

PERSONHOOD: PROVING THE SIGNIFICANCE OF THE BORN-ALIVE RULE WITH REFERENCE TO MEDICAL KNOWLEDGE OF FOETAL VIABILITY

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1 Introduction

In South Africa, the common law born-alive rule provides that legal subjectivity will only vest once a person is born alive.¹ The present article has been prompted by a recent publication, by Pillay, that questions the relevance of the common law born-alive rule in the face of modern-day advances in medical technologies.² Pillay argues that, in view of advances in medical technology and science, the evidentiary difficulties that gave rise to the formulation of the born-alive rule are now eliminated.³ This argument rests on the fact that medical technology gives direct access to the developing foetus and its environment, and also enables medical practitioners to determine the nature and extent of any harm that may have been caused to a foetus prior to birth.⁴ On these grounds, Pillay then calls for the born-alive rule to be substituted by a definition of personhood which relies on medical science and technology (rather than legal factors) in order to include an unborn but viable foetus.⁵ Foetal viability is defined by Pillay as the point in foetal development at which the foetus can survive independently of the pregnant woman, and the author accepts that this occurs at 24 weeks' gestation.⁶

The author then goes on to argue that introducing personhood at the point of viability will assist in addressing the unequal power relationship shared by the foetus and pregnant woman in the context of termination of pregnancies.⁷ Pillay argues that the courts will also be in a position to adopt a more balanced approach when called on to resolve "maternal-foetal

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¹ T Boezaart *Law of Persons* 5 ed (2010) 11

² R Pillay "The Beginning of Human Personhood: Is South African Law Outdated?" (2010) 21 *Stell LR* 230

³ 232

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⁶ 236 n 56 Pillay relies on K Moodley "Feticide and Late Termination of Pregnancy: Five Levels of Ethical Conflict" (2008) 18 *O & G Forum* 93 Also see J de Roubaix & A van Niekerk "Separation-survivability – The Elusive Moral Cut-off Point?" (2006) 96 *SAMJ* 623, who share Pillay's views

⁷ Pillay (2010) *Stell LR* 236

conflicts”.⁸ Further, laws can be enacted to proscribe murder of, and assault on, the foetus, and wrongful-death claims based on negligently causing a stillbirth can also be facilitated.⁹

In order to extend personhood to a viable foetus, the concept of foetal viability needs to be properly understood. The present article examines the concept of foetal viability within the framework of modern-day medical knowledge of foetal development.¹⁰ The aim is to indicate that, despite advances in medicine, the term “foetal viability” used in law introduces a false sense of foetal security.¹¹ It will be demonstrated that the term “foetal viability” is not an exact point in foetal development. In fact, foetal viability is subject to a number of clinical factors, some not directly linked to foetal development but rather to the position adopted by a particular society. Further problems are encountered when it comes to accurately determining the gestational age or even weight of developing foetuses, making the exact moment of foetal viability more an issue of clinical estimates that can be verified only upon birth.

2 Live birth in law

The requirement of live birth features in criminal law for purposes of proving murder¹² and in the law of persons as the moment when legal subjectivity originates.¹³ The common law born-alive rule was developed as a result of a lack of advanced medical technology and because of a primitive understanding of the female body during pregnancy.¹⁴ During these less technologically advanced eras, pregnancies could not be monitored with any certainty.¹⁵ Prior

⁸ Pillay (2010) *Stell LR* 236 See R Roth *Making Women Pay: The Hidden Cost of Fetal Rights* (2001) 6 Roth argues that it is best to avoid the phrase “maternal-foetal conflict”, since it only focuses attention on women’s behaviour as the source of risk to foetal health and away from pregnant women’s environments and the responsibilities that other individuals or institutions might have towards ensuring healthy pregnancies and healthy pregnancy outcomes Further, with reference to the current legal position in South Africa, in principle, there are no “maternal-foetal conflicts” to be resolved This is the position because a pregnant woman is one single legal subject and she cannot be in conflict with herself or her own interests It is only once a pregnant woman and foetus are separated that the conditions for conflict are encountered, since the two separate legal subjects (held in one pregnant body) may have diverging interests at some point during the pregnancy See *S v Mshumpa* 2008 1 SACR 126 (E) 1511, where Froneman J expressed this as the “unique togetherness” experienced during a pregnancy, with the result that an assault on a pregnant woman is an experience of both the foetus and woman in their togetherness

⁹ Pillay (2010) *Stell LR* 236

¹⁰ Unfortunately, Pillay did not consider this aspect in Pillay (2010) *Stell LR* 230, despite her assertion that advances in medical science justify the extension of personhood to a viable foetus

¹¹ G Cohen & S Sayeed “Fetal Pain, Abortion, Viability and the Constitution” (2011) 36 *JLME* 235 237

¹² C Snyman *Criminal Law* 5 ed (2008) 448; J Burchell & J Milton *Principles of Criminal Law* 3 ed (2007) 671

¹³ Boezaart *Law of Persons* 11

¹⁴ Pillay (2010) *Stell LR* 231

¹⁵ 231 Also see A Oakley *The Captured Womb: A History of the Medical Care of Women* (1984) 11-12 According to Oakley, in the eighteenth and nineteenth centuries, antenatal care did not exist Pregnant women and healthcare providers did not consider routine medical supervision necessary There were no clinics or hospital departments available to pregnant women The general rule was that pregnancy did not constitute a medical phenomenon; in fact, there was no professional body claiming expert knowledge on the treatment of pregnant women

to the 20th century and the discovery of foetal viability,¹⁶ quickening¹⁷ was considered the most important point in pregnancy in both law and medicine.¹⁸ In medicine, it was assumed that the foetus became alive at quickening.¹⁹ At common law, quickening was legally significant because it was the only reliable proof that a woman was pregnant in an era where medical knowledge about pregnancy was very underdeveloped.²⁰ On the other hand, live birth offered the opportunity of providing an objective, clinical observation that the foetus, once born, was alive.²¹ Further, the health of the foetus could not be established until born.²² Consequently, until birth, proving the cause of termination of a pregnancy or injury to a foetus was impossible.²³ The born-alive rule was later extended to the law of persons, and it is now the only criterion used to determine whether there is an entitlement to personhood.²⁴

Accordingly, the common law crime of murder is only applicable to those persons who have been born alive.²⁵ Section 239(1) of the Criminal Procedure Act 51 of 1977 provides that a child will be deemed to have been born alive if it is proved that he or she breathed after separation. For purposes of legal subjectivity, the common law requires that the foetus must be separate from the mother's body and must have lived independently.²⁶ Boezaart states that any sign of life is evidence that the foetus survived after separation.²⁷ Foetal viability is not recognised as a qualifying element in either of these constructions of live birth.²⁸ Localities of birth, the sex of foetuses, weight or attending healthcare facilities are not an issue in the criteria for live birth, which is not the case for purposes of determining foetal viability.²⁹

3 The legal construction of foetal viability

In Pillay's critique of the South African position concerning personhood, the author calls for the courts to recognise the fact that medicine has advanced to such a point that we now have direct access to a developing foetus' environment.³⁰ This medicalised access proves the presence of life before

¹⁶ In his discussion of the development of the born-alive rule, Forsythe points out that foetal viability, as emphasised in American law today, did not actually play a role in the development of common law concerning foetal life – see C Forsythe “Homicide of the Unborn Child: The Born Alive Rule and Other Legal Anachronisms” (1987) 21 *Val U L Rev* 563 569

