contraception (the morning after pill). He stated that *the prevention of implantation which is brought about by emergency contraception products* does not amount to procuring a miscarriage under sections 58 and 59 of the 1861 Act.” [emphasis added]

The press release continued: “This case hinged on the definition of when pregnancy begins. The established medical view is that pregnancy begins at implantation not when an egg is fertilised.”<sup>110</sup> Therefore, MAP proponents can join with “...the Government’s long held position that a pregnancy begins at implantation not when an egg is fertilised. Emergency contraception works before implantation and cannot cause an abortion if taken post implantation.”<sup>111</sup> That is why the manufacturers of the MAP can boast that it “...stops a pregnancy before it is established.”<sup>112</sup>

Readers will appreciate that we are now getting to the very heart of the matter – the nature and status of the human embryo.



Part 2  
Confronting the  
central issue

# 2.1 The central issue

## 2.1.1 The nature and status of the human embryo

How we judge the MAP, whether we think its use is right or wrong, will ultimately be determined by our knowledge and understanding of the nature and status of the human embryo. In short it will depend on how we answer this crucial question: “What is a human embryo?” Likely answers will include: it is a living human being; it is a collection of cells; it is ‘one of us’; it is a potential human being, and so on.

So, what is a human embryo? If the MAP disrupts the progress of a ‘fertilised egg’, consisting of a tiny cluster of undifferentiated cells, then that seems a fairly trivial matter. However, if the MAP ends the life of a human being during embryonic development, then that is an entirely different affair. All of us should be nervous and bothered about such a momentous question.

This central issue needs unpacking carefully because so much depends upon it. It is not just our response to the MAP that is at stake here, but also our attitude towards embryo experimentation, assisted reproductive techniques, such as IVF, as well as therapeutic and reproductive cloning, because these and other procedures entail the deliberate destruction of human embryos. This is no small matter. We cannot agree with John Guillebaud, one of the UK’s leading experts on



contraception, who has sought to play down these concerns: “It seems to me that a lot of the arguments are just about definitions.”<sup>113</sup> But definitions are the very way we express truth – they are essential to its understanding and communication. We therefore ignore definitions at our peril. In the context of defining the human embryo, it has been said that: “Calling things by other names to suit the arguments will fool no-one.”<sup>114</sup> But sadly we have already seen what lexical engineering can do.

### **2.1.2 Why are people so confused and confusing?**

People can be dreadfully confused about the beginning of human life – how strange it is that we can be so uncertain about when and how we all began. Some intellectuals consider it a virtue to be ‘uncertain’ and ‘ambiguous’ about such matters, moral philosophers talk about ‘personhood’ or ‘consciousness’, scientists search for ‘primitive streaks’ or ‘ethically relevant characteristics’, and bishops hypothesise about ‘ensoulment’ or ‘the divine spark’. Others regard birth, or twenty-eight weeks, or viability, or fourteen days, or implantation as the decisive event at which human life begins. The very range of these possibilities demonstrates just how arbitrary each of them really is. Suppose, for example, that fourteen days is the answer. What then is present a day before? Is it non-human life? What about an hour, or a minute before? Is it then human non-life? Can you see the philosophical, let alone the practical, problems produced by these options? None is sufficient to count as the defining moment, before which, there was something of no consequence, but after which, there is valuable human life. Can anyone say, without intellectually blushing, “Before this or that developmental event, I was not, but after it, I was”? These, and a host of other ingenious beginning-of-life markers, are ethical smoke screens. The truth is that, for many, the real answer is simply too simple.

Being vague about the beginning of human life, and *ipso facto* the status of the human embryo, is not a virtue. Such a deliberately agnostic stance empowers men and women to destroy human embryos, and, at the same time, it allows them to continue in the self-deception that they are acting entirely honourably, both intellectually and bioethically. Their erroneous views allow them to evade the reality of their actions. They can then say: “If the MAP is not an abortifacient, then how can dispensing it be wrong?” and “If the MAP cannot terminate a pregnancy, then how can preventing an embryo from implanting be unethical?” This is what the culture of death does – it bends the truth, it redefines reality, and it encourages people to deceive themselves, and others.

## 2.2 Six different answers

The central question is: when does human life begin? The correct answer to this will have ethical, philosophical, biological and theological features. But how are we to know the correct answer? The Christian will, above all, be interested in what the Bible has to say. This will be examined later. First, there are six of the favourite and most enduring of the confused and confusing answers to consider; these will be briefly reviewed, and refuted.

### 2.2.1 The potential answer

While denying full human status for the human embryo, some would maintain that the embryo does have potential – the potential to ‘become’ a human life. But this argument hugely underestimates the true nature and functioning of the human embryo.

Consider four objections. First, there is the origin of the gametes involved – the resultant embryo must already be undeniably human – it is genetically programmed to be nothing other than human. Second, it is undeniably alive – multiplication, differentiation and specialisation are already occurring. The living embryo is already enjoying human life. Third, some will say that it does not look human, meaning, it does not look like a pre-born or newborn child. This is true. Rather,

it looks exactly like an embryonic human, because that is precisely what it is. Fourth, given the opportunity to develop, the embryo will become nothing other than what it essentially already is, namely, a human being. The three adjectives that most accurately describe this entity are, ‘human’, ‘living’ and ‘embryonic’.

So, the answer based on ‘potential’, though beloved by some, is essentially flawed because it belittles what is already present and it detracts from what is already happening. A human embryo is not a potential human being; it is *a human being with potential*.

### **2.2.2 The incapable answer**

It is argued that human embryos are incapable of certain human functions and therefore that they should not be treated as being fully human. For example, it is generally conceded that they cannot communicate or form relationships (though in the light of the recently-discovered signalling between embryo and mother, as previously discussed, this might now be seriously questioned). It is obvious that human embryos cannot do all that a human adult can do. But why should early embryos be assessed by the marks of mature adulthood? Of course, the simple answer is that it is adults who are doing the judging. Yet, judged by those criteria, it is not only embryos, but also babies, the comatose and many elderly people who would be regarded as incapable, and therefore non-human. To determine the value of human beings by what they can, or cannot, do, rather than by their God-given dignity and status, is a sure step onto the path of prejudice and discrimination.

This incapable argument can also appear under another muddling guise, namely, theological dualism. Dualism maintains that true human beings are composed of the physical and the spiritual – they have a body (the material part) and a soul (the immaterial part). And unless the soul is present, a proper, valuable human being cannot exist.

