Freezing fertility: Oocyte cryopreservation and the gender politics of ageing

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Chapter 4

Imaging the Frozen Egg
OC’s Cellular Portraiture

Figure 1 “Picture of my Frozen Egg” (Eggfreezer 2008b)

The notion that reproductive technologies are also visual technologies has become abundantly clear in the last half-century. The images produced by these technologies have had profound political effects and cultural impact; fetal ultrasound imagery played a key role in the politics of abortion, in vitro embryo images did in stem cell debates and the iconic scene of the egg’s micro-injection in ICSI fertilisation influenced the popular imagination of the reproductive process and the “helping hand” of ARTs (Franklin 2013b, 25). As the advent of new reproductive technologies also entails the production and distribution of new forms of medical imagery within the clinic and beyond, so oocyte cryopreservation gains a visual dimension through the photomicrography of extracted eggs. The photograph above shows an unfrozen extracted egg, but may also function, as I will argue in this chapter, as a visual referent for the frozen egg that remains in the

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freezer, which never existed in this extended disembodied state before the advent of OC. Of course the cryopreservation of sperm and embryos has been routine practice for decades and the viability of the human egg outside of the female body has been manifest in the birth of in vitro conceived children from the late 1970s onwards (Pegg 2002; Parry 2004). Yet OC is unique in combining the egg’s cryopreservation, viability and extracorporeality. OC thereby introduces the emergent cultural entity of the viable extracorporeal frozen egg, of which the light grey round shape pictured here is the visual counterpart.

The image is an example of a photograph of an egg taken prior to cryopreservation that fertility clinics may offer women after their eggs have been extracted.78 When all the matured eggs have been removed from the woman’s ovaries, they are examined under the microscope to check whether they are of good-enough quality to warrant freezing them. The photograph is a registration of the microscopic examination of the egg after its extraction; it is a visual record of a procedure that takes place in laboratories that normally remain closed to patients, which now brings the egg into visibility for the women from whom it was extracted, their social networks and the wider public.

Photographs of cells have long circulated beyond the confines of the laboratory, and yet this photograph is novel in two respects. Firstly, although the image was taken prior to freezing, the suggested referent of the image—as the title indicates—is the frozen egg that remains in the freezer. As opposed to the familiar images of egg extraction and fertilisation that also occur in conventional IVF, this photograph specifically references the phase of cryopreservation that is unique to OC. The image’s novelty then follows from bringing together the “frozen moments” of photographic representation and the frozen state of the eggs.

Secondly, given its production in a clinical context, the photograph is framed as a particular patient’s egg rather than a generic image. This suggests an individualisation of the egg—both in relation to the patient’s body and as a self-contained entity—which allows for a reading of the photograph as a portrait. Although intended parents have encountered clinical images of fetuses and embryos through ultrasound and IVF technologies, OC offers an even earlier depiction of pre-natal, pre-conception reproductive imagery at the cellular level.79 As specimens that may play a role in people’s imagined familial and fertile futures, these images are disseminated in personal blogs

78 Although not all clinics offer their patients images of their eggs, it is familiar practice among UK and US clinics to share egg photographs—either as part of the egg freezing package or upon the woman’s request.
79 See Franklin (2013b) for an in-depth discussion of IVF as “a technology of representation,” which offers “a window onto early human development, and as such a new form of public spectacle.” She argues that “IVF technology is also the source of new images of human origins, and thus offers a new visual grammar of coming into being” (2013b, 23).
and family albums. This photograph, for example, was offered to a woman after she had frozen her eggs; using Eggfreezer as her online alias, she publicly shared the image on the Blogspot website and added a reflection on her relation to the depicted egg now that it is stored in the freezer. If OC introduces the novel cultural entity of the frozen egg, this blog post is indicative of how it can be visually mediated in patient communication and circulated in social media.80

In this chapter, I read the cryopreserved egg’s cellular portrait and ask what cultural ideas about reproductive ageing are expressed in the image, its textual framing and its online distribution. I approach the egg’s portrait as an effect of a variety of world-making practices, cultural, medical and technoscientific in kind, through which specific ways of living, seeing and ageing the body are expressed. In earlier chapters I argued that egg freezing entails an engagement with embodied reproductive ageing that becomes meaningful through constructions of the biological clock and responsible life course management, through a history of medicalisation of female reproductive ageing, and as an anticipatory biopreparation for potential future infertility. Here I explore how the visualisation of OC in the frozen egg’s photograph is mobilised to frame embodied reproductive ageing as a process that may be inevitable, but can equally be outsourced, avoided, halted, modified or multiplied.

Now that frozen eggs may continue to exist for extended periods of time outside of the body, the photograph of the cell becomes a means for relating to it while it remains in the freezer. While the egg’s extracorporeal existence challenges conventional constructions of reproductive embodiment, its cryopreserved state invokes a tension between the egg’s symbolism of life’s beginning and the association of the photographic “frozen moment” with death and finitude. In this chapter, I will first address constructions of cellular individuality and exceptionalism in the frozen egg’s portrait, which may reference the woman, the egg and the potential child, in relation to a visual history of reproductive medical imaging. Subsequently, I discuss the implications of these constructions for understandings of reproductive embodiment by considering the cellular portrait as an opportunity for what art theorist Amelia Jones calls “self-imaging” (2006). In this process of self-imaging, the photograph becomes an occasion for relating lived existence to cellular existence—a notion that Hannah Landecker writes about in Culturing Life (2007). In her critical history of cellular tissue cultures, Landecker reads the cell as a foundational concept in 20th-century reconceptualisations of the body and its temporality (2007). Combining Landecker’s cultural analysis of the temporality of

80 Although the blog post under scrutiny is but a single instance, it is indicative of a wider practice of observing, recording and circulating microscopic images of eggs. My reading of the Eggfreezer’s blog suggests that these images become meaningful in new ways when the depicted eggs are individualised and remain stored in the freezer, instead of being fertilised or discarded, as is the case in conventional IVF.
extracorporeal cellular life and Jones’ reflections on finitude in the photographic portrait, I will analyse how the image of the egg’s cryopreservation is used to affirm and reimagine both existing understandings of reproductive embodiment and linear models of biological ageing. Bringing together practices of self-imaging and self-presenting, I analyse this image as an expression of a contemporary moment in which the manipulation of biological time changes what it means to age as much as culturally specific ideas about ageing—in this case mobilised by the photographic image of the egg—change what it means to manipulate biological time.