¹⁷ Quickening is defined as the first time the pregnant woman feels foetal movement within her uterus, usually in the second trimester of her pregnancy – see Forsythe (1987) *Val U L Rev* 567

¹⁸ 568

¹⁹ 568

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²¹ 568

²² 575

²³ 575

²⁴ Pillay (2010) *Stell LR* 232

²⁵ Snyman *Criminal Law* 448; Burchell & Milton *Principles of Criminal Law* 671

²⁶ Boezaart *Law of Persons* 12

²⁷ 12

²⁸ However, see Boezaart *Law of Persons* 12, where she points out that some authors specify an additional requirement of foetal viability for purposes of legal subjectivity

²⁹ Clinical considerations with regard to foetal viability are addressed in detail below

³⁰ Pillay (2010) *Stell LR* 232

birth, and also has the potential to prove the nature and extent of harm that has been caused to the foetus without the necessity of birth.³¹

It needs to be noted that it is no longer a question of whether there is human life in the process of foetal development; medicine has shown that there is life (albeit developing life) before birth. It is now a question of what to do with foetal life in law.³² Roth states that it is not technology that presumes the legal subjectivity of the foetus, but rather the way the information derived through technology is interpreted and imbedded in law.³³ Roth uses the example of foetal imagery and argues that these images do not speak for themselves, but need to be interpreted in order to make sense to the viewer, and technology alone does not tell the story.³⁴ She cautions that “how we ‘know’ the fetus through scientific images and information is still a matter of interpretation, mediated by politics and culture”.³⁵ The subject of interpretation is significant in the context of formulating a definition of foetal viability. It will be shown below that, from one region to the next, the interpretations of information gathered from advances in medical science are so varied that a uniform policy on foetal viability has never been adopted, and may possibly never be adopted.

Cohen and Sayeed, in discussing foetal viability in the context of termination-of-pregnancy laws in the United States, argue that the judiciary and society have developed a normative tendency to define a foetus as viable based on gestational age alone.³⁶ This is also true in South Africa and will be discussed below.

The United States will be considered, because foetal viability is a prominent feature in its legislation and case law.³⁷ However, owing to the extensive attention foetal viability receives, the focus of this discussion will be narrowed down to termination-of-pregnancy laws in the United States. This confined approach will demonstrate that not even one area of law applies a uniform definition of foetal viability, despite the fact that foetal viability holds substantial weight in termination-of-pregnancy laws.

3 1 Foetal viability in the United States

The Supreme Court of the United States in *Roe v Wade*³⁸ introduced the notion that the state’s interest in foetal life becomes compelling once the foetus is viable, thus legitimately limiting women’s access to termination-of-pregnancy services.³⁹ Viability was found to occur at 28 weeks, but may be as

³¹ 232

³² *Christian Lawyers Association of SA v Minister of Health* 1998 4 SA 1113 (T) 11201

³³ Roth *Making Women Pay* 33

³⁴ 33

³⁵ 36

³⁶ Cohen & Sayeed (2011) *JLME* 236

³⁷ Laws pertaining to delict, murder, advanced medical directives on pregnant women, child abuse and neglect all involve the issue of foetal viability to some extent. See generally Roth *Making Women Pay*; M Goodwin “Prosecuting the Womb” (2008) 76 *Geo Wash L Rev* 1657; L Fentiman “The New ‘Fetal Protection’: The Wrong Answer to the Crisis of Inadequate Health Care for Women and Children” (2006) 84 *Denv UL Rev* 537

³⁸ 410 US 113 (1975)

³⁹ 154

early as 24 weeks' gestation.⁴⁰ *Planned Parenthood of Southern Pennsylvania v Casey*⁴¹ described foetal viability as the only workable point at which the state's interest in preserving foetal life becomes compelling.⁴² Foetal viability was found to occur at 23 or 24 weeks, at the earliest.⁴³

Currently, the authority to limit access to termination-of-pregnancy services and determine definitions of foetal viability has been delegated to individual states and territories in the United States.⁴⁴ Listing relevant provisions of legislation in each state and territory individually, Arzuaga and Lee point out that the majority of statutes have deferred judgment of viability to the attending physician.⁴⁵ For instance, Utah prescribes that the determination of foetal viability "shall be made by the physician, based on his own best clinical judgement".⁴⁶ Some states set a gestational age limit in conjunction with requiring clinical judgment on the issue of viability. The state of Alabama provides that, once a woman is nineteen weeks pregnant, her attending physician is required to determine whether the foetus is viable in the sense that there is a reasonable likelihood of sustained, independent survival.⁴⁷ However, there is no mention of factors that need to be considered by the medical practitioner that will indicate foetal viability. This has the benefit that each case is dealt with individually, but there is also the disadvantage of uncertainty for pregnant women, because the determination of viability rests on one individual without any accessible and readily understood guidelines for the general public. There are some states that merely refer to a particular gestational week as the point of foetal viability. The Delaware Code provides that a pregnancy that has progressed beyond 20 weeks shall not be terminated unless continued pregnancy will pose a risk to the pregnant woman.⁴⁸ Nevada has set the limit for access to termination-of-pregnancy services at 24 weeks' gestation.⁴⁹ Once again, clinical factors are not mentioned in either the Delaware or Nevada code.

It is clear that foetal viability plays a significant role in termination-of-pregnancy laws in the United States. However, "foetal viability" is a very open-ended term, relying mainly on the issue of independent survival in relation to a gestational week or that can be determined only by a medical practitioner as some time after the second trimester of a pregnancy. South Africa is comparable to the United States to the extent that our termination-of-pregnancy laws also rely on gestational weeks. Similarly, in South Africa, the threshold of foetal viability differs from one area of the law to the next.

⁴⁰ 163

⁴¹ 505 US 833 (1992)

⁴² 870

⁴³ 860

⁴⁴ B Arzuaga & B Lee "Limits of Human Viability in the United States: A Medicolegal Review" (2011) 128 *Pediatrics* 1047 1051

⁴⁵ Arzuaga & Lee (2011) *Pediatrics* 1048-1051 This is more in line with the medical reality that foetal viability needs to be considered on a case-by-case basis, an issue that is discussed in more detail below

⁴⁶ Utah Code Ann s 76-7-310 5 (2010)

⁴⁷ Alabama ss 26-22-2; 26-22-4 (2010)

⁴⁸ 24 Del C 1953 s 1790

⁴⁹ Nev Rev Stat Ann s 201 120 (2010)

3.2 Foetal viability in South Africa

In South Africa, foetal viability is receiving increased attention. With reference to the Choice on Termination of Pregnancy Act 92 of 1996 and a number of decisions, it is clear that we have also developed a legal concept of foetal viability that relies on the gestational age of the foetus.