This harks back to the errors arising from the writings of Aristotle and the arguments surrounding ensoulment (see pages 60-61).

The first point to note is that the Bible does indeed teach that all those made in the image of God possess ‘a body’ and ‘a soul’<sup>115</sup> (sometimes also referred to as ‘a spirit’ – compare, for instance, John 12:27 and 13:21 KJV/ESV). These are distinct, but not opposed. The Bible teaches duality not dualism. Second, the teaching of the Bible is that each of us is a body-soul “unity-in-duality”<sup>116</sup> – you *are* body and soul. Thus when Adam “became a living being” (Genesis 2:7) the Hebrew word *nephesh* can also be translated as ‘soul’.<sup>117</sup>

Arguments founded on incapability and dualism are wrong because they are derived from a faulty understanding of the nature of human beings.

### 2.2.3 The gradualist answer

Many people would argue for a ‘gradualist’ approach, that is to say, that as the embryo or, from about 8 weeks onwards, the fetus develops, they become progressively more human, more valuable. For example, the Warnock Committee concluded that destructive experimentation could be conducted on human embryos up to 14 days, but after that time, when the primitive streak has appeared, such experimentation must be halted.<sup>118</sup> At the other end of the spectrum are people like Helga Kuhse and Peter Singer, who are quite happy to recommend that the unborn, and even the newborn up to 28 days after birth, should be killed if they cannot demonstrate certain ‘normal’ human attributes.<sup>119</sup> Others favour other criteria, such as viability, the appearance of blood or brain waves, 24 weeks (as the upper limit of most UK abortions), and so forth.

Two aspects must be firmly grasped. First, all of these criteria are always entirely arbitrary – they have been plucked out of the air. Take, for example, the 24-week limit. There is nothing especially significant that occurs at 24 weeks in the developing pre-born – a

multitude of processes are already in full swing. This upper limit for current abortions in the UK (between 1967 and 1990, it was arbitrarily set at 28 weeks) was decided upon simply to reflect the ever-decreasing age of survival of premature babies – after all, we would not want to abort a viable baby, would we? Similarly, the Warnock Committee decided that 14-days was significant. However, the Committee recognised that this was an arbitrary limit, opting for 14-days not because of some rational argument, but because “...we agreed that this was an area in which some precise decision must be taken, in order to allay public anxiety.”<sup>120</sup>

Second, these gradualists’ criteria make for philosophical as well as biological nonsense. What is the essential difference between a 24-week-old child and one who is 23 weeks and 6 days? Or what about the 14 and the 15-day-old embryo? The answers are nothing, and again, nothing! And, anyway, how precise is the timing of these different developmental stages? Embryonic development, like all human development, varies from individual to individual.

How many modern men and women are seduced by the gradualist answer! Initially, it has some attraction because we all get increasingly excited by the positive pregnancy test, then the first scan, then the kicks from within the womb, and so on. But these gradualists, while obsessed with the thought of the embryo or the fetus developing and thus ‘becoming’ a human life, close their eyes to the key fact – that that life has already ‘become’, it has already begun.

## **2.2.4 The modern medical ethics answer**

The ethics and practice of medicine were founded upon a combination of the Hippocratic Oath and the Judaeo-Christian doctrines. These two grand ethical pillars undergirded medical practice for 2000 years and more. They kept it safe and beneficial, and they prohibited the deliberate taking of human life, specifically, by abortion and euthanasia. In 1949, in the wake of the Nuremberg trials, these traditional ethical

codes were reiterated in the form of The Geneva Convention Code of Medical Ethics. It included the following statement: “I will maintain the utmost respect for human life from the time of conception; even under threat. I will not use my medical knowledge contrary to the laws of humanity.” The world, and doctors in particular, were left in no doubt about what this meant – the hope was that unethical medicine, as perpetrated during the Nazi regime, would never again be practised.

However, today’s medical ethics has largely departed from these traditional robust roots. Now it is mostly governed by fuzzy philosophies, such as, situation ethics and secular humanism. And because its ethics are now so feeble, its practice has inevitably become unprincipled – today, medicine is a much more dangerous enterprise, especially for human embryos.

Therefore, there will be no satisfactory answer to be found from modern secular medical ethics – it has been corrupted.

### **2.2.5 The modern moral philosophy answer**

The remit of the Warnock Committee was to resolve some of the great bioethical questions concerning human embryos. Faced with the greatest question of all, namely: “when does human life begin?”, it meaninglessly concluded that “...when life or personhood begin... are complex amalgams of factual and moral judgements. Instead of trying to answer these questions directly we have therefore gone straight to the question of *how it is right to treat the human embryo*.”<sup>121</sup> The authors of *The Warnock Report*, like many others, preferred to duck that great question by pretending that it is an unfathomable, philosophical issue, somehow beyond human comprehension. Yet amazingly, having signally failed to answer this momentous question and thereby resolve the debate over when human life begins, and thus, the status of the human embryo, *The Warnock Report* pragmatically moved on to consider how the human embryo should be used and

treated. But how can you prescribe treatment if you are unsure who or what you are treating? This is moral philosophy at its very worst. Such evasion, deception and fudging of the issues discredits the whole enterprise. The world of the 1980s was waiting for answers – Warnock sidestepped the question.

So how did the members of the Warnock Committee regard the human embryo? Their Report states: “We found that the more generally held position, however, is that though the human embryo is entitled to some added measure of respect beyond that accorded to other animal subjects, that respect cannot be absolute...”<sup>122</sup> And it recommended “...that the embryo of the human species should be afforded some protection in law.”<sup>123</sup> So, according to *The Warnock Report*, the human embryo is a ‘sort of’ human being, worthy of some respect and protection. This seems meaningless, especially since the Committee was happy to recommend that human embryos can be used as laboratory material, as long as they are destroyed after fourteen days. The outcome has been a new fashion for deliberately destroying human life on an unprecedented scale. You are entitled to ask, “Where is the ‘respect’ and ‘protection’ in that?”

Sadly these quasi-arguments derived from *The Warnock Report* have become embedded in much of the world’s thinking and practice with regard to the human embryo. Therefore, there will be no sufficient answer to be found from modern moral philosophy – it has become bankrupt.