The Individual Egg

*Here is an actual egg from my retrieval. (the whole thing is the egg and the spot is the nucleus). Life is a pretty crazy thing. This egg was inside me (in a premature state) for 32 years - even before I took my own first breath as a newborn. Had I not had the retrieval, this egg would have just never developed and died off last month - just another one of the many millions that die off over a woman’s lifetime. Instead, through modern medicine, it was able to be matured and extracted and it is now quite literally frozen in time alongside 27 others, potentially to be the starting building block of a future human being. And this egg is what is fully sufficient and necessary to make that human my biological child. This is the tie - the everything and anything that is what a woman prefers when she wants “her own” biological baby. Whatever it is that she wants - what I want - it’s in there. Part of me is in there.* (Eggfreezer 2008b)

Eggfreezer’s photograph shows the egg as a single, disembodied entity. It is not swaddled in an ovarian follicle, swept into the Fallopian tubes by engorged fimbriae or surrounded by sperm in a scene of (imminent) fertilisation. The image rather presents the frozen egg as a cultural entity that exists outside of the female reproductive tract and has reproductive significance for the potentiality—rather than the visible actuality—of a future merge with a sperm cell and division into new life. Eggfreezer includes this image of the frozen egg in the blogpost “Picture of My Frozen Egg” and frames it with the text cited above. As the last in a series of 47 posts describing her experience of OC in 2008, the photograph presents the result and the conclusion of the egg freezing process.

On the blog this clinical image of the disembodied cryopreserved egg attains a specific individuality as the egg that had been “inside [her] for 32 years” and as the “building block of a future human being.” In this way, it differs from similar cellular images circulating in medical textbooks, news media, advertising and bioart, which
depiect the egg as a generic entity (Anker and Nelkin 2004; Lie 2012, 476). The
culturation of the cryopreserved egg as an “emergent form of life,” as photographic
imagery as well as biogenetic substance, is situated in a visual history of ideas on
reproductive cells and prenatal life, their relation to the bodies from which they
originate and those whose origin they represent (Bharadwaj 2012, 394). In this first
section, I analyse the mobilisation of the cell’s photograph in conceptualising the egg as
an individual entity in relation to this history. In doing so, I explore how the framing of
the egg as individual implicates various constructions of cellular and bodily temporality,
including its position in a developmental continuum from gamete to baby, the rhetorical
use of its averted death and its life-giving potential, and the relation between the frozen
time of cryopreservation and the ageing of the reproductive body.

The individuality of prenatal life and its relation to the female body were put
centre stage in late 20th-century scholarly discussions on ultrasound testing, fetal
photography and embryo imaging. These discussions are a testimony to the fact that,
once circulated in the public domain, these prenatal images exceed their medical
function and play a key role in patient experiences, in the visual rhetoric of reproductive
debates and in the popular imagination of reproduction and the bodies involved (Lie,
Ravn, and Spilker 2011; Franklin 2013a). Fetal imagery has been widely criticised for its
visual construction of an autonomous, individual fetus that appears to exist
independently of its embodied uterine surroundings, thereby erasing the maternal body
from view (Petchesky 1987; Stabile 1992). When ultrasound technology brought the
fetus into view, Petchesky argued that the imagery blurs “the boundary between fetus
and baby; [it] reinforce[s] the idea that the fetus’ identity as separate and autonomous
from the mother […] exists from the start” (1987, 272).81 Anti-abortion campaigns have
appealed to this medico-scientific imagery to extend personhood to the fetus and
politicise the timing of its development, particularly with the aim of reducing the time
limit on abortion (Franklin 2014, 110–112). Fetal ultrasounds have become widely
recognised and circulated images of prenatal kinship, and they function as an integral
part of the pregnancy experience for many intended parents (Van Dijck 2001, 108–9).
The ultrasound image presents the fetus as an interior other, with whom a relation can
be established through the visual register. The presumed affect raised by these images
can be read in governmental and clinical policies, for example in the enforced visual
bonding protocols in contemporary US abortion practices that require an ultrasound
encounter with the fetus’ image prior to the procedure (Sanger 2008; Coe and Altman

81 Fetal photography, epitomised by Lennart Nilsson’s influential 1965 series in LIFE magazine,
complemented textual constructions of fetal individuality in medical scientific texts and played a key role
in pro-life anti-abortion campaigns (Franklin 1991, 195).
2012). In these examples, the fetus’ visual resemblance to the future child is capitalised to extend claims of individuality and personhood to it.

The image of the embryo has been used both as an argument against its individuality and as a visualisation of the further extension of prenatal personhood to the embryonic stages. On the one hand, the embryo’s image played a key role in ethical debates on the regulation of in vitro embryo culturing for research purposes to support the view that “life” does not “begin at conception” (C. Williams, Kitzinger, and Henderson 2003, 803; Franklin and Roberts 2006; Ehrich, Williams, and Farsides 2008; Theodosiou and Johnson 2011). In the UK, the visible development of the embryo’s “primitive streak” 14 days after conception, which indicates an observable differentiation between embryonic and placenta cells, marks the moment until which embryos can legally be cultured and researched. In the debates that led up to the establishment of this 14-day limit in the 2001 amendment of the Human Fertilisation and Embryology Act, proponents of embryo research employed the embryo’s image to argue against its individuality by pointing to its appearance as a cluster of cells that lacks recognisable features and the ability to feel. For example, one Sunday Times columnist explained that “only after 14 days do those 100 or so indeterminate cells begin to shape into the embryo of human life,” while before this point they are merely “‘stem cells’ […] stuck together like fluorescent frogspawn” (C. Williams, Kitzinger, and Henderson 2003, 801–3). In this description, recognition as “human life” follows from cell growth and a time-specific differentiation into distinguishable, functional and observable elements, while early embryonic life is disavowed as human for lacking these qualities and resembling the less valuable reproductive tissue of another species.