Writing in 1993 on the topic of termination-of-pregnancy laws,⁵⁰ Sarkin-Hughes argued that foetal viability and brain birth are said to occur at 22 weeks' gestation.⁵¹ However, given the fact that estimates of gestational age have an approximate two-week margin of error, the cut-off point to allow for elective termination of pregnancies should be set at 20 weeks' gestation.⁵² In line with Sarkin-Hughes' position, the Choice on Termination of Pregnancy Act, prohibits elective termination-of-pregnancy procedures after the completion of 20 weeks' gestation. The Act provides that a pregnancy may not be terminated after the 20th week of gestation, unless continued pregnancy will endanger the woman's life, will result in severe malformation of the foetus or will pose risk of injury to the foetus.⁵³ The Choice on Termination of Pregnancy Act does not refer to the concept of foetal viability and merely refers to various gestational weeks grouped together in a trimester framework.⁵⁴

Meyerson argues that section 2(1)(c) of the Choice on Termination of Pregnancy Act is justified by the constitutional value of dignity and is in line with the fact that, after 20 weeks' gestation, the foetus is viable and capable of feeling pain.⁵⁵ Slabbert also recognises that there is a gradual shift towards increased protection for the foetus as it develops to the point of viability.⁵⁶ However, she is critical⁵⁷ of the trimester framework adopted by the Act and considers this approach to be based on arbitrary markers, since the

⁵⁰ Prior to the 1994 elections and the enactment of the Choice on Termination of Pregnancy Act

⁵¹ J Sarkin-Hughes "A Perspective on Abortion Legislation in South Africa's Bill of Rights Era" (1993) 56 *THRHR* 83 87-89 Brain birth is described by Sarkin-Hughes as the point in foetal development where all necessary structures (dendritic spine, neural connections and thalocortical connections) have developed in order to render the brain a functioning organ, allowing for thought, emotion and consciousness

⁵² 89 Also see Sarkin-Hughes's later article, "Suggestions for a New Abortion Law for South Africa" (1996) 9 *S Afr J Crim Just* 212 Sarkin-Hughes correctly considers a number of physiological factors as indications of the survivability of a foetus, but, as shown later in the present article, he fails to take into account external medical factors and the environment of the pregnant woman

⁵³ S 2(1)(c) of the Choice on Termination of Pregnancy Act

⁵⁴ S 2(1)(a) refers to the first twelve weeks' gestation as being the first trimester of pregnancy, s 2(1)(b) refers to the thirteenth up to and including the 20th week of gestation as being the second trimester, and s 2(1)(c) refers to the period "after the 20th week gestation" as being the third and final trimester

⁵⁵ D Meyerson "Abortion: The Constitutional Issues" (1999) 116 *SALJ* 50 57 It needs to be noted that the ability of a foetus to feel pain is a contested issue See M Ford "Nothing and Not Nothing: Law's Ambivalent Response to Transformation and Transgression at the Beginning of Life" in S Smith & D Deazley (eds) *The Legal, Medical and Cultural Regulation of the Body: Transformation and Transgression* (2009) 21 27 Ford argues that scientists disagree about the gestational age at which a foetus becomes sentient Some have argued that sentience is present in the first trimester, and there are those who doubt that foetuses are sentient at all Ford states that there is a majority view that sentience emerges late in the third trimester, and that this is based on the fact that no sentience is possible without cortical structure in place, which is only in place between 30 to 35 weeks' gestation Also see, generally, Cohen & Sayeed (2011) *JLME* 235

⁵⁶ M Slabbert "Does South African Legislation Protect the Human Embryo and the Foetus *in Utero* Sufficiently?" (2001) *TSAR* 729 735

⁵⁷ Slabbert (2001) *TSAR* 736-737 criticises a number of aspects of the Choice on Termination of Pregnancy Act, but these will not be considered here, since the aim of this discussion is to determine the legal concept of foetal viability

biological developments representative of these three stages are not explained in the Act.⁵⁸ However, both Meyerson⁵⁹ and Slabbert⁶⁰ are of the view that the decision to adopt the trimester framework is infused with biological and moral considerations. Slabbert makes the point that the law has to work with definite boundaries and is required to make a determination in the absence of clear indications.⁶¹

Relying on gestational weeks, the Choice on Termination of Pregnancy Act limits the right to elective terminations once a pregnancy has passed its 20th week; this has been interpreted as the point where foetal viability sets in. This is a clear indication of the tendency to relate viability to a particular gestational week.⁶² The same can be said for our case law in other areas of law.

In *S v Mshumpa*⁶³ (“*Mshumpa*”), a pregnant woman was shot in the stomach with the intention to terminate the pregnancy. The pregnant woman survived the incident, but the gunshot wounds to the body of the foetus caused her to deliver a stillborn, 38-week-old foetus. Medical evidence showed that the foetus was viable at the time of the incident, and medically alive within the victim’s uterus.⁶⁴ The state sought a murder conviction in respect of the foetus, arguing that the law must reflect medical reality and find that the “killing of an unborn child in circumstances such as the present” constitutes murder.⁶⁵ The court accepted the definition of murder as the unlawful and intentional killing of another person, and that such person had to have been born alive.⁶⁶ Kruuse mentions, with reference to the state’s heads of argument, that the state argued that the born-alive rule is obviated by medical technology.⁶⁷ However, on a number of grounds,⁶⁸ the court refused to extend the definition of murder to include a viable foetus.⁶⁹

In *Mshumpa*, the court accepted that, at 25 weeks’ gestation, a foetus is viable and capable of independent survival.⁷⁰ All the evidence concerning foetal development mentioned in the judgment revolves round the issue of

⁵⁸ Slabbert (2001) *TSAR* 737

⁵⁹ Meyerson (1999) *SALJ* 57

⁶⁰ Slabbert (2001) *TSAR* 737

⁶¹ 737

⁶² It is accepted that there are other policy issues that inform the Choice on Termination of Pregnancy Act, especially when dealing with pregnancies resulting from rape; incest; severe foetal malformations; or where pregnant women’s lives are at risk. This indicates that a combination of foetal viability and policy issues inform the Choice on Termination of Pregnancy Act. It is not the purpose of this article to consider the various policy issues at play here but to rather work towards understanding the legal construction of foetal viability in South Africa.

⁶³ 2008 1 SACR 126 (E)

⁶⁴ 148C

⁶⁵ 149A

⁶⁶ 149E

⁶⁷ H Kruuse “Fetal ‘Rights’? The Need for a Unified Approach to the Fetus in the Context of Feticide” (2009) 72 *THRHR* 126 133

⁶⁸ The grounds include the principle of legality, practical difficulties linked to formulating a precise definition, whether viability should be a prerequisite, whether the crime should include the actions of pregnant women, and the uncertain impact the new offence will have on the Choice on Termination of Pregnancy Act (*S v Mshumpa* 2008 1 SACR 126 (E) 150G-H)

⁶⁹ 152D

⁷⁰ 148D

whether the 38-week-old foetus was viable.⁷¹ There is no evidence discussed in the judgment as to what factors indicate foetal viability; it is merely accepted that this occurs at 25 weeks' gestation. If the state were to rely on the element of foetal viability for the extension of the crime of murder, this point in foetal development should have received more than a superficial glance.⁷²

The issue of foetal viability featured in a more recent case concerning concealment of birth of a newly born child in terms of section 113 of the General Law Amendment Act 46 of 1935.⁷³ In *S v Molefe*⁷⁴ ("*Molefe*"), the accused was convicted on the basis of her guilty plea of unlawfully and intentionally concealing the birth of her child. Originally, the case was referred for special review because of a procedural irregularity.⁷⁵ However, on the opinion of a senior state advocate, the review court found that there was a defect in the accused's plea explanation to the extent that the gestational age of the foetus had not been admitted. The court determined that reference to the term "child" in the Act meant that the foetus must have "arrived at the stage of maturity at the time of the birth that it might have been born a living child".⁷⁶ It was accepted that this occurred at 28 weeks' gestation.⁷⁷ The conviction was set aside in this matter because it was never admitted by the accused, nor was any evidence led, that she gave birth to a foetus of more than 28 weeks' gestation.⁷⁸ All that was known was the fact that there was a premature delivery of a stillborn foetus.⁷⁹