### **2.2.6 The ‘new biology’ answer**

This argument has been examined in the preceding pages – that human life does not begin until the embryo implants in the womb. But it is a matter of indisputable fact that the product of human fertilisation, formed when an ovum is fertilised by a sperm, is a single-celled



zygote, which is alive, human and genetically unique. It is the way that you started your life.

### **The answer from the Bible**

There is one final source – the Bible, the ultimate frame of reference for all mankind. As Schaeffer and Koop so neatly put it: “God gives the pages, and thus God gives the answers.”<sup>124</sup> Now this does look promising!

## 2.3 The answer from the Bible

This section must be approached with some caution. First, the Bible is certainly not a textbook of embryology or medical practice. But neither is it silent on these matters. The Bible contains sufficient truth to guide us in all matters of faith and practice, and hence, in these bioethical issues too. In other words, the Bible is not exhaustive, but it is sufficient – it does not tell us everything, but it does tell us enough.

Second, the Bible has a wonderful unity and its true meaning and teaching on any particular topic is determined, not from an isolated verse or two taken out of context, but by comparing and contrasting all of its content, concepts and themes. So what follows is not an attempt at simplistic ‘proof-texting’ but rather the exegesis, albeit briefly, of several key passages. The outcome of examining these verses is an insistent authority and an irresistible momentum that will constrain us to conclude that the Scriptures teach: first, that human life does indeed begin at no time other than at conception and second, that all human life from day one onwards is special and precious, to be protected and cherished. In other words, the nature and status of the human embryo are clearly delineated.

### 2.3.1 The nature of man

There is no place to start like the beginning. And the foundations of a proper view of the nature and status of all human life are laid out on the opening pages of the Bible. Genesis 1:27 explains that man is made in the image of God – we all bear the *imago Dei*, which makes us special and it makes us distinct from the rest of the created order. Men and women, boys and girls, all human life is extraordinarily distinguished in that we all can know our Creator.

This great doctrine also explains the purpose of redemption, culminating in the Cross. Why has God been so determined to rescue us, at such an immense cost? Would He have launched such an extravagant rescue mission for something insignificant or of trifling worth? No! God made man as the pinnacle of His creation. We have extrinsic dignity – derived from the intrinsic dignity of the one whose image we bear.<sup>125</sup> That is why we are all unique and we are all special – we are the bearers of the *imago Dei*.

That is the glorious privilege of being a human being. But there is also a sinister downside, something ugly about being human. It is sin; that transgression of the moral law of God; our rebellion against our Maker. King David makes clear this foundational Christian truth. He confesses: “Surely I was sinful at birth, sinful from the time my mother conceived me.” (Psalm 51:5.) Furthermore he declares: “All have turned aside, they have together become corrupt; there is no-one who does good, not even one.” (Psalm 14:3.) Here are the two-fold inglorious conditions of every human being – sinner by nature *and* sinner by practice.

First, man is a sinner by nature. Sin is not just an annoying stain that we have somehow acquired from somewhere during our development. Sinfulness is that inevitable and integral part of me that arose as soon as I became a full and comprehensive member of the human race. And when did that occur? At conception, “...from the time my mother conceived me.”

And, second, there is worse to come, because this sinful nature cannot help but sin. All of us are sinners, not just by our nature, but also by our practise. As soon as we are born, we practise, we commit, sins. Nobody taught us – it came entirely naturally because we are sinners by nature. We cannot do otherwise. Just as oak trees produce acorns, so sinners produce sins. It is the expression of our true fallen nature.

When it comes to defining the nature of human life, Scripture repeatedly returns to these two foundational doctrines of ‘made in the image of God’ but ‘sinner by nature and practice’. And both of these doctrines presuppose that human life begins at conception, otherwise the whole Bible begins to make no sense whatsoever. These two pivotal doctrines are further developed throughout the Book by, for example, expounding the remarkable themes of God’s foreknowledge, God’s incarnation and God’s redemption. Understanding these themes will lead to a greater understanding of human life and its beginning.

### **2.3.2 The foreknowledge of God**

Foreknowledge is one of the attributes of God – Scripture abounds with this truth. Yet for us it remains a largely incomprehensible trait. How can we grasp that God knows the end from the beginning? Then again, without such an attribute, how could He ever be sovereign and worthy of the title, God?

Well, something of this great truth can be unravelled by starting with Genesis 25:21-26, which narrates the pre-born and newborn lives of Esau and Jacob. These twins in Rebekah’s womb are described not as vague non-entities, nor simply as bits of biological material, nor even potential lives. No! In the foreknowledge of God they already possessed personality and significant purpose – they were to become two great leaders, the progenitors of two vast nations (Genesis 25:23). The omniscient God already possessed the foreknowledge of the

entire lifespan of these two boys – from womb to tomb – and He communicated something of it to their mother.

Similarly, in Jeremiah 1:5, God states: “Before I formed you in the womb I knew you...” In the foreknowledge of God we each, like Jeremiah, have – from eternity – an identity and purpose in the Creator’s mind. That is, we all have a ‘pre-history’. The physical outworking of this begins for us at fertilisation. It is therefore evident that God oversees our entire prenatal and postnatal life.

Grasping something of the foreknowledge of God gives an insight into the ways and purposes of God. Here, we are arguing for the highest status to be assigned to the human embryo simply because that life comes into being materially at fertilisation – but in the foreknowledge of God, we have been known and purposed by Him long, long before that landmark event. He not only foresees what we will be; He ordains it. If He so carefully superintends all human life, how can we ever be dismissive of the human embryo?

### **2.3.3 The incarnation**

The themes of the beginning of human life and its inherent value are expounded, perhaps above all, in the incarnation of the Lord Jesus Christ. It is a cardinal truth of Christianity that the Second Person of the Trinity became a man. “The Word became flesh and made his dwelling among us” (John 1:14).

This incarnation did not suddenly occur in that stable at Bethlehem. It started nine months earlier. In Matthew 1:20 Joseph is told that “...what is conceived in her is from the Holy Spirit.” Mary was carrying the embryonic Immanuel: the ‘God with us’. Here indeed is “very God and very man”.<sup>126</sup> And how did the incarnated God start His earthly life? As a zygote – just as we did. As the writer to the Hebrews affirms, “...he had to be made like his brothers in every way...” (Hebrews 2:17). True, His conception was different

from ours, in the sense that it occurred without human sperm. Yet it is conception that remains the common start of all human life – His was supernatural, ours was natural.

