The Human Fertilisation and Embryology Act 1990 established the legal framework that governs infertility treatment, medical services ancillary to infertility treatment such as embryo storage, and all human embryological research performed in the UK. The law also defines a legal concept of the parent of a child conceived with assisted reproductive technologies. Section Five of the Act establishes the Human Fertilisation and Embryology Authority, the first of its kind in the world, to enforce and regulate the responsibilities that scientists, doctors, and prospective parents have towards embryos and to each other. Upon introducing the Act to the House of Commons, the Secretary of State for Health of the time, Kenneth Clarke, said the bill was in his opinion the most important piece of legislation considered by the government in two decades.

On 1 November 1990, the Parliament of the UK passed The Human Fertilisation and Embryology Act 1990 (HFE Act) to bring under regulation three aspects of assisted reproduction: the creation, care, and use of human embryos outside of the body of a mother (ex vivo); the collection, care, and use of donated human sperm and eggs (donated gametes); and the storage of these human gametes and embryos. The first baby produced via means of in vitro fertilization, called a test tube baby, was born in 1978. The government of the UK established a Committee of Inquiry into Human Fertilisation and Embryology in July of 1982. This committee published a report, called the Warnock Report, after the committee chair Mary Warnock, that helped precipitate the HFE Act of 1990. The government published a White Paper titled *Human Fertilisation and Embryology: A Framework For Legislation* after the Warnock Report in 1987, followed three years later by the 1990 Act.

In addition to being about assisted reproductive technologies, the HFE Act also covers the use of human embryos in scientific research. Under the HFE Act, scientists could undertake human embryological research for a limited number of reasons: to increase knowledge of the causes of congenital diseases and miscarriage; to encourage advances in the treatment of infertility and the development of more effective contraception; and to detect genetic or chromosomal abnormalities before an embryo is implanted. The UK amended this provision of HFE Act in 2001 to allow human embryonic research to (a) increase knowledge of the developing embryo; (b) increase knowledge about serious disease, or (c) enabling any such knowledge to be applied in developing treatments for serious disease.” The HFE Act allows for experimental research on human embryos only before they develop primitive streaks, a structural feature of an embryo that typically appears after fourteen days of development.

The HFE Act has an introductory preamble, forty-nine Sections, and four Schedules. The law established the Human Fertilisation and Embryology Authority in London, UK, as the regulatory body for these issues in the UK. Sections 9 through 22 of the HFE Act list conditions upon which the Authority can grant and revoke licenses to medical providers, storage centers, and research scientists, who research human gametes and embryos. Schedule 2 details all of the conditions that govern the HFE Authority for the license of professionals and institutions using or storing human embryos.

The HFE Act stipulates legal definitions for a variety of natural language terms including embryo, gamete, mother of, and father of, to clarify matters of legal and social standing and inheritance. An embryo according to the HFE Act is “a live human embryo where fertilization is complete, and (b) references to an embryo include an egg in the process of fertilization, and for this purpose, fertilization is not complete until the appearance of a two cell zygote. A mother is ‘the woman who is carrying or has carried a child as a result of the placing in her of an embryo or of sperm and eggs, and no other woman, is to be treated as the mother of the child.’ Therefore, according to the act a woman who donated an embryo isn’t legally the mother of the child born from the donated embryo if another woman carries it to term. This provision is excepted in the case of adoption, where the mother of the adopted child is to be considered the adoptive mother. The act states that a father of a child conceived with help from reproductive technologies is the person married to the mother at the time a fertilized embryo is implanted in her, unless he does not consent to the procedure. Sections 27 through 30 detail the legal implications of the various definitions for England, Wales, Northern Ireland, and Scotland, respectively.

The act deals with the concept of consent in Schedule 3 for all participants in assisted reproductive technologies. In addition to providing the Human Fertilisation and Embryology Authority with enforcement powers over licensing conditions, many of the final sections of the HFE Act articulate punitive judicial guidelines, including fines and imprisonment, not to exceed ten years, for violations of the various conditions of licensing.

The HFE Act amended several existing laws, including the Surrogacy Arrangements Act of 1985, the Abortion Act of 1967, and the Congenital Disabilities (Civil Liability) Act of 1976. Schedule 4 offers further amendments to previous laws, including the Family Law Reform Act 1969, the Social Security Act 1975, the Adoption Act 1976, and the Human Organ Transplants Act 1989. The law also enjoin the Human Fertilisation and Embryology Authority to yearly reporting and auditing. Schedule 1 describes the operational details of the authority: how the authority is to appoint members and staff, as well as conditions on their tenure of office and general terms of remuneration.

The HFE Act of 1990 was itself amended in 2000 by the Human Fertilisation and Embryology (Amendment) Bill to allow some cases in which sperm from dead men may be used in ex vivo fertilizations. The law was amended again in 2001 by the Human Fertilisation and Embryology (Research Purposes) Regulations to expand the allowable reasons for research on human embryos. In 2004, the UK government began to review the 1990 Act and subsequently in March of 2007, the House of Commons Select Committee on Science and Technology published its “Fifth Report, Human Reproductive Technologies and the Law” which criticized the HFE Authority for failing to regulate the combination of human and non-human animal genetic material in the creation of a chimera. In 2008, the HFE Authority addressed this concern through an amendment. The 2008 amendment also banned sex selection of children for social reasons and expanded the allowable roles of same sex couples under the law. The 2008 revision also changed the reference to “the need for a father” with the gender neutral “need for supportive parenting.”

Numerous authors have reacted to the law and to the Authority it established. In 1991 Blackstone, a UK publishing company, published Blackstone's guide to the *Human Fertilisation and Embryology Act 1990: Abortion and Embryo Research, the New Law*, edited by Derek Morgan and Robert Lee, which was an early contribution to scholarly commentary on the law and its consequences. The HFE Act was the first comprehensive national policy regulating the use of human embryos in the world. The law continued to cause controversy into the twenty-first century, as it addresses fundamental moral concerns; nevertheless it remained in effect as the primary legal instrument regulating the use of human embryos for medical and scientific purposes in the United Kingdom.

### Sources

[1] Published on The Embryo Project Encyclopedia (https://embryo.asu.edu)
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