In the process of determining that 28 weeks' gestation is the point of viability, the review court referred to three decisions that all dealt with concealment of birth: *S v Jasi*⁸⁰ ("*Jasi*"); *S v Manngo*⁸¹ ("*Manngo*"); *S v Madombwe*.⁸² In *S v Jasi*, the Zimbabwe High Court found that a "child" for purposes of the Concealment of Birth Act⁸³ meant "one that has reached a stage of development, irrespective of the duration of the pregnancy, which makes it capable of being born alive, ie after separation from its mother the

⁷¹ 148C-H

⁷² This statement is made without having had access to the state's heads of argument

⁷³ S 113 of the General Law Amendment Act S 113(1) provides that "[a]ny person who, without lawful burial order, disposes of the body of any newly born child with intent to conceal the fact of its birth, whether the child died before, during or after birth, shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding three years" S 113(2) provides that "[a] person may be convicted under subsection (1) although it has not been proved that the child in question died before its body was disposed of" S 113(3) provides that the Director of Public Prosecutions must have given written authorisation for the institution of a prosecution

⁷⁴ 2012 2 SACR 574 (GNP)

⁷⁵ The matter was referred for special review because the magistrate was not convinced of the validity of the prosecution, given that the authorisation to prosecute had not been in written form as required by the Act. The review court set aside the conviction on a number of grounds; however, these fall outside the scope of the topic of foetal viability

⁷⁶ 578G-H

⁷⁷ 578F. The court came to this conclusion based on an opinion drafted for the assistance of the court by Senior State Advocate Fourie; and Deputy Director of Public Prosecutions, Advocate Van Vuuren concurred with this opinion

⁷⁸ 578F

⁷⁹ 578H

⁸⁰ 1994 1 SACR 568 (ZH)

⁸¹ 1980 3 SA 1041 (V)

⁸² 1987 3 SA 1008 (R)

⁸³ Ch 52

child breathes independently either naturally or with the aid of a ventilator”.⁸⁴ In *Manngo*, the Venda Supreme Court did not refer to a particular gestational age, but found that the offence of concealment of birth cannot be committed unless the “child” had reached a stage of maturity that it could be born a living child. *S v Madombwe* found that a foetus less than 28 weeks old should not be regarded as a child within the provisions of the Concealment of Birth Act.⁸⁵ Once again, gestational age was accepted as the sole indication of foetal viability.

Failure by the prosecutor in *Molefe* to obtain an admission to an essential element of the crime of concealment of birth has come at a very high price. It must be noted that the earliest decision reached in the three cases relied on by the review court is eighteen years old. With the exception of *Jasi*, those judgments do not refer to medical evidence. In the case of *Jasi*, decided eighteen years ago, the information may be somewhat outdated and not reflective of improved medical knowledge concerning foetal development. At most, these three decisions say that “child”, for purposes of the concealment-of-birth provisions, refers to a viable foetus, that is, one that can survive separation from the pregnant woman. Only contemporary medical knowledge could have sufficiently answered when, and in what circumstances, a foetus can be considered viable. *Molefe* was thus a lost opportunity to develop a medically sound legal definition of foetal viability.

Whether considering the legal system of the United States or South Africa, the definition assigned to foetal viability is vague and indeterminable. According to the case law and legislation discussed above, foetal viability occurs anywhere from nineteen weeks’ gestation to 28 weeks’ gestation. It is important to note, therefore, that foetal viability is not a set definition as employed by Pillay.

The current legal construction of foetal viability creates more uncertainty than certainty. There are a number of reasons for this uncertainty. Foetal viability is being considered very superficially, without contextually considering current medical knowledge and maternal and foetal factors. The legal construction of foetal viability in the context of termination-of-pregnancy laws is influenced by morality, indicating where society draws

⁸⁴ *S v Jasi* 1994 1 SACR 568 (ZH) 574. It needs to be mentioned that there is an error in *S v Molefe* 2012 2 SACR 574 (GNP) concerning the court’s conclusion of the decision reached in *S v Jasi* 1994 1 SACR 568 (ZH). In *S v Molefe* 2012 2 SACR 574 (GNP) 578B, Rabie J (relying on the opinion of a senior state advocate) incorrectly concludes that *S v Jasi* 1994 1 SACR 568 (ZH) found that a foetus of less than 28 weeks’ gestation is not a viable “child” for the purposes of the Concealment of Birth Act. If one refers to *S v Jasi* 1994 1 SACR 568 (ZH) 574-574, Adam J, after reviewing case law and academic arguments relating to concealment of birth and viability, concludes as follows:

“I cannot, therefore, accept that Whitaker J was correct when he held that a fetus of less than 28 weeks should not be regarded as a child within the provisions of the Act.”

This conclusion is reached because Adam J was aware of the fact that medical technology has an influence on survivability of premature neonates and thus survivability cannot simply be pinpointed to a specific gestational week. The discovery of this error leads one to question the reliability of the outcome of the decision reached in *S v Molefe* 2012 2 SACR 574 (GNP).

⁸⁵ Ch 57

the line as to what is acceptable,⁸⁶ whereas morality may not have such a defining presence in the crime of concealment of birth. If it were medical knowledge informing the legal definition of foetal viability, there would only be one definition applied in law, because foetal viability is a biological occurrence that is not influenced (suspended or advanced) by the application of a particular provision of law. Without enough certainty in law, personhood cannot be extended to a viable foetus.

4 Medical construction of foetal viability

If personhood were to be extended to a viable foetus, it is essential to improve on the ambiguous legal construction of viability and critically consider medical observations and findings on this topic. At this point, the aim is to determine the clinical definition of foetal viability and establish a contextual understanding. It also needs to be determined when the earliest point in foetal development is that a foetus is accepted as viable, and whether this point can ever be accepted as an exact moment for the purpose of extending personhood.

In a clinical setting, foetal viability is an important determinant for the purpose of establishing the correct course of medical treatment for extremely premature neonates, particularly with regard to resuscitation policies.⁸⁷ The definition of foetal viability is informed by neonatal resuscitation policies, that is, when to resuscitate and to provide intensive care or when to simply offer comfort care.⁸⁸

There are a number of authors within the medical field who firmly support a gestational-age approach to determining foetal viability because of the general uncertainty surrounding extremely premature neonatal survival.⁸⁹ Powell et al generally define foetal viability as the gestational age at which a foetus “reaches an anatomical threshold when critical organs, such as the lungs and kidneys, can sustain life”.⁹⁰ However, the authors recognise that neonatologists, neonatal nurses and obstetricians have established that there are a number of other factors relevant to determining the viability of a foetus, and that reliance on gestational age alone is not sufficient to accurately reflect the prospects for sustaining life.⁹¹ The discussion to follow will demonstrate that gestational age is not only a problematic determination, but is also a rather insignificant factor in determining viability if considered in isolation.