While the embryonic images functioned in these debates to dissociate the embryo from fetal imagery, in a clinical context the visual representations of embryos appear to work to the opposite effect. Sheryl de Lacey studied intended parents’ visual perception of embryos and found that her participants described the experience of seeing the embryos through a microscope or on a photograph as affirmation of them being “real.” For these intended parents, the observation of the eight-cell in vitro embryo in combination with the four-week ultrasound image of the in utero embryo visually affirmed the continuum of human development (2005, 1666). In her seminal On Photography, Susan Sontag posits photography as “a narrowly selective transparency” that nevertheless gains authority by the ubiquitous “presumption of veracity” ascribed to it; its effect is one of “furnish[ing] evidence” for events that have happened (1977, 5–6). The quality of the “real” that Lacey’s participants describe references this traditional presumption of photography of providing “evidence” that the procedure has occurred and that the embryos are indeed developing at otherwise imperceptibly small dimensions. These images of the cells become significant because, rather than a lacking
humanness, they signify the temporal progression of embryonic development, from which the growth into the potential future child may be extrapolated.\textsuperscript{82}

Similarly, in Eggfreezer’s reflection on the visual encounter with her egg’s photograph, the image is seen to portray an individual egg that bears a direct relation to her potential future offspring. What makes this egg photograph special to Eggfreezer is her reading of it as “potentially […] the starting building block of a future human being. And this egg is what is fully sufficient and necessary to make that human my biological child.” Its significance follows from a futural orientation to the image, in which the nucleus represents a visible genetic connection to the “‘own’ biological baby” and the cell itself a “building block” from which this potential child may one day grow. With the advent of OC, the portrait of the individualised egg thus emerges as the next step in the visualisation of early reproduction in a visual continuum from gametes to an embryo to a recognisably human fetus and baby.

Because sperm is, quite literally, not yet in the picture, this female gamete symbolises the earliest visualisation and materialisation of the potential future child. This primacy of the egg in imagining the reproductive process reverses the logic of the “preponderance of narratives describing the exceptionalness of the one sperm that gets to fertilize the egg” (Moore 2003, 291). In the familiar trope of the “sperm race,” a multitude of male gametes compete and the exceptional sperm that first reaches the single, ovulated egg becomes the genetic building block for the future child. Here Eggfreezer’s egg emerges as the exceptional one among “the many millions” in the act of visualisation rather than fertilisation. The fact that the egg survived and has been extracted against the odds, as the one singled out of millions, imbues it with an individuality that finds its visual reflection in the photograph of the cell. The meeting of egg and eye, rather than egg and sperm, becomes the occasion for establishing this particular egg’s exceptionalism as the “starting building block” for the potential future child. Only once removed from the body and rendered observable by the camera, this particular egg becomes recognisable as an individual entity onto which reproductive futures may be projected. Following Kathryn Yusoff’s assertion that “the conception of time that the photograph orders is a time conceived on arrests,” both in its form and content the photograph conveys that the egg also becomes exceptional because of its particular existence in time: it has moved from the transitory time of the body to the

\textsuperscript{82} The conceptualisation of embryo as individuals is epitomised in the reframing of embryo donation into embryo adoption in schemes such as the “Snowflakes” programme run by the Nightlight Christian Adoptions agency. The longest-running US programme of its kind, Nightlight started its embryo adoption programme in 1997 (Collard and Kashmeri 2011, 308). They refer to the embryos as “preborn children” and emphasise their individual personhood: “Each snowflake is frozen. We understand that each snowflake is unique. Each snowflake is a gift from heaven. We hope each donated embryo will become a snowflake baby” (Nightlight Christian Adoptions 2015).
arrested time of cryopreservation (2007, 299). In the transition from the opaque body to the transparent petri dish, from an ageing to an arrested state, the photographed egg becomes exceptional in the visual encounter—as the one that continues to live out of the “millions that die off.”

The egg’s potential, but averted, death and successful maturation are temporal markers that function as narrative devices which stage the egg’s exceptionalism as an individual entity. In the visual encounter with the egg, Eggfreezer draws together the premature state of the egg and her own premature state as a fetus: “This egg was inside me (in a premature state) for 32 years - even before I took my own first breath as a newborn.” The shared lifetime gives an age-specificity to the egg, which reinforces its anthropomorphic quality through temporal means, while its chance extraction “through modern medicine” averts its death and positions it as the one that develops against the odds and bears a higher chance of developing into the imagined future child. Rather than the exceptional sperm’s relatively short-lived race through the reproductive tract to be the first to meet the egg, Eggfreezer’s egg’s longitudinal journey is portrayed as stretching back a lifetime. The photograph, then, functions as a testimony to the egg’s survival and stages a departure from the body and the shared journey of a lifetime in the service of future reproduction.

The framing of the egg as individual is thus established with reference to various constructions of cellular and bodily temporality, which play a role in conceptualising reproductive embodiment and ageing in OC. Firstly, the egg was framed within a temporal logic of prenatal development, in which this cell attains a degree of individuality because it becomes recognisable as the first stage in an increasingly observable continuum from gamete to baby. Secondly, the egg’s exceptionalism follows from its shared life span with the body from which it originates. The pictured egg is different from the others by virtue of being saved, preserved and recognisable in the image, thereby continuing its life path according to a different temporal logic outside of the body. This points to a third temporal construction, in which cellular and bodily time are opposed as, respectively, the “frozen time” of cryopreservation that is associated with future generativity and the time of the ageing body that presents a confrontation with finitude—an opposition that I explore in more detail in the next section.

Self-Imaging the Suitable Host

Given the individuality Eggfreezer ascribes to the egg, mirrored in the photograph’s unambiguous centring of its brightly-lit subject, I propose to read the egg’s photograph as a portrait—a genre that is traditionally mobilised “as a soldier for individualism” presenting its subject in terms of “its uniqueness rather than its social connections” (Bal
With the recognition of the egg as individual, its photographic depiction meets Amelia Jones’ definition of a portrait as an image in which “a subject is apparently revealed and documented” and in which the indexicality of the “‘real’ is supposedly presented through the technological means of mechanical reproduction, tempting the viewer to turn to it as a document of the truth of what Roland Barthes terms the ‘that-has-been’ before the lens” (2002, 951).

Jones’ work on portraiture offers insight into the role of the photomicrography of the egg in reimagining the body from which it originates. Two important elements of Jones’ work that also emerge in the egg’s image are the photographic staging of the self and of temporality. On the one hand, the photographed egg’s ambiguous status as both extracted body tissue which may be considered “part of me” and “building block” of the potential future child engages Jones’ concern with complicating the process of establishing the “self” through portraiture. On the other hand, the “frozen moment” of the photograph depicts an egg that simultaneously signals a corporeal past and a reproductive futurity, while staging a cellular temporal “latency,” or life in suspended animation, in the face of bodily finitude (Radin 2013, 484). In this section, I address how these two elements inform the egg’s portrait as an image through which reproductive embodiment and related constructions of bodily temporality that emerge with OC become legible.

