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Rethinking reproductive politics in time, and time in UK reproductive politics: 1978-2008

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This paper explores two different but interlinked and contemporaneous debates over reproductive politics in which we can observe at least three distinct combinations of time. In the first part, I describe the shift in the 1980s to a 'biologized' time by British Christian Right-to-Life groups, who began to use a secularized ontology to promote and defend a religious definition of 'the way, the truth, and the life' – an altered 'theo-ontology' based on the equivalence of the absolute value of human life, the truth (of biological life), and faith in Christ (as everlasting life). In the second part, I describe a differently 'remixed', and opposing, ontology (secular and semi-secular, using a hybrid bio-legal chronometry but orientated toward the timeless horizon of progress) that characterized the debate over the future of *in vitro* fertilization in the same period, leading up to the adoption of the first Human Fertilization and Embryology (HFE) Act in the UK in 1990. In the third part, I examine the legacy of these debates insofar as they are evident in the more recent political conflicts accompanying passage of an amended HFE Act in 2008 and the debate over so-called 'cybrid embryos'. These episodes reveal how social movements 'are profoundly shaped by mediations and conflicts between diverse representations, technologies, social disciplines and rhythms of time'. I argue that the varied constructions of temporality in reproductive politics evident in these three distinct episodes are crucial to anthropological understandings of the meaning of 'biological control' in the context of stem cell research, cloning, tissue engineering, and reproductive biomedicine.

In her discussion of the role of progressive genealogical time in English models of kinship in *After nature*, Marilyn Strathern underscores the 'formulaic' capacity of biological development to signify 'natural time' as one of the 'facts of life'. For the English, she notes, 'the temporal sequencing of generations is irreversible. Indeed the English are able to point to "biological" experiencing of temporality as vindicating a linear conception of it ... A life has a demonstrable beginning and end in this view, and biological time is irrefutable evidence of linearity' (Strathern 1992a: 62). Linear time was biologized in the context of Darwinian understandings of development and evolution, while thus also reconstituting kinship as 'natural', and as Strathern persuasively shows, this 'formula' was reproduced to become the 'irrefutable' logic of inter-generational time. This recursive structure of time, whereby it is 'one-way' and finite in relation to the past, but also capable of signifying open-ended and multiple possibilities

in the future, allows the world to continue to have, for example, ‘more’ time, as Strathern points out, just as it has more people. However, as this paper suggests, the reproduction of biological time has, as Strathern would have predicted, not quite reproduced itself exactly. This can be shown in terms of both how the ‘irrefutable facts’ of biological time have been used to construct quite opposite models of biopolitics in the past, and, somewhat differently and more recently, how ‘biological time’ has been reconfigured in relation to the future of ‘biological control’.¹

This paper explores biological time in the context of two British social movements concerned with the ‘facts of life’ as well as the future of science – both of which used specific moments in time to anchor their arguments in ‘irrefutable’ natural fact. In the first part, I describe the shift in the 1980s to a ‘biologized’ time by Christian Right-to-Life groups, who made a deliberate and politically motivated decision to begin to employ the language of biogenetics to defend foetal personhood, and thus foetal rights. In the second part, I describe the equally strategic decision by the pro-embryo research lobby to employ the open-ended temporal and spatial language of scientific progress to defend the value of human embryo research. These two debates, which were in some ways direct reversals of one another, occurred simultaneously during the 1980s and culminated in the successful passage of the first Human Fertilization and Embryology (HFE) Act in the UK in 1990. In the third part, I examine the legacy of these debates in relation to the more recent political conflicts accompanying the amendment of the HFE Act in 2008, and in particular the debate over so-called ‘cybrid embryos’.

‘Biologized’ time in the context of the Alton Bill

The Alton Bill, which was introduced into the UK Parliament in 1987, was aimed at reducing the upper time limit of legal abortion to eighteen weeks, based largely on the claim that technological improvements enabled an earlier age of foetal viability. More broadly, this well-organized parliamentary initiative led by one of the UK’s most prominent Catholic MPs (David Alton) represented the culmination of a lengthy period of preparation by the UK Right-to-Life movement to challenge the 1967 Abortion Act. The abortion debate in the UK, like its predecessors in the US, centrally concerned the role of scientific and clinical expertise in the definition of viability, and thus the question of the ‘objective’ criteria on which abortion law should be based. This framing of the debate in relation to objective scientific facts was itself the subject of extensive critical analysis, and the focus of academic research, such as that I carried out as a graduate student while writing my Ph.D. in the late 1980s. At the time, as part of a working collective at the Birmingham Centre for Contemporary Cultural Studies (CCCS), my colleagues and I critically analysed the extent to which ‘the Alton Bill debates were centrally about the role of medical experts, scientific knowledge and technological innovation in contemporary British culture’ in ways that had direct consequences for reproductive politics. This was due to our sense that ‘although feminists have won short-term gains [in defeating the Bill], we fear we may be losing the larger struggle over commonsense assumptions about abortion’. Thus, we set out to examine ‘the legacy of the Alton Bill debate and what it revealed about popular perceptions of abortion, motherhood, scientific medicine and new reproductive technologies’ (Science and Technology Subgroup 1991: 147).