⁸⁶ Meyerson (1999) *SALJ* 57; Slabbert (2001) *TSAR* 737. Meyerson and Slabbert accept morality as a factor that influences the limitations imposed by the Choice on Termination of Pregnancy Act. This signifies that there are other external elements relevant to determining when a foetus is considered viable in the context of termination-of-pregnancy laws.

⁸⁷ T Powell, L Parker, C Dedrick, C Barrera, D Salvo, F Erdman, S Huff & M Saunders “Decisions and Dilemmas Related to Resuscitation of Infants Born on the Verge of Viability” (2012) 12 *NAINR* 27.

⁸⁸ J Tyson, N Parikh, J Langer, C Green & R Higgins “Intensive Care for Extreme Prematurity: Moving Beyond Gestational Age” (2008) 358 *N Eng J Med* 1672.

⁸⁹ Powell et al (2012) *NAINR* 29; E Turillazzi & V Fineschi “How Old Are You? Newborn Gestational Age Discriminates Neonatal Resuscitation Practices in the Italian Debate” (2009) *BMC Medical Ethics* 19.

⁹⁰ Powell et al (2012) *NAINR* 29.

⁹¹ 29.

4 1 Foetal-related variables influencing foetal viability

In addition to gestational age, there are other factors that affect the probabilities of long-term neonatal survival, such as sex,⁹² birth weight, presence or absence of deformities, antenatal exposure to corticosteroids,⁹³ and whether the pregnancy involves a single gestation or multiple gestations.⁹⁴ Seri and Evans set the absolute minimum birth weight required at 500 grams at 22 to 23 weeks' gestation.⁹⁵ They argue that a neonate weighing less than 500 grams and of less than 23 weeks' gestation is too immature and does not have any realistic chance of survival, thus rendering it unreasonable to provide any medical care other than comfort care.⁹⁶ However, there is authority that indicates 400 grams as the absolute minimum weight for purpose of resuscitation.⁹⁷

Consequently, a singleton female at roughly 22 to 23 weeks' gestation, weighing at least 400 grams, without the presence of deformities, and whose mother has been exposed to antenatal steroids, has better odds of surviving than males in the same circumstances. However, it is recognised that, as foetal weight and gestational age increase, the chances of survival are increased for both sexes.⁹⁸

Seri and Evans define this area of foetal viability as the “gray zone”, that is, as indicating the absolute limits of viability.⁹⁹ The authors state that, when a neonate falls in the “gray zone”, several factors need to be considered, which include an assessment of prenatal data and information obtained during consultations with parents before delivery, evaluation of gestational age, birth weight, the clinical condition of the neonate after birth, ongoing reassessment of the neonate's response to resuscitation and intensive care, and continued involvement of the parents in the decision-making process after birth.¹⁰⁰

Gestational age is an important element when determining the viability of a foetus. Nevertheless, it is not the only qualifying criterion for viability. Gestational age must be considered together with other biological factors that can be determined only in a clinical setting and on a case-by-case basis. Unfortunately, the inclusion of gestational age and foetal weight do not add to certainty as regards viability. In fact, these two factors increase the element of uncertainty. Kattwinkel et al argue that a discrepancy of one to two weeks

⁹² Female neonates have better survival rates than male neonates – see Powell et al (2012) *NAINR* 29; Cohen & Sayeed (2011) *JLME* 236

⁹³ Corticosteroids are recommended for women in preterm labour before 34 weeks' gestation. The use of corticosteroids reduces respiratory distress syndrome by 36%, but has maximum effect at 32 weeks' gestation – see F Barros, Z Bhutta, M Batra, T Hansen, C Victoria, C Rubens & GAPPS Review Group “Global Report on Preterm Birth and Still Birth (3 of 7): Evidence for Effectiveness of Interventions” (2010) 10 *BMC Pregnancy and Childbirth* 1 18

⁹⁴ Cohen & Sayeed (2011) *JLME* 236; Tyson et al (2008) *N Eng J Med* 1679; Powell et al (2012) *NAINR* 29

⁹⁵ I Seri & J Evans “Limits of Viability: Definition of the Gray Zone” (2008) 28 *J Perinatol* 4

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⁹⁷ J Kattwinkel, M Perlman, K Aziz, C Colby, K Fairchild, J Gallagher, M Hazinski, L Halamek, P Kumar, G Little, J McGowan, B Nightengale, M Ramirez, S Ringer, W Simon, G Weiner, M Wyckoff & J Zaichkin “Special Report – Neonatal Resuscitation: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care” (2010) 126 *Pediatrics* 1400 1407

⁹⁸ Powell et al (2012) *NAINR* 29; Tyson et al (2008) *N Eng J Med* 1678 figure 1

⁹⁹ Seri & Evans (2008) *J Perinatol* 4

¹⁰⁰ 4

between estimated and actual gestational age or a 100 to 200-gram difference in weight may have serious implications for the survivability of the foetus.¹⁰¹

There are three primary methods of gestational-age estimation,¹⁰² namely dating based on the last menstrual period,¹⁰³ ultrasound-based dating,¹⁰⁴ and neonatal estimates.¹⁰⁵ Generally, the estimated due date for delivery for most pregnant women is determined according to Naegele's rule, which relies on the date of a woman's last menstrual period.¹⁰⁶ This method of gestational-age estimation is based on a number of assumptions, namely that a menstrual cycle is 28 days long, with ovulation occurring on day fourteen of the cycle, and that a pregnancy lasts 280 days from the first day of the last menstrual cycle.¹⁰⁷ However, Lynch and Zhang emphasise that there are flaws in this method of gestational-age estimation, because it requires a woman to be able to report a reasonably accurate date of her last menstrual period and relies on the date of ovulation as the proxy for the time of conception.¹⁰⁸ This proves to be problematic, because some women have been found to have 30-day menstrual cycles and other women to ovulate within four days of day thirteen of their cycle.¹⁰⁹ Further, as a result of mid-cycle bleeding (not associated with menses), some women may provide misleading information concerning their date of the last menstrual period.¹¹⁰ The timing of fertilisation relative to ovulation can also influence the accuracy of this estimation method. Spermatozoa can survive in the female reproductive tract for up to six days, and a female ovum can survive for approximately twelve hours.¹¹¹ Consequently, a pregnancy is most likely to take place during a cycle in which intercourse occurs in the five-day period prior to ovulation or on the day of ovulation itself.¹¹²

According to Morin et al, early ultrasound is widely recognised as providing a more valid estimation of gestational age than last-menstrual-period dating.¹¹³ The authors reported that several maternal and foetal characteristics influence the extent of the discrepancies between the gestational-age estimates; these

¹⁰¹ Kattwinkel et al (2010) *Pediatrics* 1407

¹⁰² C Lynch & J Zhang "The Research Implications of the Selection of a Gestational Age Estimation Method" (2007) 21 *Paediatric and Perinatal Epidemiology* 86

¹⁰³ This method of estimation aims to determine the gestational age of the foetus with reference to the length of the pregnancy – see Lynch & Zhang (2007) *Paediatric and Perinatal Epidemiology* 89

¹⁰⁴ This method of estimation aims to determine the gestational age of the foetus with reference to the size of the foetus – see Lynch & Zhang (2007) *Paediatric and Perinatal Epidemiology* 89