A few days after receiving this astonishing news, the newly-pregnant Mary goes to meet her cousin Elizabeth, who is six months pregnant with John the Baptist. The pregnant women greet one another, but John the Baptist, as a spiritual being, recognises that he is in the presence of the Christ-child, albeit as a two-week-old embryo, and what does he do? He leaps for joy. The two pre-born boys are already demonstrating what it means to be fully human, spiritual beings, bearers of the *imago Dei*. In the meantime, Elizabeth, filled with the Holy Spirit, exclaims that Mary is indeed “...the mother of my Lord...” (Luke 1:39-45). Here is post-incarnational, prenatal recognition, and holy joy.

The Bible’s account does not permit us to believe that deity was somehow poured into Christ’s body at a later date, or that this ‘mere man’ was subsequently promoted to become the Son of God. The plain truth is that Jesus was incarnated at conception, as a zygote, fully God, yet fully human. All else is heresy. *And the theological upshot is that we too began our human lives at conception.* There is no room for reckoning that we somehow became human at a later date, or that personhood was subsequently attached. The Bible knows of no gradualism.

If you doubt that human life begins at fertilisation, or if you regard the human embryo as a mere thing, then you have a fundamental argument with Scripture. Many of the major doctrines of orthodox, historic Christianity – among them, the nature of man, the foreknowledge of God, the Incarnation and our redemption – depend four-square upon these propositional truths.

### **2.3.4 The work of redemption**

Hebrews 2:17 is a key verse that links both Christ's incarnation and His work of redemption. Part of the amazing condescension of Christ for His people is that He "...is not ashamed to call them brothers" (Hebrews 2:11). From His incarnation onwards Christ, "...had to be made like his brothers in every way..." (Hebrews 2:17), meaning that His development, in utero and ex utero, from conception onwards, was entirely like ours, the only difference being that He did not possess our sinful nature – He "was without sin" (Hebrews 4:15). As a consequence, the Second Person of the Trinity became a true and full member of the human race from His conception until His death. Truly He was 'very God', but also 'very man'.

But there is something equally breath-taking here too. This "in every way" incarnation means that He also was composed of flesh and blood, just like us (Hebrews 2:14). And herein lies the genius of God's plan of redemption – this incarnated Christ was to become our High Priest, but more than that, this incarnated Christ was also to become our Redeemer. That role required flesh and blood (Hebrews 9:11-28). Without such flesh and blood, how could His great work of salvation ever be accomplished? Without torn flesh there could be no shed blood, and so there could be no propitiation. Therefore the wrath of God could not be appeased, so there could be no forgiveness for us. Can you see the sheer immensity of it all? Without this incarnated Christ, there is no flesh, no blood, no sacrifice, no redemption, no hope – no Christianity. And this incarnation all started with a zygote!

### **2.3.5 The continuity of human life**

And there is still more to consider. Human life is a continuum from fertilisation until natural death. Neither the Bible nor biology knows of any stage or event that is so definitive that it can be said, "Before

this, I was not, now I am.” In other words, there is a demonstrable continuity throughout each human life.

This continuity theme is brilliantly expressed in three ways in Psalm 139:13-16. First, King David acknowledges God’s creational oversight of his earliest days: “For you created my inmost being; you knit me together in my mother’s womb.” It is God the Creator who directs and purposes the beginning of prenatal life.

Second, there is the repetitive use of the personal pronouns, ‘I’ and ‘me’. This usage establishes the continuity of life between the adult David and the just-conceived David, as both the writer and the subject of this Psalm. At whatever stage and whatever age, whether in the womb or on the throne, it was always David. In other words, once fertilisation has occurred, there is a real, live human being, whether it is David or you, launched onto the continuum of zygote → morula → blastocyst → embryo → fetus → unborn child → born baby → infant → toddler → teenager → adult. Scripture and biology simply reinforce one another.

Third, there is an additional couplet of pronouns here, that of ‘I’ and ‘you’. This is a most intimate expression of a man (‘I’) knowing God, as well as a man being known by God (‘you’). The created and the Creator are in communion. This is the most profound demonstration of what it means to bear the *imago Dei*. We are never just a potential human being, we are, from conception onwards, a real human being already possessed of innate value and dignity.

These verses of Psalm 139 are a remarkable articulation of God’s intimate involvement in the conception, continuance and consummation of every individual human life.

This continuity theme is reinforced in the New Testament when Luke, the doctor, uses the one Greek word *brephos* for Elizabeth’s pre-born child (Luke 1:41, 44), as well as for the newborn Christ child (Luke 2:12,16), and also for the young children brought to Jesus



for blessing (Luke 18:15). Scripture knows of no discriminatory developmental demarcations, in either prenatal or postnatal life.

It must be added that these are not the only passages of Scripture relevant to the issues of early human life. For example, Jeremiah 20:16-18; Job 3:16; and Job 10:18-19 are fascinating passages, and there are many others which bring additional weight to the arguments already established here.

### **2.3.6 The historical Christian perspective**

Of course, the early church, unlike us, had no detailed knowledge of embryology. Furthermore, human life was a very cheap commodity in many of the ancient civilisations – infanticide, abortion and euthanasia were widely practised. So it is perhaps surprising that the Old Testament people of God, as well as the New Testament Christians, held such a high view of human life and, almost without exception, strove to protect it. And their reasons for doing so, and thereby resisting the practices of their surrounding cultures, were based solely on the teachings of the Bible, particularly those outlined in the previous pages.

Furthermore, these people of God were fully persuaded of the continuity of human life and they therefore made no distinction between pre-birth and post-birth life. As Brendan McCarthy states: “Even if the ancients had little understanding of embryology, they did understand the difference between a fully formed fetus, about to be born, and the early embryonic ‘seed’. They understood that conception took place nine months before birth and that the early embryo was very different in size and form from the later fetus. The fact that they make no distinction in their arguments, but assert that abortion is murder, indicates that we may view early-church tradition as supporting the view that the human embryo should enjoy a status equal to that of a child or adult.”<sup>127</sup>

Moreover, as already noted, it was these self-same Judaeo-Christian doctrines that, together with the Hippocratic Oath, buttressed the ethics and practice of early medicine in the West and then kept life in the womb largely safe for the next twenty centuries and more. That is no small feat and we should be proud of, and humbled by, such a rich heritage.