Jones’ Self/Image is concerned with “the drive in Euro-American culture to deploy technologies of visual representation to render and/or confirm the self (paradoxically: objectifying the self so as to prove its existence as a subject)” (2006, xvii). This drive, she argues, exists in a tension with the failure of these representations to offer an image of “the self as a coherent knowable entity” (2006, xvii). Engaging this drive, the egg’s photograph provides the occasion for Eggfreezer’s consideration of the egg’s reproductive potentiality, the other eggs inside of her and the averted possibility of the cryopreserved egg’s death. Yet the photograph also offers an opportunity to reflect on the self as a potentially reproductive, temporally-specific body in relation to this egg—as a body that once enveloped the egg, as a self genetically transferred to its nucleus, and as a self that continues to encompass the egg even after its extraction. This variety of

83 With a reading of portraiture by artists like Cindy Sherman and Marlene Dumas, Van Alphen shows how the genre can also depart from its conventional function of “portraying somebody in her or his individual originality” (2005, 47). In this section, however, I take this conventional function of portraiture as starting point for a discussion of the egg’s photograph.

84 The idea of photography as depiction of a “frozen moment” holds cultural currency in spite of the multiple temporalities of photography—including historical time as well as the time of exposure, development, digitisation, distribution and reception (Drucker 2010, 23). Similarly, although the egg is frequently described as “frozen in time,” there will be morphological changes in the egg in the process of freezing and thawing, notably in the zona pellucida that surrounds the cell’s membrane (Eggfreezer 2008b).
approaches is indicative of how the extracorporeal, cryopreserved egg both challenges and affirms the notion of a self as a “coherent knowable entity.”

In the image of the egg, photography’s authenticating power combines with the authority of medical imagery. The numeric markers and the rectangular greyscale framing the egg are the visual traces of a medical gaze mediated by microscopic imaging technologies, which form the basis for self-imaging in the egg’s portrait. Feminist scholarship of science has long recognised the significance of the medical gaze for “women’s sense of bodily awareness” (McNeil and Franklin 1991, 134). The employment of medical imagery in imagining a self is in keeping with what Jones calls “our weird, counterproductive imagining of ourselves from the outside, as we are seen by others” (2006, xvii). In the image of the egg, the view from outside the body is the basis for self-imaging, both because the spectator position “is established through the clinical gaze” and because the eggs have been extracted from the body’s interior (Franklin 1995, 333).85

The (interior) bodily self, and its reproductive potential as symbolised by the egg, thus become recognisable through the visualisation of the disembodied egg after its extraction. In The Transparent Body, José van Dijck traces the techno-cultural transitions in visualising the body, from the primacy of portrait painting to portrait photography in the mid-19th century and subsequently, later that century, the popularisation of X-rays as “a portrait that revealed everything under the skin” (2005b, 92). Although after the discovery of its hazardous effects X-ray sittings soon disappeared, the remainder of the 20th century saw a variety of medical imaging techniques, from ultrasound to the MRI to the endoscope, that sought to make the body transparent. The photographic imaging of the egg in OC represents a method of revealing what is “under the skin” by removing the egg from the body and photographing it both as evidence of the in vivo existence of eggs in the body and of the continued existence of the egg outside of the body, in the freezer. If the photograph of the cell then functions to “render and/or confirm the self,” the eggs, paradoxically, need to be disembodied in order to become visually recognisable as what was “inside of me” (Jones 2006, xvii; Eggfreezer 2008b). The portrait, in turn, “becomes a kind of technology of embodiment” that “points to our tenuousness and incoherence as living, embodied subjects” (Jones 2002, 950).

Positioned in a history in which the visualisation of reproductive cells and prenatal bodies has had far-reaching cultural implications for conceptualising women’s

85 As “visualizing and imaging technologies are critical to the technical and discursive apparatus of assisted reproduction,” so does the clinical and research practice of OC have various visual elements (Franklin 1995, 332). At different stages of the procedure, whether an ultrasound scan of the ovaries during hormonal stimulation, light-based laparoscopy in egg extraction or the microscopic examination of eggs prior to cryopreservation, visual technologies are essential elements. With the egg’s photograph, this visual dimension of the OC practice gains a more public character.
bodies, the outside view of the cryopreserved gamete similarly affects understandings of female, age-specific reproductive embodiment. In Eggfreezer’s case, the effect of self-imaging with the egg’s portrait is a reconceptualisation of the body as host of the individualised egg that has been “inside [her]” for 32 years, but “would have just never developed and died off last month” if she had not had the extraction. This understanding of the body is reminiscent of a familiar idiom highlighted by Sarah Franklin in her reading of 1980s abortion debates, in which she observes that the fetus is presented as independent, separate entity while the mother is configured as its “suitable host” (1991, 193–4). This discussion had its visual counterpart in fetal imagery, in which the absence of the pregnant woman’s body visually “reinforce[s] a patriarchal and masculinist equivalence between the ‘individual’ foetal body and foetal personhood, when in fact the foetus is never an ‘individual’ at all as long as it is inside a woman’s body” (Franklin 2014, 117). Rosalind Petchesky famously critiques the fetal ultrasound as a “panoptics of the womb” for observing fetal behaviour that rendered the woman invisible as “maternal environment” (1987, 277). In Disembodying Women, Barbara Duden similarly argues that the ultrasound image reduces the “woman as the environment of new life” (1993).

Although these critiques respond to discourses of another era, the photograph of the frozen egg also inflects on the body from which it originates as (un)suitable host. The egg’s photograph, although produced with light photomicrography rather than ultrasonography, has a similar aesthetic to the ultrasound, with its blurry greys and a single figure immersed in a dark background. Like many ultrasound images, it includes a greyscale next to the image and a set of numeral references, including the date of the image. In keeping with the above discussion of the cell’s individuality, the aesthetic resemblance to the ultrasound invites a reading of the egg cell as a very early image of the (potential) future child, existing independently of the intended mother’s body. In Eggfreezer’s narrative, the egg needs to be extracted from the body to ensure its continued existence. Here the body’s suitability as host for the egg is linked to its existence in time, which contrasts with the representation of time in the egg’s photograph.