¹⁰⁵ Neonatal estimates are usually used in circumstances where a woman receives little or no prenatal care. In these circumstances, the gestational age can be estimated after birth by examining the physical and neuromuscular maturity of the neonate. Neonatal estimates will not be considered in this article, because the purpose of the discussion is to determine when foetal viability occurs before actual birth – see Lynch & Zhang (2007) *Paediatric and Perinatal Epidemiology* 89

¹⁰⁶ Naegele's rule involves the use of a "due date wheel", which subtracts three months from the first day of the woman's last menstrual period and adds seven days – Lynch & Zhang (2007) *Paediatric and Perinatal Epidemiology* 86

¹⁰⁷ Lynch & Zhang (2007) *Paediatric and Perinatal Epidemiology* 86

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¹¹³ I Morin, L Morin, X Zhang, R Platt, B Blondel, G Bréart, R Usher & M Kramer "Determinants and Consequences in Discrepancies in Menstrual and Ultrasonographic Gestational Age Estimates" (2005) 112 *BJOG* 145

include maternal age, education, marital status, pre-pregnancy body mass index, foetal sex, and chromosomal malformation.¹¹⁴ Even though it is generally recognised that ultrasound provides more valid estimations, Tyson et al mention that estimates of gestational age based on the use of ultrasound have been reported to have an error of approximately four days at twelve to fourteen weeks and seven days at fourteen to 22 weeks.¹¹⁵ At 20 to 30 weeks' gestation, an error of up to two weeks has been reported.¹¹⁶ Since viability is estimated to occur at roughly 22 weeks' gestation, a seven-day discrepancy has the potential to impact negatively on the clinical determination of the survivability of a foetus.

Although Dudley recognises that foetal-weight estimation is somewhat helpful in predicting the ability of a foetus to survive, she describes foetal-weight estimates as “inaccurate with poor sensitivity for prediction of fetal compromise”.¹¹⁷ The weight of a foetus is usually estimated using a wide range of formulas based on single or multiple measurements taken during prenatal ultrasound procedures.¹¹⁸ Widely used foetal measurements include the diameter across a foetus' skull from one parietal bone to the other (biparietal diameter), femur length, head circumference, and abdominal circumference.¹¹⁹ Kattwinkel et al report that estimates of foetal weight are accurate to only 15% to 20%.¹²⁰ Dudley found that larger errors occurred in foetal-weight estimations for smaller foetuses. Once again, this poses a problem for those foetuses falling in the “gray zone”.

There are a number of variables influencing the accuracy of foetal-weight estimations. In Dudley's literature review, the author found that there are errors in foetal-weight estimations between varying measurement methods and between various centres performing ultrasounds.¹²¹ Dudley argues that these errors imply that there are local factors influencing accurate estimations,¹²² namely the study population, operators,¹²³ measurement protocols and equipment,¹²⁴ or a combination of these variables. Dudley found that maternal and foetal factors such as maternal body mass index, foetal sex, and whether it is a singleton or multiple pregnancy did not have a significant influence

¹¹⁴ 150-151

¹¹⁵ Tyson et al (2008) *N Eng J Med* 1679

¹¹⁶ 1679

¹¹⁷ N Dudley “A Systematic Review of the Ultrasound Estimation of Fetal Weight” (2005) 25 *Ultrasound Obstet Gynecol* 80

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¹²⁰ Kattwinkel et al (2010) *Pediatrics* 1407 Also see Dudley (2005) *Ultrasound Obstet Gynecol* 82-85 for graphical and descriptive summaries of the accuracy of various methods of foetal-weight estimation

¹²¹ Dudley (2005) *Ultrasound Obstet Gynecol* 85

¹²² 85

¹²³ Here, Dudley points out that operator experience is an important factor in producing accurate foetal-weight estimates Dudley (2005) *Ultrasound Obstet Gynecol* 86

¹²⁴ 86-87 Dudley provides a detailed discussion of a number of issues concerning measurement protocols and equipment However only one will be considered here to demonstrate the precision required when estimations are being made In the 1970s and 1980s, measurements were made from photographs of an ultrasound image This method was found to give rise to a number of problems, especially when converting from image scale to foetal scale On modern equipment, measurements are made on screen using electronic callipers However, errors occur with correct identification of structures and the placement of callipers

on measurement errors.¹²⁵ However, Dudley theorises that maternal fat mass and amniotic fluid should influence the accuracy of individual measurements, since these factors are known to affect image quality in ultrasonography.¹²⁶

These areas of potential discrepancies in estimates are significant for purposes of determining the point of foetal viability, because, if one cannot ascertain foetal weight with a certain degree of accuracy, then it cannot be said with absolute certainty that a foetus is capable of survival after separation. Kattwinkel et al point out that, before making a confirmed decision on the course of treatment in the case of an imminent premature delivery, it is required that one first have the opportunity to perform an examination of the neonate after its birth.¹²⁷ Birth is therefore the only logical avenue available to overcome the general uncertainty regarding the much individualised concept of foetal viability.

4.2 Medical and sociocultural variables influencing foetal viability

Although medical knowledge on foetal development demonstrates that foetal viability is something that should be determined on a case-by-case basis, the clinical definitions are also reflective of prevailing medical and sociocultural attitudes of a particular society.¹²⁸ In the United States and United Kingdom, very few neonates are resuscitated if born before 23 weeks' gestation. In the Netherlands, neonates of less than 25 weeks' gestation will not be resuscitated, while Japan accepts 22 weeks' gestation as the limit.¹²⁹ These limits with regard to resuscitation procedures are informed by statistical probabilities of survival.¹³⁰

Pignotti and Donzelli argue that care for extremely premature neonates (22 to 24 weeks' gestation) involves a variety of complex medical, social and economic aspects calling for ethical decisions, because the boundary between the benefit of life and futility is not clear.¹³¹ These are serious considerations to juggle, since the majority of extremely preterm neonates will die before, during or soon after birth.¹³² For those who do survive, there is further risk of death during childhood, and roughly half will suffer moderate to severe neurodevelopment problems.¹³³ At the age of six, some children will begin to show signs of some kind of disorder.¹³⁴ It is the likelihood of a favourable outcome that will inform the definition of viability. A favourable outcome does not only require the ability of the neonate to live once separated, but also includes a consideration of the quality of that life and of the ability of the

¹²⁵ Dudley (2005) *Ultrasound Obstet Gynecol* 85

¹²⁶ 85

¹²⁷ Kattwinkel et al (2010) *Pediatrics* 1407; M Pignotti & G Donzelli "Perinatal Care at the Threshold of Viability: An International Comparison of Practical Guidelines for the Treatment of Extremely Preterm Births" (2008) 121 *Pediatrics* 196

¹²⁸ Cohen & Sayeed (2011) *JLME* 237

¹²⁹ 236

¹³⁰ 237

¹³¹ Pignotti & Donzelli (2008) *Pediatrics* 193

¹³² 193

¹³³ Pignotti & Donzelli (2008) *Pediatrics* 193 Also see Tyson et al (2008) *N Eng J Med* 1676

¹³⁴ Pignotti & Donzelli (2008) *Pediatrics* 193

family and society to provide for the neonate in the case of moderate to severe abnormalities.¹³⁵ It also includes a consideration of the availability of scarce resources within the healthcare system to ensure the continued life of an extremely premature neonate.¹³⁶ Hence, there is a link between resuscitation policies and the definition of foetal viability.

