



The art of medicine

The power and politics of fetal imagery

The ultrasound image of the fetus in utero is iconic and has transcended the medical domain into our everyday visual culture, where it has been deployed for commercial, social, and political purposes. The power of fetal imagery to inform contentious debates and influence policy and legislation that limit reproductive rights raises important questions about medicine's role in the production, interpretation, and dissemination of these images.

Dating back to anatomical and midwifery texts in the 1400s, images of the fetus were created primarily with scientific and medical intent for a limited audience. In the western tradition, the earliest fetal imagery appeared in manuscripts as hand drawings that were more diagrammatic than realistic. This changed during the 16th century, when proliferation of the printing press and the revival of scientific inquiry into human anatomy prompted the publication of texts illustrating more realistic depictions of the fetus in utero for the edification of physicians, anatomists, midwives, and their students. Much later, in combination with mass media, technologies like photography and ultrasonography further consolidated the value of fetal imagery in medical contexts, while also making possible their use in more public ones.

In April of 1965, fetal imagery entered the public sphere when *Life* magazine published a photograph of a free-floating

fetus on its cover with the title "Drama of life before birth: unprecedented photographic feat in color". The images that comprised this photo essay heralded a new era of public cultivation and consumption of fetal imagery. The public's interest in these images helped shape the aesthetic template for future fetal imagery and contributed to changing the debate about reproductive rights. The fetuses depicted in the *Life* article were disembodied from the pregnant person, often floating alone in a space-like background or an amniotic sac. The practical reason for this aesthetic was that, although one of the fetuses photographed for the *Life* article was in utero, the others were aborted or miscarried fetuses obtained by the photographer, Lennart Nilsson, from a clinic where he had an on-site photography studio. Importantly, the fact that these images were photographs imbued them with a sense of objective truth. The implied objectivity of these images belied the reality of how most of them were produced and curated. Symbolically, these seminal images projected a public aesthetic of the fetus as an isolated being, one potentially deemed by some to be worthy of independence and personhood. Although the focus on the fetus at the expense of the pregnant person had been depicted throughout centuries of anatomical and medical texts, the leap of this *Life* imagery into the public domain was new. Subsequently, the public's growing familiarity with and consumption of images of disembodied fetuses provided an opportunity for anti-abortion campaigners to appropriate such imagery during the 1970s.

Fetal imagery has always been a familiar part of the visual landscape of the anti-abortion movement. Starting with photographs and then adding ultrasound images, anti-abortion campaigners have curated fetal imagery to evoke an emotional response. By focusing on easily recognisable facial features, hands, or feet, often captured in evocative gestures, the anti-abortion movement has co-opted images to foster their contention of fetal personhood and to argue that the fetus is an independent entity deserving of legal and political protection. This single focus on the fetus distinct from the pregnant person contrasts with the complexity and nuance that inform private and autonomous individual reproductive decisions. The use of fetal imagery for the ideological purpose of claiming fetal personhood, in turn, may also influence the public interpretation of these images, imparting them with a power to influence political agendas in legal arenas.

The perceived power of fetal imagery, particularly the ultrasound image, is reflected in its use in anti-abortion legislation. Since the 1990s, US state legislators have appropriated the fetal ultrasound as a compelling image that has had a role, alongside other factors, in contributing towards anti-abortion policies that have been enshrined in



Courtesy of the John Crerar Library and the Special Collections Research Center, University of Chicago Library

Image from Eucharius Rosslin's *Der Schwangeren frauen und hebammen rosegarten* (1528)

law. These laws are often couched in terms of patient safety, despite the low rates of complications in abortion care, and rely on notions that viewing the fetal ultrasound image will provoke or intensify maternal bonding and could reverse a person's decision to have an abortion. Such laws include requiring abortion providers to perform an ultrasound for all patients seeking abortion, show and describe the ultrasound images, or offer all patients the opportunity to view the ultrasound. Although ultrasounds are often clinically indicated before an abortion and some patients may desire to view or discuss the ultrasound images, such decisions are best made between the patient and provider, in accordance with clinical indications and respecting the individual's preferences and values. Instead, abortion laws in some US states intrude on the patient-provider relationship and violate core ethical principles of autonomy, beneficence, and non-maleficence by mandating practice around ultrasound.