When Eggfreezer uses the image of the frozen egg to conceptualise her body, the image becomes, if not a self-portrait, a form of what Jones calls “self-imaging: the rendering of the self in and through technologies of representation” (2006, xvii). Rather

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86 Although there are newer technologies for producing real-time images of the fetus in utero, including the yellowy images of the 3D echography and its moving 4D variant, the black-and-white ultrasound is still widely in use and continues to bear cultural relevance as the standard image for the first visual encounter with the fetus, in the clinic and beyond. For an in-depth discussion of the 3D ultrasound and its claims to transparency, see Roberts (2012).

87 Moreover, as part of a blog post, the photograph “performs” as a public announcement of egg freezing, much like the ultrasound image is commonly used as simultaneous proof and announcement of pregnancy.
than reflecting the self’s appearance, the egg photograph presents a cellular temporality which allows a self-imaging of the body’s relation to time. Regarding the temporal dynamics of self-imaging, Jones suggests the photographic portrait inherently entails an engagement with “the fact of the aging and inevitable death of the subject” (2006, 46, 76). She reasons that

[the photograph is a sign of the passing of time, of the fact that what we see in the shiny surface of the photographic print no longer exists as we see it: it is a sign, again, of our inexorable mortality as well as, paradoxically, an always failed means of resecuring our hope of having the photographed subject “live forever.” (2006, 46)

The photograph thus marks the process of ageing and a confrontation with mortality. In Mourning Sex, Peggy Phelan similarly reads the photographic image as “the resistance to releasing the moment into the past without securing its return” (2013, 157). Both theorists associate with photography a confrontation with the passing of time and a desire for counteracting it.

Jones and Phelan develop their thought after Roland Barthes’ reflection on mourning and photography in Camera Lucida. Occupied with the death of his mother and the photographs of her that remain, Barthes writes on the confrontation with death in photography: “In front of the photograph of my mother as a child, I tell myself: she is going to die: I shudder, […] over a catastrophe which has already occurred. Whether or not the subject is already dead, every photograph is this catastrophe” (1981, 96). The photograph’s catastrophe follows from its “anterior future”: the image presents a past moment that tells of a future has already passed at the time of viewing (Barthes 1981, 96). In its resistance to releasing the moment into the past, the photograph “induces belief that it is alive, […] but by shifting this reality to the past (‘this-has-been’), the photograph suggests that it is already dead” (Barthes 1981, 79). The catastrophe thus lies in the “arrest of aliveness, which simultaneously foreshadows the terminal arrest of death”; the photograph captures the tension between “the two temporalities” of aliveness and arrest (Yusoff 2007, 222).

The egg’s portrait is poised at the tension between aliveness and arrest. Barthes recognises in his photographs a “new punctum,” not in its conventional meaning of the significant “detail,” but a punctum of “Time” (1981, 96). Time is similarly at the forefront of the egg’s photograph, which has as its subject an egg that has been extracted because of its vulnerability to the passage of time. Numeric markers imprint time, date and an identifying number as part of the image itself—a reference point for future revisiting of the photograph and the egg it depicts. The numbers tell scientific time,
specific to the second, highlighting the precision of the moment. The photograph’s temporal punctum follows from its depiction of the egg as “literally frozen in time” (Eggfreezer 2008b). This suggests that the photograph’s “frozen moment” does not primarily reference the slippage of a moment of the embryological examination of the extracted cell in the past (this-has-been), but rather signifies the frozen state of the egg characterised by the arrested cellular time in the present (this-is).

As the frozen moment of the photograph depicts the frozen state of the egg, this photograph presents an alternative temporal logic to the portraits theorised by Barthes and Jones. Rather than a “sign of the passing of time” that is a “failed means […] of having the photographed subject ‘live forever,’” the egg’s photograph references a subject whose existence in time is seen to be halted and may thereby maintain its viability (Jones 2006, 46). The frozen egg “induces belief that it is alive” without “shifting this reality to the past”; the cell’s arrested time thereby does not foreshadow death, but is framed as having a futural orientation that promises both its own latent aliveness and its future reproductive potential (Barthes 1981, 79). Given that the image depicts the arrested present rather than the past moment, while the egg is frozen, the photograph is “live”—in a sense analogous to the “live” broadcast of moving images and in keeping with the living quality of the frozen egg.

While the egg’s image affirms the aliveness of arrested time, in the confrontation with this image Eggfreezer directs the work of mourning mortality to the site of the body. In her text, she uses an anterior future in which death is at stake: “had I not had the retrieval, this egg would have just never developed and died off last month” (Eggfreezer 2008b). A reversal of Barthes’ anterior future, the image of the in vitro cryopreserved egg signifies its aliveness in the present while Eggfreezer invokes an in vivo past of the egg in which it is “going to die” and would have been “already dead” at the time of writing (Barthes 1981, 96). With the cryopreserved egg functioning as a foil for her ageing body, Eggfreezer adopts a model of reproductive ageing as mournful, in which the female body becomes the site of the incessant dying of “many millions” of eggs in a process that culminates in the finitude of age-related infertility. In this model, the salvaging of eggs and their preservation in the freezer entail a rescue from the ageing body “through modern medicine” (Eggfreezer 2008b).

Clearly, the technoscientific practice underlying the production of cryopreserved eggs figures prominently in Eggfreezer’s text as a life-or-death intervention to save the egg. Because of the egg retrieval in OC, Eggfreezer writes, the egg can develop into a mature state through hormonal stimulation and subsequently attain a frozen, ageless state. However, given the existence of many eggs in Eggfreezer’s ovaries, there is no particular reason to assume that this specific egg would have “died off last month” if she had not “had the retrieval.” In the absence of hormone-induced superovulation and
subsequent surgical extraction, the egg may have stayed with her for several more years; it could have ovulated in the future; there is even a slight possibility that this very egg could have fertilised *in vivo* without medical intervention.