Thus the ancient people of God were constantly and consistently exerting their influence as salt and light within their own generations. Again, this can be seen in relation to the practice of infanticide. At the time of the ancient Israelites, it was commonplace for children to be sacrificed to Molech, “the detestable god of the Ammonites” (1 Kings 11:5). Yet this practice was resolutely denounced by the Jews, who upheld the death penalty for any parent committing such a crime (Leviticus 20:2). However, it must be conceded that, during times of disobedience, even some of these Israelites were involved in such heinous acts (Jeremiah 32:35).

Similarly abortion was widespread in the Graeco-Roman world. Yet the early church’s opposition to the practice was so universal and so staunch that many believe it was responsible for purging abortion from the Roman Empire. William Lecky asserts that: “With unwavering consistency and with the strongest emphasis, they denounced the practice, not simply as inhuman, but as definitely murder.”<sup>128</sup> The *Didache*, an early Christian teaching manual, stated bluntly: “You shall not commit infanticide, nor procure abortion.”<sup>129</sup>

In the Graeco-Roman world, abortions were procured either by crude mechanical means, or more commonly by the use of abortifacient drugs, the so-called *pharmakon*, often in the form of pessaries. One of the leading gynaecologists of the time, Soranos of Ephesus (AD 98-138), classified these abortion methods as either *phthorion* (which destroys what has been conceived) or *ekbolion* (which expels what has been conceived).<sup>130</sup>

The Greek word used for the medical practice of the times, in the *Didache* and elsewhere, was *pharmakeia*. This was often ‘folk medicine’, which embraced abortion, linked to occult practices. In English versions of the Bible this word has generally been translated as ‘sorcery’ or ‘witchcraft’. For example, in Galatians 5:20, the apostle Paul condemns the practitioners of such ‘medicine’.<sup>131</sup> John Noonan considers that “Paul’s usage here cannot be restricted to abortion, but the term he chose is comprehensive enough to include the use of abortifacient drugs.”<sup>132</sup>

Similar condemnation occurs in the pagan Hippocratic Oath, which forbade doctors from giving lethal drugs. It included a pledge “...not to give a deadly drug [*pharmakon*] to anyone if asked for it, nor to suggest it. Similarly, I will not give to a woman an abortifacient pessary”.<sup>133</sup> The ‘deadly drug’ undoubtedly included a range of poisons used to perform acts of euthanasia, but, according to Soranus and other first-century medical practitioners, it also included an assortment of forbidden abortifacients (*phthorion*).<sup>134</sup>

Into the second century, the same prohibitions were maintained. The early Christian theologian, Clement of Alexandria (AD 150-215), taught that Christians must not “...take away human nature, which is generated from the providence of God, by hastening abortions and applying abortifacient drugs [*phthoriois pharmakois*] to destroy utterly the embryo and, with it, the love of man.”<sup>135</sup>

These examples support this simple thesis – the Old Testament people of God and the early church were united in upholding a high view of all human life. In practice, this meant that they were steadfastly and unambiguously opposed to abortion, infanticide and euthanasia. These people understood the Bible and they understood the quasi-medicine of their day. But, sadly, this robust biblical worldview was not to last.

### 2.3.7 Where did it all go wrong?

The downgrade started when the biological analysis of Aristotle (384-322 BC) influenced the theological analysis of early Christians. Aristotle said it was the soul which gave an organism its characteristic form. But in Aristotle's writings the 'soul' meant something different to what many people mean by it today: "The word '*psyche*', commonly translated 'soul', really has a wider meaning; plants as well as animals have *psyche*, they are also *living*."<sup>136</sup> Aristotle attributed a 'nutritive' soul (and therefore vegetative existence) to the earliest embryo; the later embryo was claimed to resemble an animal and have a 'sensitive' soul; and finally the formed fetus was said to be recognisably human and have a 'rational' or 'intellectual' soul. These features of the soul were, Aristotle claimed, added to the previous soul – which was not replaced.<sup>137</sup> Furthermore, Aristotle maintained that a fetus was not 'differentiated' until around the fortieth day if male, or the ninetieth day if female.<sup>138</sup> Subsequently a distinction was drawn by Aristotle's successors between an 'unformed' and a 'formed' fetus.<sup>139</sup> Aristotle himself advocated abortion as a means of population control "before sense and life have begun..."<sup>140</sup> and drew a further distinction between "effluxion" – the "destruction of the embryo within the first week..." – and "abortion [which] occurs up to the fortieth day..."<sup>141</sup>

The damage done by these beliefs derived from Aristotle has been widespread and enduring. Whereas Christians had previously rejected any such distinction, they began to accept the notion that the unformed fetus lacked full human status. The Aristotelian view on the biology of formation came to define "...the limits with which, in the later moral tradition, a fetus was held to be *formatus et animatus* and so indisputably human. And whereas the deliberate destruction of nascent human life at any stage was held to be morally offensive, the penalties were graded on the basis of that distinction."<sup>142</sup> However, Augustine (AD 354-430) accepted the distinction between 'formed'

and ‘unformed’ embryos, but did not believe this defined what was indisputably human and he opposed abortion.<sup>143</sup>

Aquinas (AD 1225-1274) has a similar distinction between the pre- and post-animated fetus.<sup>144</sup> Indeed, it has been argued that “Aristotle’s views on human reproduction acquired great historical weight in Christian Europe on account of their substantial adoption by the outstanding philosopher and theologian St Thomas Aquinas... It is true to say that Aristotle’s general views on the origin of the individual human being held sway from prior to Christian times right through to the Middle Ages and beyond for several centuries.”<sup>145</sup> In fact, it was not until the seventeenth century, when William Harvey (1578-1657) presented biological evidence, that Aristotle’s biological theories were finally discredited.<sup>146</sup>

For many today the development of human life resembles the Aristotelian belief in a delayed origin of the human being. Aristotle’s followers considered about 6 or 13 weeks (dependent on the sex) to be the decisive time. More modern alternatives include birth (about 40 weeks), viability (about 23 weeks), quickening (about 16 weeks), the detection of brainwaves (about 6 weeks), the appearance of blood (about 3 weeks) and implantation (about 1-2 weeks). And the most recent, and also perhaps the most pernicious example, has surfaced as the appearance of the primitive streak (about 2 weeks), as proposed by the Warnock Committee<sup>147</sup>, and subsequently incorporated into the Human Fertilisation and Embryology Act 1990 as the 14-day rule.<sup>148</sup>