By dictating when and how providers perform ultrasounds, these laws transgress the shared decision-making process between a pregnant person and their provider. In an era of laws protecting a provider's right to conscientiously refuse to provide services based on moral or religious beliefs, we assert that the medical community needs to push back against laws and policies that undermine the patient-provider relationship. Laws that force patients to view ultrasound images aim to elicit an emotional response from the patient by presenting a sense of fetal movement or structures that draw on a constructed notion of fetal personhood, thereby linking private clinical encounters to a public campaign built on a partial framing of fetal imagery. This coercive legislating of ultrasonography and fetal imagery discounts the fact that people presenting for abortion have deliberated and carefully considered their decisions, navigating a complex set of emotions to arrive at a conclusion they believe is in their and their families' best interests.

Ultrasonography is also at the centre of so-called "heartbeat" laws, including Texas Senate Bill 8 (S.B.8), which was allowed to go into effect on Sept 1, 2021, by the US Supreme Court. These controversial laws make abortion illegal at the point when an embryonic/fetal "heartbeat" is detected by "standard medical practice". Relying primarily on imaging technology to identify cardiac activity, these laws claim the detection of a "heartbeat" to be "the universally recognized indicator of life", according to a faith-based organisation that advocates for "heartbeat" legislation. This interpretation and these bills are controversial, partly because what is visualised on imaging early in gestation is not a formed anatomical heart beating, but rather, electrical activity of cells in an evolving "heart tube" that later in embryologic development becomes a four-chambered heart. The "heartbeat" laws effectively outlaw abortion after a gestational age of 6 weeks and partly rely on an ideological interpretation of ultrasound images. These laws have previously failed to pass or have been suspended by the courts, but the recent enactment of Texas S.B.8 underscores

the power of fetal imagery to influence policy that drastically limits individuals' access to essential reproductive health care.

In addition to political and legislative use of ultrasound images, patient access to these images has impacted patient autonomy. The proliferation of digital and social media has altered public engagement with and discourse about fetal imagery. Before the regular clinical use of ultrasound, an individual first experienced pregnancy when fetal movements were first felt. This initial personal and physical engagement with the fetus is now commonly replaced by the diagnostic experience of the ultrasound, during which the pregnant person is part of this experience both in the moment and beyond it. Patients are now able to project the ultrasound image of the fetus outside of the clinic and into the digital world. The pregnant person assumes the new role of curator of these images in social media, by choosing how, when, and why to publicly share them. In this sense, social media has given control over fetal imagery and its interpretation in the public space to the person from which it was created. By providing the fetal ultrasound image to the pregnant person, medicine has played a part in this transformation.

This curation of fetal imagery in the digital domain and on social media marks an important point in the visual culture of the fetus in utero. Will the digital age take the public fetal ultrasound in new ideological directions? While we cannot answer that question, we can expect that imaging technologies will continue to advance, and undoubtedly the technological gaze will remain focused on the pregnant person and the fetus in utero. Yet, the proliferation of fetal images in the public domain continues to raise questions about their broader use and interpretation. Does the ubiquity of the fetal ultrasound in pregnancy announcements for example distort its traditional clinical role in providing patients and practitioners with insights into an individual pregnancy? How has the asymmetric use of fetal imagery in the public domain informed politics and debates about reproductive rights? What should medicine's role be in creating, interpreting, and disseminating these images, particularly when the image or imaging technology is used to restrict reproductive rights and violate core principles of clinical ethics? As medical imaging becomes more sophisticated, we must be vigilant in anticipating and responding to how these images are interpreted for ideological, political, or legislative purposes.

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