Rather than a medical fact, the invoked imminent death of the photographed egg is a narrative device that not only stages the egg’s exceptionalism, but also positions the OC technology as a rescuing “helping hand” to the physical limitations of Eggfreezer’s reproductive body. As Sarah Franklin and Celia Roberts observe in *Born and Made*, the notion that the egg was saved “through modern medicine” is a trope so familiar that it is expressed in the term *assisted* reproductive technologies. Whereas IVF was naturalised as “giving nature a helping hand” in achieving conception, the point of pre-implantation genetic diagnosis (PGD) was to “prevent nature from doing what it might to ‘naturally,’ by making sure certain possibilities can be eliminated in advance” (2006, 224). In OC, two different natures are played out against one another: the naturalisation of the reproductive drive that motivates assisted reproductive technologies and the naturalisation of bodily ageing processes as a prescriptive “biological clock” to reproductive life. On the one hand, there is a broad recognition of the drive to reproduce as natural, even after age-related infertility has occurred. As is the case in conventional IVF, OC provides a helping hand to meet this drive. On the other hand, there is a recognition of age-related limits to reproduction (whether individual or population-based), which may be adopted as ethical guidelines for the use of OC in establishing chrononormative limits to assisted reproduction.

As OC lends a helping hand to circumvent the ageing of the body, rather than a supportive environment, the body is a problematic vessel for the egg. Emily Martin has observed that a focus on cells as individual entities can result in the conceptualisation of the human body as an environment for cells (2001b, 266). With the availability of a technological container for the egg, the body is no longer the egg’s only “suitable host.” An early practitioner of the new technologies of cell culturing remarked in 1916 that “through the discovery of tissue culture we have, so to speak, created a new type of body in which to grow a cell” (Uhlenhuth qtd. in Landecker 2007, 12). In a similar vein, Landecker reflects on tissue culturing as a history in which “the body was not replaced by the cell, but rather this technique substituted an artificial apparatus for the body. As a result, understanding of the cell and the body as well as their relation to one another was fundamentally altered” (2007, 33).

As has been recognised for the medium in tissue culturing, the artificial apparatus of the liquid nitrogen tank figures as “a new type of body” in OC which substitutes the ageing ovaries as “suitable hosts” and maintains eggs’ quality and viability as time passes (Uhlenhuth qtd. in Landecker 2007, 12). As a fertility treatment that can be used by healthy, fertile women, OC offers an alternative to a body that is fallible not
necessarily by illness, but by reproductive ageing. The occasion of OC triggers Eggfreezer to reflect on her own reproductive system as an environment for egg death. As opposed to an understanding of her ovaries’ function of preserving the eggs and providing the site for their maturation and ovulation, she presents her body as the place where the eggs “die off.” While the photographed egg was inside her body for 32 years, and derives some of its sentimental value from this fact, her body no longer provides an environment in which the egg can continue to live. The female body as suitable host for egg preservation is finite and may be superseded by the liquid nitrogen tank as an environment in which the eggs do not die off as time passes. The egg, captured in the deathless portrait, is—at least conceptually—unthreatened by the transitory nature of organic life. That egg, which, more than any other cell, carries the significatory weight of the future, may be rescued from a transitory body and frozen into an unchanging stillness that promises potential life.

Eggfreezer’s engagement with the egg’s photograph thus links the body’s suitability as host to its existence in time, which contrasts with the representation of time in the egg’s photograph. By conveying the unchanging indexical time of the “frozen moment” in which the cellular snapshot was taken, the photograph suggests a logic of OC in which the egg’s age departs from that of the maturing body in which it was previously infolded and, crucially, maintains the same age in frozen stasis. While the egg remains “live” in arrested time, Eggfreezer’s reading of the egg portrait also entails a confrontation with the body’s (reproductive) finitude.

Becoming Biological with the Egg: Distributed Ageing and Cellular Plasticity

While the vulnerability of the in vivo cell reimagines the ageing body as unsuitable host, the egg’s frozen, resilient stillness in vitro may also trigger a reconceptualisation of embodied reproductive ageing. Through operations of self-imaging, the egg’s portrait not only invites a reading of the self as a cellular environment, but also as a cellular being. Rather than an individual other, the egg’s image also signifies as a foundational element of reproductive embodiment. In this section I explore self-imaging as a method of what Landecker terms “becoming biological,” or understanding the self through a reflection on the cellular level of existence. In doing so, I draw attention to the reconceptualisations of reproductive ageing as extra-corporeally distributed and plastic that underlie reflections on the frozen egg and its static image as “part of me.”

In her Culturing Life, Landecker analyses the 20th-century history of tissue culturing with the aim of understanding “how biotechnology […] changes what it is—
what it means at any given moment—to be cellular living matter” (2007, 233). In response to this question, she presents the notion of “becoming biological”: the reflexive practice of considering the implications of tissue culturing practices for conceptualising the lived body. Not unlike Landecker’s tissue cultures, which introduce “systematic change into biological existence,” the emergence of the frozen egg presents a systematic change in how female gametes can exist and reproduce outside of the body. Providing the occasion for visualising the eggs and generating a new set of reproductive choices predicated on the in vivo and in vitro existence of these cells, egg freezing provides an emblematic case for highlighting the biotechnologically-inflected relation between cellular and lived biological life.

Cellular cryopreservation has important implications for reimagining ageing in Landecker’s framework. She argues that “to be biological, alive, and cellular also means (at present) to be a potential ‘age chimaera,’ to be suspendable, interruptible, storable, and freezable in parts” (2007, 228). This entails a reconceptualisation of bodily ageing as predicated on the technical possibility of altering the way its cellular components exist in time. In the previous section, I discussed how the photograph’s frozen moment, which captures unageing eggs that “remain 32 forever,” can be mobilised to frame the ageing body as an environment in which eggs simply “d[ie] off” in a “really cruel decline” (Eggfreezer 2008a). Yet, as oocyte cryopreservation offers the possibility of freezing cellular time, Landecker’s approach also suggests that the meaning of reproductive ageing may be extended to encompass a variety of processes within and without the body. In the process of becoming biological, the cell takes up a privileged position as a foundational element of human embodied life. One common element in the OC discourses I discussed in previous chapters is the recognition of eggs as the locus of fertility, both inside and outside the body. Occupying this privileged position, the extracted egg in its cryopreserved state is not only the foil against which the body is either a youthfully functional or an unsuitably ageing host, but its freezability also suggests a chimaeric model of reproductive ageing that encompasses both living and latent, intra- and extracorporeal, elements.