Cohen and Sayeed point out that, as the chances of successful survival without permanent disabilities diminish, it becomes less compelling to offer medical intervention.¹³⁷ These factors affect our interpretation of where to draw the line.¹³⁸ The availability of scarce resources and the ability of parents and society to meet the needs of the premature neonate with an uncertain future will vary from one country to the next or even from one city to the next, thus explaining the varying positions found in the United States, the Netherlands and Japan.¹³⁹ Further, the fact that different viability thresholds exist in different regions of the world suggests that very few obstetricians and neonatologists would advocate the development of a uniform policy for resuscitation, and, ultimately, a uniform definition of foetal viability.¹⁴⁰

It is undeniable that determining foetal viability is a clinical exercise based on estimations that can be validated only once the foetus is born. Foetal viability is also dependent on the country and city where pregnant women receive care, and on the means and policies of the facility where women present themselves for care. The determination of foetal viability is not a precise science, because there are too many variables that fall outside the control of pregnant women and the medical profession. Pignotti and Donzelli state that, “because of the uniqueness of every pregnancy and neonate, to protect mothers and infants from futile treatment as well as incorrect withholding of life sustaining treatment, the specific circumstances of every individual situation must always be kept in mind”.¹⁴¹ This overall understanding of foetal viability is far more convoluted than the legal construction of foetal viability discussed above.

5 Clinical definition of foetal viability in South Africa

In accepting that foetal viability must be determined on a case-by-case basis, based on a number of factors, it needs to be considered how these qualifying requirements will impact on the definition of viability in South Africa. A South African definition of foetal viability needs to be considered, because

¹³⁵ See, generally, Powell et al (2012) *NAINR* 27; Pignotti & Donzelli (2008) *Pediatrics* 196

¹³⁶ Cohen & Sayeed (2011) *JLME* 236

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¹³⁸ 237

¹³⁹ For more on the various resuscitation policies, see, generally, Pignotti & Donzelli (2008) *Pediatrics* 193

¹⁴⁰ Cohen & Sayeed (2011) *JLME* 237; Pignotti & Donzelli (2008) *Pediatrics* 195 Unfortunately, the tendency to define viability according to a gestation age has also contaminated resuscitation policies, and some clinical definitions of viability are not individually patient-specific See Turillazzi & Fineschi (2009) *BMC Medical Ethics* 19 who assert that physicians do not need rigid rules based on inflexible gestational age and birth-weight requirements The resistance to rigid guidelines is particularly strong where the guidelines take their reference of limitation from gestational age only It must be emphasised that this differs from one country to the next

¹⁴¹ Pignotti & Donzelli (2008) *Pediatrics* 197

we need a definition relative to our healthcare system's and society's means. A particularly troubling aspect in developing a South African definition of foetal viability is the scarcity of resources available in the public healthcare system, especially because resource requirements are a prominent feature in the clinical definition of viability discussed above.¹⁴² Inevitably, the poor availability of resources will push the viability line to a later point in foetal development.

Determining South Africa's neonatal resuscitation policy has proved problematic. Pignotti and Donzelli conducted an international comparative study of the treatment of neonates at the threshold of viability and found that official guidelines for the treatment of extremely premature neonates could not be sourced among developing countries.¹⁴³ The authors theorise that this is as a result of the very high cost of intensive and long-term care.¹⁴⁴

Writing on the public sector, Ballot, Chirwa and Cooper recognise that South Africa is a developing country with limited health resources and high patient numbers. Consequently, the authors argue that it is not possible to provide full tertiary-level healthcare and support for every very low birth-weight neonate.¹⁴⁵ In the Charlotte Maxeke Johannesburg Academic Hospital, this problem has been addressed by limiting ventilatory support for neonates who are born weighing above 900 grams.¹⁴⁶ The Charlotte Maxeke Hospital does not use gestational age as a guide for survivability, because foetal-weight estimates are considered more reliable within that setting.¹⁴⁷ The authors found that foetal birth weight, sex, resuscitation and ventilatory support were significant predictors of mortality.¹⁴⁸

Hoque et al describe public neonatal healthcare as under-resourced, since it operates under a high work load with an inadequate provision of equipment and well-trained staff.¹⁴⁹ This environment diminishes the chances of providing the best possible care required for premature neonates.¹⁵⁰ According to Hoque et al, prematurity and low birth weight continue to be a major public-health problem, and they found that very low birth weight, sex¹⁵¹ and preterm delivery were significant predictors of neonatal death.¹⁵² The authors define "extremely low birth weight" as a neonate weighing less than 1,000 grams,

¹⁴² The public healthcare system is the chosen point of departure, because those women who cannot afford access to the private sector have no other choice but to rely on public facilities for maternity care. South Africa has a national policy of free maternal and child healthcare at all public health facilities. See M Hoque, S Haaq & R Islam "Causes of Neonatal Admissions and Deaths at a Rural Hospital in KwaZulu-Natal, South Africa" (2011) 26 *South Afri J Epidemiol* 26

¹⁴³ Pignotti & Donzelli (2008) *Pediatrics* 197

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¹⁴⁵ D Ballot, T Chiwa & P Cooper "Determinants of Survival in Very Low Birth Weight Neonates in a Public Sector Hospital in Johannesburg" (2010) 10 *BMC Pediatrics* 30 39

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¹⁴⁹ Hoque et al (2011) *South Afri J Epidemiol* 28-29

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¹⁵¹ Hoque et al found that male neonates were at higher risk of death – see Hoque et al (2011) *South Afri J Epidemiol* 27

¹⁵² 29

“very low birth weight” as a neonate weighing less than 1,500 grams, and “prematurity” as a neonate born before 32 weeks’ gestation.¹⁵³

Further, Pattinson et al found that neonatal deaths were higher in rural areas.¹⁵⁴ Rural areas are plagued with inadequate facilities and staff shortages.¹⁵⁵ Neonatal high-care facilities are very limited, and there is a lack of antenatal care and care during labour.¹⁵⁶ Disturbingly, Pattinson et al’s study of causes of neonatal deaths excluded neonates weighing 500 grams to 999 grams, because the authors questioned the reliability of these data.¹⁵⁷ The authors found that neonates born within this weight bracket were recorded as stillbirths in error or that data on them were not recorded at all because these neonates were regarded as nonviable.¹⁵⁸

When one considers the three studies collectively, it is clear that clinical foetal viability in South Africa is a far cry from foetal viability as discussed above, namely that, in addition to other factors, a foetus at 22 weeks’ gestation, weighing at least 400 grams, can be considered viable. This is not a reality in the public healthcare system. Another diminishing factor regarding foetal viability rests on the realisation that we must further consider the healthcare facilities that pregnant women may have access to. An extremely premature neonate born at a rural facility will have less chance of survival than one born in a facility in an urban area.¹⁵⁹ Partridge et al state that South African public-sector hospitals have proposed higher resuscitation thresholds than the United States and European countries, because the provision of intensive care for all very premature neonates is not realistic in all practice settings.¹⁶⁰

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¹⁵⁴ R Pattinson, D Woods, D Greenfield & S Velaphi “Improving Survival Rates of Newborn Infants in South Africa” (2005) 2 *BMC Reproductive Health* 4 5

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¹⁵⁹ See, generally, Pattinson et al (2005) *BMC Reproductive Health* 4