### **2.3.8 The non-problem of Exodus 21**

This Aristotelian analysis also manifests itself in the erroneous reading of one particular passage in the Bible. Exodus 21:22-25 deals with the case of two men, who, while having a fight, accidentally injure a pregnant woman. The Septuagint rendered this passage so that if an ‘unformed’ unborn child dies, then only a fine is imposed,

whereas if the child is ‘formed’ and dies, then the assailant incurs the death penalty.<sup>149</sup>

This passage has become the cornerstone for those who wish to argue that Scripture asserts that the early (unformed) unborn child has a lesser status than the adult mother, or even that of the later (formed) child. Hence, an embryo, a fetus, an unborn child are of limited value, and certainly less than that of an adult. Hence, abortion and the destruction of human embryos are justifiable practices. For example, “...God does not regard the fetus as a soul [Hebrew *nephesh*], no matter how far gestation has progressed...[this] can be demonstrated by noting that God does not impose a death penalty for the destruction of a fetus...according to Exodus 21:22 ff. the destruction of a fetus is not a capital offense.”<sup>150</sup>

The argument centres on verse 22. Translations influenced by the Septuagint, such as the Revised Standard Version, have translated this to mean that ‘a miscarriage’ occurs – that is, the unborn child dies as a result of the damage inflicted by the fighting men. Even if this translation is correct, an offence has still been committed and it does not allow us to argue that the unborn child is not human. However, this is a most improbable interpretation for several reasons.

Correctly translated the verse refers to ‘a premature birth’ – that is, the unborn child is born alive, but simply unexpectedly early. The Hebrew noun used is *yeled*, which is a common word for ‘offspring’ or ‘child’, and the verb is *yatza*, which means ‘to go out’ or ‘to come forth’. It refers to the ordinary birth of children, as in, for example, Genesis 25:26; 38:28-30, Job 3:11 and Jeremiah 1:5, 20:18. In none of these instances is a miscarriage indicated. In fact, there is a perfectly good Hebrew word, *shakol*, for miscarriage, and it is found in Exodus 23:26 and Hosea 9:14, but not in Exodus 21:22.<sup>151</sup>

Furthermore, the word for ‘injury’ in this passage is non-specific, that is, it could refer to either the woman, or the child, or both. This means that the woman and the unborn child are to be treated equally:

the man who caused the injury is to be fined if the damage is minor, and if it is serious, then the compensation is an eye for an eye, and so on, the well-known *lex talionis*, the law of retaliation. The idea that a mere fine is levied when there is “no serious injury” could hardly describe a situation that resulted in a death by miscarriage. Indeed, this passage, far from demeaning the status of the unborn human life, actually elevates it by instituting penal sanctions against those who would damage or destroy such life. And those penal sanctions were to be the same as those that protected adult human life. Finally it should be noted that this passage deals with punishments for an *unintentional* assault upon unborn human life – an *intentional* assault would, of course, be treated more severely.

The case presented by those who claim that Exodus 21 proves that the unborn are other than “fearfully and wonderfully made” by God (Psalm 139:14), are of lesser value than the born, and can therefore be intentionally destroyed, is both illogical and unsound.

### **2.3.9 The serious problem of the Sixth Commandment**

Protection of human life is a recurring theme in Scripture. Uniquely in the created order it is only the lives of human beings that enjoy this special protection. The Sixth Commandment, “You shall not murder” (Exodus 20:13), stands out as a great beacon to protect all innocent human life. Killing is permitted in the cases of capital punishment, just wars and in self-defence, but killing of the innocent is strictly forbidden. Even the accidental killing of another human being was to be punished – the killer had to flee to a city of refuge (Numbers 35:6-34). And the builder of a new house had to construct a parapet around the roof to prevent someone falling off and killing themselves (Deuteronomy 22:8). How precious in God’s sight are those made in His image. According to Christ, anyone who merely hates another person is in breach of the Sixth Commandment (Matthew 5:21-22). And again the same stringent ethic appears in Romans 13:10: “Love

does no harm to its neighbour.” And who, it should be asked, is my neighbour?

Destroying an embryo is killing a ‘human being with potential’. It is wishing someone was dead – a straightforward breach of God’s law. At the very least, it is a form of hatred which flies in the face of the command to love our neighbour.

The non-negotiable prohibition on killing innocent human beings was originally set out in Genesis 9:6: “Whoever sheds the blood of man, by man shall his blood be shed; for in the image of God has God made man.” And what is the basis for this protective law? It is based not upon complex and specious arguments, rather it is grounded in this simple fact – we all bear the image of God, the *imago Dei*.

There is no school of thought, no religion, no book, no worldview that expounds the nature and status of all human life like Christianity and its Bible – providing a cohesive, robust and entirely reasonable set of answers. Biblical truths are reinforced by evidence from science, though philosophies often misuse science to contradict the Bible. That should surprise nobody – truth often has this uncomfortable habit of clashing with the thoughts and ways of men.

The next question is: on the basis of these truths, what can be done to protect and cherish all human life and overcome the disaster created by the MAP?



# Part 3

## Responding to the MAP

## 3.1 Reflecting on the damage

None can doubt that our world is a highly sexualised one – it is both precocious and promiscuous. ‘The Swinging Sixties’ were undoubtedly a watershed of licentiousness, but they neither created immorality, nor invented ‘sexual liberation’ – they merely fed and watered the seeds that produced this reckless growth. Now, at the beginning of the twenty-first century, we are reaping the dreadful harvest. And the fruits are typically rotten – the blight seems intractable.

It is epitomised by this epidemic of ‘teenage pregnancy’. Since 1999 the Government has responded with its plan to halve the rate of conceptions among the under-18s by 2010. It is a laudable aim, but the strategy is all wrong. It will never work. Over half way through the experiment the results look dreadful – the rate of teenage pregnancies is proving to be doggedly resistant to change. As the latest figures show, they decreased by only 1.4% between 2003 and 2004.<sup>152</sup> Despite the huge amount of money, so far at least £168m, being poured into the strategy, the under-18 conception rate has fallen by only 11% since it was launched – the Government’s final target for 2010 is 50%.<sup>153</sup> In a desperate response to these figures the Government has now lowered VAT on the MAP – to encourage its use even more!<sup>154</sup>

The centrepiece of the Government’s strategy, built around the MAP, is in dire straits. And even though the *rate* has fallen slightly,

the *number* of pregnancies has remained static since 1999. It may well be that population changes mean the 'rate' figure is deceptive.