Self-imaging through the egg’s portrait enacts this process of becoming biological; the photograph’s depiction of the egg suspended in time provides the basis for an engagement with the frozen cell’s latent temporality. Eggfreezer expressly identifies the egg as “part of me,” thereby exemplifying self-imaging as “the rendering of the self in and through technologies of representation” (Jones 2006, xvii). In this sense, much as Suzanne Anker and Sarah Franklin have argued that the in vitro lens is also a mirror that

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88 For Landecker, the relevance of rethinking what it is to be cellular, or biological, is that it offers a framework through which organic life across species can be reconceptualised.
“over-determin[es] the viewer position of witnessing ourselves, our technology, our future, and our obligations to one another,” so the egg’s photograph functions as a mirror onto the self that refracts multiple temporalities of existence (Franklin 2013b, 29). Now that the egg has been removed and frozen, its photograph stages an encounter between the embodied, ageing viewing subject as positioned in historical time and cellular bodily material that continues to exist according to a different temporal logic. This encounter supports an understanding of the reproductive ageing process as encompassing multiple bodily temporalities, including the age of the body as a whole and the cellular age of the cryopreserved egg in the freezer. Becoming biological offers a prism for conceptualising ageing at the meeting ground of the life cycle and the cell cycle. If, in the dynamic of self-imaging, the extracted egg’s portrait is the vehicle through which a bodily self can be reimagined, reproductive ageing becomes conceivable as a distributed process that encompasses both the latent state of the ageless egg and the body living in time.

Following Michelle Murphy’s discussion of “distributed reproduction” as “the ontological politics of embodied reproduction,” distributed ageing points to the simultaneous spatial and temporal dispersal of “‘biological’ forms,” inside and outside the body, that comprise reproductive embodiment in contemporary technologised models of reproduction (2011, 23). Distributed ageing signifies the assemblage of different elements of reproductive embodiment that are seen to exist differently in time, yet can partake of one other’s vitality, latency and reproductive potentiality. As the current and previous chapters pointed to various discourses that privileged the egg as locus of reproductivity—whether through its recognition in fertility statistics, “a couple of good eggs” for later, or a reproductive “building block”—OC presents a particular kind of distributed reproductive ageing that comprises both the time of the body and the egg. Here the visual technique of cellular portraiture makes the frozen egg and its latent temporality legible and instrumental for the process of “becoming biological.”

As counterpart to the distributed ageing of egg and body in OC, the cell’s temporal manipulations enact a plasticity of biological time that engenders another way in which reproductive ageing may be reimagined in relation to the frozen egg. Landecker describes the history of tissue culturing in the last century as “the realization and growing exploitation of the plasticity of living matter, with interventions in plasticity tightly linked to interventions in the way biological things lived in time” once they are “freed from the limits of the organising organism” (2007, 31, 11). Egg freezing emerges in the wake of this history, affecting the ways in which eggs—and the bodies that once enveloped them—live in time. The techniques of plasticity employed in OC are “modes of operationalizing biological time, making things endure according to human intention” by means of manipulating both the cell and the medium in which it lives (2007, 10–11). While the material manipulation that renders the egg temporally plastic occurs only at
the cellular level, “becoming biological” is here the process through which the cell’s plasticity affects the meaning of ageing—or living in time—for the body as cellular living matter.

If the egg is recognised as temporally plastic, the concomitant reconceptualisation of reproductive embodiment entails an understanding of ageing as not exclusively the “immovable intrinsic age of living matter,” but also as having “a moveable—plastic—quality” over which agency may be exerted (Landecker 2007, 231). Significantly, the eggs in OC provide the occasion for a reflection on one’s “becoming biological” as a temporally-plastic bodily entity even more so than the “dismemberment and redistribution of living matter from bodies to laboratories” that Landecker describes (2007, 14). This is the case because, unlike Landecker’s tissue cultures, the link between the egg and the body is established through the recognition of the egg as the cellular “building block” for a future individual. Moreover, the eggs not only exist in vitro, but are expected to return to the body after cryopreservation. Given the cultural significance ascribed to this particular cell as locus of fertility, the egg’s plasticity forms the basis for counteracting reproductive ageing at a cellular level, thereby bringing the way in which the egg lives in time into the realm of intentionality.

Eggfreenzer’s self-imaging through a photograph that depicts the manipulation of cellular ageing becomes meaningful within a “culture in which manipulability and morphing are commonly accepted conditions for shaping personhood” (Van Dijck 2008a, 70). The conditions of plasticity and modifiability that characterise the egg and its portrait resonate with “self-remodelling” projects such as the anti-ageing injunction that seeks to slow down, halt or reverse ageing (Van Dijck 2008a, 67). Just like “ultrasound images of fetuses […] stimulate intervention in the biological fabric, turning the fetus into an object to be worked on,” the egg’s portrait stimulates intervention in bodily temporal logic that turns the egg into a plastic object that must be saved from the ageing body and manipulated into cryopreserved stasis (Van Dijck 2007, 107). The resultant visible and timeless egg becomes the basis for a reflection on the self as a potential “age chimera” in which reproductive ageing is located both in the frozen cell and the warm body.

Self-imaging and self-modelling through this egg’s portrait functions as an anti-ageing strategy of “halting time” (Vincent 2008). As the halting of cellular time occurs analogously in the moment of freezing the oocyte and in the camera’s image sensors’ momentary translation from light to data, the photograph signifies not a passing of time, but the cryopreservation of embodied time in a state of latency. Rather than a failed

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89 This notion of plasticity co-emerges with growing anti-ageing industries that advocate and advertise methods for slowing, halting or reversing growing older (Post and Binstock 2004). I will discuss the relation between anti-ageing industries and OC in Chapters 6 and 7.
means to “live forever” in the face of inevitable ageing, the photograph’s depiction of the unchanging egg may also propose a model in which the cryopreservable cell renders reproductive ageing into a phenomenon that is no longer inevitable. Given that the cryopreserved cell both symbolises reproductive potential and may return to the body after fertilisation, the eggs can be framed as an essential, and temporally plastic, element in the self-modelling of reproductive ageing. OC functions, therefore, as an anti-ageing strategy—one that not only halts ageing, but opens up possibilities for destabilising the logic of biological time as distributed and plastic.

In Eggfreezer’s case, the understandings of ageing as inflected by cellular plasticity and distributed across the body and the freezer gain a public dimension in her presentation of the egg’s portrait in an online blog. The specificity of this social use of medical imagery emerges at a time in which, as Van Dijck purports, photography functions less primarily as a mnemonic device for safeguarding family heritage and increasingly more as a tool for individual identity formation, self-remodelling and online communication (2008a, 57). She argues that the increasing use of photography as an instrument for presenting the self is part of a broader social pattern tracing back to the late 1960s that is characterised by an “emphasis on individualism and personhood” at the expense of the primacy of family life. The traditional use of photography as a mode of self-representation that found its quintessential expression in photo albums organised around family bonds and future memories is increasingly replaced by a more ephemeral mode of photographic self-presentation through online image sharing and social networking sites—including the Blogspot platform (Slater 1995, 139; Harrison 2002, 107; Van House 2011, 131).