¹⁶⁰ C Partridge, T Ranchod, D Ballot, A Martinez, B Cory & V Davies “Intensive Care for Very Low Birthweight Infants in South Africa: A Survey of Physician Attitudes, Parent Counselling and Resuscitation Practices” (2005) 51 *J Trop Pediatr* 11 15 Recently, the issue of inadequate provision of intensive-care facilities was brought to the attention of the Public Protector in the form of a written complaint by Advocate Hoffman, Director of the Institute for Accountability in Southern Africa. See P Hoffman “Sick Infants Not Much Better Off Than in Ancient Sparta: The Situation in the Public Health Sector is Grossly Improper, Unconstitutional and Illegal” (2012) *Business Day* <<http://www.businessday.co.za/articles/Content.aspx?id=176319>> (accessed 02-08-2012) Hoffman argues that the position of critically ill infants and children is distinguishable from *Soobramoney v Minister of Health* 1998 1 SA 765 (CC), since these infants and children are in need of emergency care that requires access to intensive-care units. Hoffman further argues that these situations fall outside the “available resources” exception to the constitutional right to access to healthcare in terms of s 27 of the Constitution of the Republic of South Africa, 1996 (“the Constitution”). See J Smith “Protector to Probe Hospital Baby Shambles” *The Star* (27-07-2012) 11 who quotes Hoffman as saying “[n]o one may be refused emergency medical treatment, and children get special mention in the constitution that excludes the ‘available resources’ aspect. In our constitution, the best interests of children are paramount. A child at death’s door in need of life-saving treatment in an ICU is surely an emergency.” It is my submission that steps to address the concern of adequate provision of intensive-care units will have a positive impact on the survivability rates of extremely premature neonates in public hospitals in South Africa.

One can theorise¹⁶¹ that the clinical definition of viability discussed above is more in line with what one can expect if one were to attend a private healthcare facility in South Africa.¹⁶² Partridge et al found that practitioners in the private sector were more willing to offer medical intervention for neonates born earlier in gestation than practitioners in the public sector, namely between 25 to 26 weeks' gestation and weighing roughly 665 grams.¹⁶³ The authors link this approach to the availability of resources within the private sector.¹⁶⁴

The discrepancy between public and private facilities leads to the uneasy position of determining which of the two offers the most reliable definition of foetal viability that all pregnant women will be regulated by regardless of their social and financial standing.

6 Conclusions on defining a “person” in view of these considerations

In South Africa, foetal viability features in the application of Choice on Termination of Pregnancy Act and in the crime of concealment of birth. In each case, a very narrow definition of viability has been adopted, focusing mainly on gestational age alone. This may be acceptable, since the definition of foetal viability has a very limited application in one particular area of law. In termination-of-pregnancy laws, foetal viability limits access to elective termination of pregnancies. In terms of concealment of birth, foetal viability is described as an element of the offence. However, when considering the broader area of the law, as is the case with legal subjectivity, the application of foetal viability becomes very wide and requires more than superficial consideration. It demands going beyond the current legal construction of foetal viability and requires the determination of when, in the light of medical reality, viability occurs. This determination is essential, because the entire reach of the law becomes applicable at that moment, and all rights and duties come into play.

Unfortunately, medical science cannot provide these definitive lines. It is clear that medical science can give us insight into the life of a developing foetus. However, an examination of medical knowledge of foetal development demonstrates that survivability after separation is clouded in uncertainty and based on estimates. In medical science, foetal survivability is a clinical determination made on a case-by-case basis and subject to numerous factors fraught with uncertainty, all of which can be verified only upon live birth.

Cohen and Sayeed warn that the legally constructed threshold of viability, which is seen as the only workable solution (as proposed by Pillay), should

¹⁶¹ The author of the present article can only theorise in these circumstances, because South African resuscitation guidelines or policies cannot be sourced. See S Basu, J Andrews, S Kishore, R Panjabi & D Stuckler “Comparative Performance of Private and Public Healthcare Systems in Low- and Middle-Income Countries: A Systematic Review” (2012) 9 *PLoS Med* 1 10. In this study, the authors found that there is a lack of published data on the private healthcare sector by which to evaluate its performance.

¹⁶² Especially since the South African private healthcare sector is profit-driven, see P Carstens & D Pearmain *Foundational Principles of South African Medical Law* (2007) 234.

¹⁶³ Partridge et al (2005) *J Trop Pediatr* 13.

¹⁶⁴ 15.

not be mistaken as ensuring absolute protection for a viable foetus.¹⁶⁵ Even when moving past the “gray zone” of viability, foetal life is inherently fragile with no guarantee of live birth.¹⁶⁶ There are too many uncertain elements present for personhood to be subject to the condition of foetal viability. This approach may require a “patient-specific” confirmation of viability for each and every pregnancy. Factors relevant to the maternal environment (whether the pregnant woman has access to private or public healthcare facilities, pregnancy-related difficulties, and so on) and the physical characteristics of the foetus (the presence of deformities, weight and sex) would have to be considered. The born-alive rule merely requires the newly born to show any sign of life after separation, regardless of sex, deformities, gestational age, weight or attending healthcare facility. The born-alive rule thus offers a very objective criterion in an environment plagued with uncertainty.

SUMMARY

In 2010 an academic publication called for the common law born-alive rule to be substituted by a definition of personhood that includes an unborn but viable foetus. It was the author’s submission that foetal viability occurs at 24 weeks’ gestation. This assertion represents a wider legal tendency to attribute foetal survivability to a particular gestational week. An ambiguous legal concept of foetal viability has developed because different gestational weeks (which are all said to represent the point of viability) are being applied in different areas of law. This is problematic because it is not clear when the legal implications of personhood should benefit the unborn. Consequently, this article turns to medical knowledge and looks at the clinical definition of foetal viability in order to determine whether foetal viability can be legitimately applied in law for purposes of extending personhood. Research indicates that determining the viability of a foetus requires an individualised approach towards each pregnancy. This construction of viability moves beyond gestational age and includes the consideration of a wide range of foetal related variables, and medical and sociocultural variables. At best, foetal viability is a clinical estimate that can only be verified upon birth. Due to the fact that personhood has such far reaching legal implications, it is important that definitive demarcations are provided as to exactly when foetal viability occurs. However, medical science cannot provide these definitive lines because there are too many uncertain elements present when determining foetal viability. Thus personhood cannot be subject to the condition of foetal viability since this approach to personhood would require a “patient-specific” confirmation of viability for each and every pregnancy and this is unrealistic if not impossible.

¹⁶⁵ Cohen & Sayeed (2011) *JLME* 237

¹⁶⁶ See J Lawn, H Blewcowe, R Pattenson, S Cousens, R Kumar, I Ibiebele, J Gardosi, L Day & C Stanton “Stillbirths: Where? When? Why? How to Make the Data Count” (2011) 377 *The Lancet* 1448 1449 who report that 2.65 million stillbirths occurred worldwide in 2008 as a result of both maternal and foetal conditions. The authors found that 98% of stillbirths occurred in low-income to middle-income countries. However, see E McClure, S Saleem, O Pasha & R Goldenberg “Stillbirth in Developing Countries: A Review of Causes, Risk Factors and Prevention Strategies” (2009) 22 *J Matern-Fetal Neon Med* 183 186 who estimate that the causes of at least half of all stillbirths are unknown.