David Paton's research has convincingly shown that increased access to family planning services does *not* lead to fewer teenage pregnancies (see pages 9-10). However, the rate of sexually-transmitted infections does increase, particularly when 'emergency contraception', namely the MAP, is more widely available (see page 12). And an increase in STIs points unmistakably to an increase in sexual activity.

Our conclusion has to be this – the MAP destroys embryos, but will not reduce the number of teenage pregnancies. Why? Because its promotion only encourages sexual activity amongst teenagers. One effect cancels out the other.

## 3.2 What can be done?

### 3.2.1 What about abstinence?

Giving more and more explicit sex education, to younger and younger children has not worked. Providing more accessible abortion has not worked. Supplying free condoms and contraceptive pills at doctors' surgeries, family planning clinics and schools has not worked. Distributing the MAP with, and then without, doctors' advice, has also not worked.

There is only one approach that is guaranteed to work – and that is abstinence. Abstinence teaching, within a moral framework, has to be the answer. Although abstinence education programmes vary considerably in approach and content – some seek to build teenagers' self-esteem, some teach respect for others, some include media campaigns, and some encourage pledges of abstinence – their common goal is to encourage teenagers to abstain from sexual intercourse. The best of them encourage abstinence until marriage; they promote marriage.

Most abstinence programmes are American in origin, such as *Choosing the Best* and *Not Me, Not Now*, and many are faith-based in format, such as *True Love Waits* and *The Silver Ring Thing*. Doubters say that such US imports will not work in the UK, because the UK

is not as religious as the US.<sup>155</sup> This criticism may be valid, but it is surely not a sufficient reason to reject all abstinence programmes *per se*.

Instead of such negative dismissal, it would be better to start by asking some positive questions. Does abstinence teaching really work? Do abstinence programmes reduce teenage pregnancies? Some, such as the Chief Medical Officer, Sir Liam Donaldson, are far from persuaded. He has stubbornly concluded that: “Evidence does not exist to suggest that abstinence approaches are effective.”<sup>156</sup> And he is not alone. On 7 May 2003, in the House of Lords, the Government was asked about the failure of much of the conventional sex education in the UK, and by contrast, the success of abstinence education programmes in the US and elsewhere. In reply a Government minister stated: “As regards the evidence from the United States, my information is that no abstinence-only programmes have shown strong evidence that they either delay sex or reduce teenage pregnancies.”<sup>157</sup>

But such gloomy pessimism is contrary to a growing body of evidence. For example, Trevor Stammers has surveyed several such programmes in the US and elsewhere. His conclusion is that: “... there is a wealth of evidence suggesting that abstinence approaches can be very effective in delaying the age of first intercourse, reducing unplanned pregnancy, and lowering rates of sexually transmitted infections.”<sup>158</sup>

In the United States since the early 1990s, the Government, as well as private and charitable organisations, have been investing serious money in abstinence education programmes. Since 1996 state and federal agencies have provided more than \$700 million of such funding.<sup>159</sup>

Has it been money well spent? Has it actually worked? According to the US National Center for Health Statistics (NCHS), between 1991 and 2003 the teenage birth rate for 15-17 year olds in the US fell by 42%.<sup>160</sup> That has to be good news. But is it proof that abstinence programmes work? Some attribute these falls to an increased use of

contraceptives, others say welfare reforms are the cause. Many still doubt that abstinence has played any part.

However, the evidence is fast becoming irrefutable. In the US the percentage of 14-18 year olds who had ever had sexual intercourse decreased from 54.1% in 1991 to 46.8% in 2005.<sup>161</sup> Many school and community-based abstinence programmes report continuing success.<sup>162</sup> The case for abstinence teaching is now rapidly shifting from the anecdotal to the hard factual. For example, compelling evidence comes from a recent analysis of data from the National Longitudinal Study of Adolescent Health of teenagers who had made virginity pledges. The authors stated that: “Adolescents who take a virginity pledge have substantially lower levels of sexual activity and better life outcomes when compared with similar adolescents who do not make such a pledge...”<sup>163</sup> For instance, teenage girls who made a virginity pledge were one-third less likely to experience a pregnancy before age 18, and pledgers have almost half as many sexual partners as non-pledgers.<sup>164</sup> While these statistics may not be entirely heart-warming, they are certainly heading in the right direction.

Or consider one of the most comprehensive statistical analyses to-date of US teenage sexual behaviour, derived from three national US databases. Overall, the researchers attributed 47% of the decline in US teenage pregnancy rates to improved contraceptive use, and 53% to decreased sexual experience, as promoted by abstinence teaching.<sup>165</sup> From now on let none dismiss or disparage abstinence programmes.

### **3.2.2 The case for abstinence – biblically and pragmatically**

Christianity unashamedly proclaims that sexual intercourse is a gift reserved for within marriage. And marriage is that lifelong, exclusive union of one man and one woman. In the words of the Bible: “Marriage should be honoured by all, and the marriage bed kept pure, for God will judge the adulterer and all the sexually immoral.”

(Hebrews 13:4). That is, there should be abstinence before marriage, and fidelity within marriage.

If sexual intercourse were kept within these boundaries, teenage pregnancies (apart from those who are married) would plummet, as would illegitimacy and sexually-transmitted infections. There would be a good deal less personal animosity, and a good deal more harmony within our society. What a happier world that would be! But we live in a fallen world. And in the West today only a minority seek to follow the rules contained in the Maker's Handbook, such as, "Flee from sexual immorality" (1 Corinthians 6:18) and, "It is God's will... that you should avoid sexual immorality; that each of you should learn to control his own body..." (1 Thessalonians 4:3-4). And so all of us predictably pay the price for the current widespread and blatant disregard of the Bible's sexual moral code. The Bible's teaching is so eminently practical and sensible. Sexual immorality is to be avoided, in fact we are to flee from it. Abstinence is to be taught and applied – pure and simple.

Yet, despite these self-evident truths, plus the evidence from the US and elsewhere, UK critics continue to scoff at the very idea of abstinence education.

But sooner or later the political, medical and media establishment will have to admit that abstinence teaching is the answer. How many more years of a failing pill-and-condom culture we must endure is anyone's guess. Sadly, in the meantime, more and more of our children will continue to be physically and psychologically damaged by this perverse public policy.