The specificity of the photograph under scrutiny—as cellular, medical, digital, uploaded to the public Blogspot platform—draws attention to becoming biological as not only a reflexive exercise, but a mode of self-presentation. Eggfreezer’s presentation of the cellular portrait references the kinship bonds that may develop from this cell; its image becomes an icon of possible future familial identities. Yet, as part of the online blog, Eggfreezer also employs the image in a mode of self-presentation in which she frames the photograph as a public statement about her experience with OC and her resultant biomedically-mediated age-specific reproductive identity. Eggfreezer’s public introduction of the egg’s photograph, and her reflection on its relation to the eggs in her body and in the freezer, present a particular way of becoming biological. In other words, “becoming biological” turns into “presenting biological.”

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90 Eggfreezer specifically frames her account of the OC experience as peer-to-peer advice for women who might consider egg freezing themselves, as becomes evident in the blog’s header that promises a documentation of the process “from start to finish” but also warns that “nothing in this blog should be taken as medical advice” (Eggfreezer 2008a).
As Eggfreezer’s process of “becoming biological” gains a public dimension through the cellular portrait, she engages Landecker’s concern with “the social and cultural task of being biological entities” (2007, 235). The very message that reproductive embodiment is temporally modifiable at a cellular level that Eggfreezer’s blog conveys holds up an “irredeemable cultural logic” analogous to the one Vincent describes of ageing generally: “if death is soluble, old age represents failure. […] The focus on biological failure sets up a cultural construction of old age which generates and prolongs its low esteem” (2006, 682). With respect to reproductive ageing, the counterpart of old age is a conception of youth of which Margaret Lock writes: “we worship at the altar of youth: normality means youth and vigor, regardless of gender [...]. More specifically, among women, normal means to be of reproductive age” (1995, 377). The egg’s halted ageing suggests that reproductive finitude is soluble and can be manipulated to remain “forever functional” (Katz and Marshall 2004). Following Vincent, as the possibility of freezing eggs offers a remedy to cellular ageing, bodily reproductive ageing may be recast as “represent[ing] failure” (2006, 682). Thus, Eggfreezer’s anticipation of “a really cruel decline” of egg quality in her thirties and her reasoning that “once I freeze my eggs, they stay 32 forever” are indicative of an engagement with cellular ageing as a visible phenomenon that affects the lived experience of reproductive ageing as modifiable (2008b).

The implicit social and cultural task that Eggfreezer proposes in “presenting biological” on Blogspot is to use the egg’s photograph to reflect on the plasticity of cellular existence as a basis for reconceptualising the bodily self. In Eggfreezer’s blog the photograph offers visible evidence of the procedure and a means of accessing the eggs while they remain in the freezer. The photograph also enacts the temporal logic of the frozen moment in keeping with the idea of eggs as plastic entities whose time can be halted and maintained for future use. Through the image of the frozen egg, Eggfreezer presents an agentic and reflexive approach to a mode of reproductive ageing that is distributed between the ageing body and the temporally-plastic frozen egg.

Conclusion
In this chapter I explored how the emergence of the extracorporeal to-be-frozen egg’s image reimagines the cell in relation to reproductive embodiment and what the implications of its temporal latency are for ideas of bodily ageing. Much as embryos could become visible and recognised as potential children for intended parents undergoing IVF, the photographed frozen eggs rendered visible in OC may be seen both as individualised “building blocks” of the potential future child and as a means to distribute reproductive embodiment across bodies and freezers, thereby adopting the plasticity of the in vitro cell in the lived experience of (in)fertility and ageing.
Eggfreezer’s presentation of her frozen egg’s photograph on Blogspot was the concluding post of her detailed online account of the egg freezing process in 2008.91 Whereas the image here provided a closing to her egg freezing narrative, it also represented a first step in the reproductive process. As fertility clinics share medical images of prenatal life at increasingly early stages of the reproductive process, the egg’s portrait may be positioned in an increasingly visual continuum of human development from gamete to embryo, fetus and baby in assisted reproduction (Petchesky 1987, 272; Squier 1996, 532; Lie 2012). Eggfreezer’s presentation of the oocyte portrait indeed highlights the exceptionalism and individuality of the egg with reference to the potential future child.

Yet it is not only the future child, but the embodied ageing self that is inflected by the egg’s portrait. The cellular portrait depicts the egg’s temporal plasticity in the photographic “frozen moment.” In doing so, the egg’s image portrays a visible antidote to the decline narrative of ageing—it stays 32 forever in the freezer and the photograph. Rather than a supportive environment, Eggfreezer’s body is positioned as a problematically ageing vessel for the egg, to which the liquid nitrogen freezer is an ageless alternative.

However, because Eggfreezer also reads the egg as “part of me,” the cryopreserved cell also functions as the foundation for reconceptualising the bodily self in a process that Landecker calls “becoming biological.” Self-imaging through a picture seen to represent the unageing egg as “part of” herself, Eggfreezer’s online presentation of this image is a testimony to her agentic approach to altering the declining telos of reproductive ageing and reimagining it. In this process, the egg’s temporal latency becomes the basis for an engagement with finitude and a reconsideration of reproductive ageing as distributed and plastic. As a way of “presenting biological,” Eggfreezer proposes an agentic and reflexive approach to the modifiability of reproductive ageing that the cellular portrait enacts in its frozen moment.

Eggfreezer’s self-imaging with the egg’s photograph thus engages with various models of cellular ageing, in which the egg is positioned as the first stage in an observable reproductive continuum, as embodying an independent life span and as averting death in cryopreservation by being removed from the ageing body. While the medium of still photography was instrumental in visualising the egg’s temporally latent cryopreserved state, in the next chapter I address the visualisation of cellular time in moving images in a later step of the reproductive process: embryo selection.

91 After six years with no updates save one, Eggfreezer returns in 2014 with a last blogpost in which she announces she has had a child through donor insemination; her frozen eggs are still in the freezer.