The Government's September 2006 strategy document on teenage pregnancy continued to promote the wider availability of contraception. Yet it also said that public services should "...send clear messages to young people – boys as well as girls – on the negative consequences of having sex at an early age in terms of: the increased risk of unplanned pregnancies and STIs; the poorer health and education outcomes

for teenage parents and their children; and the high levels of regret reported by young people themselves...”.<sup>166</sup> The strategy supported “a strong focus on the benefits of delaying early sex.”<sup>167</sup>

This is not an admission that the establishment’s policy is wrong, and talk of ‘delay’ is not the same as promoting abstinence, but it may just possibly be a start. And others are now questioning the whole approach. Listen to what *The Sunday Times* journalist, India Knight, concluded recently: “I’m beginning to think that chucking free condoms about and giving children sex education classes at an earlier and earlier age is very possibly the cause of the problem, and not the remedy.” And, “Anyway, given that the liberal, here’s-some-more-information model has failed so dismally, there might well be something to be said for scrapping sex education and encouraging abstinence. It has worked in America.”<sup>168</sup> Such words are nothing but radical and heartening – when a prominent member of the chattering classes begins to doubt the wisdom of this embedded public policy, then hope arises.



## 3.3 What can I do?

Now is the time for the rest of us also to begin to think wisely, and then to act sensibly. That is the only way that we will overcome this MAP disaster.

Therefore the answer to this second question, “What can I do?”, is, lots. If nothing else this book has highlighted a huge (and growing) social problem. In fact, it is more than a problem – it is a real disaster. And this disaster continues to sit right on our doorsteps. None of us is immune. Whether we are parents, teenagers, grandparents, aunts, teachers, doctors, pastors, great-grandparents, neighbours, or just plain citizens, we are all affected. But being affected changes nothing. What can I do? There is a clear challenge and a duty laid upon all Christians and right-thinking people to be part of that answer. Let us consider just five groups.

### **3.3.1 The teacher**

Some readers will be schoolteachers – how we need good, moral teachers! You are probably with children for about seven hours a day, five days a week and thirty-six weeks of the year. That is a lot of contact time. Of course, you have to teach your charges specific subjects, but what do you also convey about the value of human life,

and how to live it? A huge amount of learning happens imperceptibly, from demeanour and attitude, and children are extraordinarily sensitive to this.

What can I do? The prospect of influencing the lives of children for good is a wonderful occupation. Most of us can name two or three teachers who brought transformation to our lives. Are you still striving to be influential? Are you concerned for the sex education policies in your school? Do you speak up? Do you care?

### **3.3.2 The medical professional**

Are you a nurse, a doctor, a health visitor, or a pharmacist? Then you are in the front line in the battle against the destruction of human life. You, perhaps above all others, will face huge ethical challenges. Often you are subject to the direction and whims of central and local governments, or the policies of local schools.

What can I do? Do I give in and sign up to the pill-and-condom culture? You are under no obligation to dish out the MAP – conscience clauses do exist.<sup>169</sup>

Confronted with these sorts of dilemmas, some take the easy route, and simply leave the profession. But that course of action solves very little, and it certainly is of no help to the next generation. Hang in there and struggle to uphold the value and dignity of all human life. Do not surrender! If you do, the situation will worsen immeasurably.

### **3.3.3 The church leader**

If you have been a church leader (minister, pastor, elder, or whatever) for the past few years, you may have taught your people effectively about the true nature of human life, and the place and purpose of sex. Then again, you may not.

The lack of clear proclamation of the whole counsel of God, including the Bible's standards of sexual conduct, is the cause of the low standard of holiness in churches and, ultimately, the decadence of our society. Even so, without the faulty and faltering witness of Christians, the current situation would be even worse.

What can I do? If you are preaching biblical sexual ethics, persevere. Resolve to be bolder and clearer. If however you have passed over or avoided these things, start preaching these urgent truths. Do not duck the issues. Determine to stand up for truth, warn the young, counsel their parents, make your church a haven for the lost and the confused. The preaching, and living out, of God's Word will have a huge impact for good.

### **3.3.4 The family**

It is one of life's greatest privileges to bear and to bring up children. And in the economy of God, parents, and the extended family, have huge responsibilities to teach, and to show by example, how the next generation should live. We dare not leave this task to outsiders.

What can I do? And none of us is excluded here. We cannot excuse ourselves because we have no children. The next generation lives all around us – we have the great task of commending truth and values to children. So, talk with them! Warn them of the dangers of sin; tell them of the delights of following God's law.

### **3.3.5 The teenager**

Of all the different groups of people mentioned here, you are at the centre of this issue. You are also the special target of the Government's Teenage Pregnancy Unit. The MAP is being aimed at you as never before.

What a complex world we live in! It is a dangerous world too. For example, smoking and drink-driving pose serious threats to your

health and you are urged to abandon such habits – you are pressed to abstain. But when it comes to sexual activity, which can also be seriously hazardous to your health, why do so few people promote abstinence? Is that not weird? And again, there are those in authority encouraging you to say “No” to narcotic drugs, like cannabis and heroin, and then, often the very same people, are persuading you to say “Yes” to drugs which cause abortions like the MAP.

What can I do? Resist peer pressure – do not be drawn in. Do not be fooled by the advertising and the hype of those who encourage early sexual activity. Save yourself. Wait. Commit yourself to abstinence until you are married. Is it worthwhile? Absolutely!

And what if these warnings come too late? What if you have already experienced early sexual intercourse? What if you have already taken the MAP? The good news is that there is forgiveness, if we confess our sins. Christ died on the Cross to bear the punishment you and I deserve for any and every sin. Yes, God’s love is an accepting love. It is also a transforming love. He then wants you and me to live and witness for Him. The best route for you is to determine to abstain from now on – to acquire what is often called secondary, or reclaimed, virginity. Ask for God’s help in these matters, and continue asking until you receive it.



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# The morning-after pill

Uncovering the truth

The morning-after pill is now more widely available than ever before. It is marketed as the ideal early solution to unwanted pregnancies. It is given a key role in the drive to combat teenage pregnancies.

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**Dr John R Ling** was a lecturer in biochemistry and bioethical issues at the University of Wales, Aberystwyth. He has lectured, debated, broadcast and written about bioethical issues for the past twenty-five years. He is the author of *Responding to the Culture of Death*, 2001; and *The Edge of Life – Dying, Death and Euthanasia*, 2002. His website is [www.johnling.co.uk](http://www.johnling.co.uk)



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