A number of important political shifts had preceded the introduction of the Alton Bill, including the conservative political influence of Thatcherism, and the corresponding return of ‘Victorian Values’ concerning the family, gender, and sexuality (Cannell

1990). The context of the Alton debate was also shaped by the rising influence of new medical technologies, in particular foetal imaging technologies such as ultrasound, but also improved neonatal care facilities which could potentially lower the upper limit of foetal viability (Gallagher 1987). The widespread adoption of ultrasound technology as a routine component in prenatal care from the 1960s onwards played a particularly important role in a shift toward the recognition of 'foetal personhood'. Beginning in the United States as early as the 1970s, a corresponding political shift began to become apparent within the Right-to-Life movement away from a strictly theological definition of human life (as a gift from God) and toward more 'objective' technological and scientific definitions of the biological threshold of foetal viability – measured as the capacity to survive 'independently' (i.e. from the mother, although not from technological support). The American feminist political scientist and reproductive rights activist Rosalind Petchesky was the first to make this shift explicit in her much-cited 1984 publication *Abortion and woman's choice*, in which she argued that: 'Increasingly, in response to accusations of religious bias and violations of church-state separation, the evidence marshalled by the anti-abortionists to affirm the personhood of the fetus is not its alleged possession of a soul, but its possession of a human body and genotype' (1984: 334). As Petchesky noted, the emergence of a powerful new discourse of foetal personhood relied not only on the affirmation of a set of universal human biological facts, but also on the increasingly routine use of technology (ultrasound), through which these facts could be witnessed, documented, and affirmed. As she characterized this shift in her now classic 1987 essay on 'Fetal images: the power of visual culture in the politics of reproduction': 'Aware of cultural trends, the current leadership of the anti-abortion movement has made a conscious strategic shift from religious discourses and technologies to medico-technical ones, in its efforts to win over the courts, the legislatures and the popular "hearts and minds"' (Petchesky, 1987: 264).

Critical to the 'cultural trends' described by Petchesky was the increasing importance, and ubiquity, of the visual interface between medical-scientific images of the human foetus and popular culture through various forms of media. This trend, epitomized by the innovative and still influential imagery of the Swedish photographer Lennart Nilsson, whose delicate and evocative full-colour foetal portraits began to be published by *Life* magazine in the mid-1960s, united improved foetal imagery with the rapid proliferation of popular formats for their consumption, including glossy magazines, film, television, and, later, advertising. It was thus the power of the combination of new types of scientific imagery of unborn foetal life and wider audiences for their consumption which, in Petchesky's view, motivated a strategic political turn by Right-to-Life activists toward the harnessing of this powerful new tool in the effort 'to win over the courts, the legislatures and the popular "hearts and minds"' (1987: 264-5).

However, the shift away from traditional religious language toward modern medical imagery was also discursively strategic as a form of political camouflage, harnessing, as it did, the power of 'objective' biological models of human life. Unlike the explicitly religious discourse of ensoulment, the biogenetic model of humanity is both secular and scientific, emphasizing the shared, universal possession of certain natural, heritable and recognizable attributes, including developmental potential. As the political opportunity to challenge the upper time limit of abortion by 'witnessing' the seemingly objective biological facts of foetal development, such as its possession of a unique genetic fingerprint or its recognizably human anatomy, became increasingly obvious during the 1980s, their tactical utility likewise became more attractive to anti-abortion

activists. Right-to-Life campaigners on both sides of the Atlantic, including the organizers of the Alton campaign, drew explicitly on this new strategy. Increasingly, the unborn foetus became, in the British Right-to-Life discourse of the late 1980s, a separate, individual human entity, whose independence of will, and entitlement to protection under the law, could be attested to by its independence of biological body and possession of a unique biogenetic identity. As an undated pamphlet published by the British Catholic Right-to-Life organization, LIFE, succinctly stated the case, in the words of a medical scientist:

The genetic pattern of this separate individual is as different to the mother as it is to the father. It can in no way be considered as part of the father, nor can it in any way be considered part of the mother. This new identity is unique.

Or, as another pro-Alton poster from the late 1980s claimed of the newly animated foetal individual:

He has likes or dislikes for sweet or sour fluids, he is developing tastes for music and may jump up and down to the beat; he is learning to recognise his mother's voice; he can be alarmed by loud bangs, and he is, of course, sensitive to pain.

These appeals to the biological reality of foetal autonomy were designed to elicit support for foetal rights on a new tactical terrain for the Right-to-Life movement. In place of the potentially 'biased' and domineering discourse of biblical authority, a new commonsense 'obviousness' of humanity based on the possession of a unique biogenetic identity and a recognizably human body functioned as a call to a new kind of witnessing to the miracle of life. With this call, Right-to-Life activists also proposed a particular relationship between the inadequate present and the desired future in the context of debates about abortion. Using the well-established legal principle of viability to argue for a reduced upper time limit to abortion, Right-to-Life groups sought to establish a cross-over rhetoric that would harness mainstream biological discourse to appeal more widely to a secular audience. In other words, they sought both to make their arguments more popular, and to alter the terms of debate over abortion, by emphasizing biological development rather than divine authority – albeit through the quasi-theological concept of witnessing. In terms of the questions this volume poses concerning the politics of temporality, this call by Right-to-Life activists is thus an example of how 'representations of the relationship between a desired future and an inadequate present animate political acts within social movements,' yet, interestingly, not an appeal that 'brackets political time off from other representations and rhythms of time' (as the organizers' statement put it), but, rather one that achieves the reverse – by embedding the religious time of theo-ontology within the secular time of biology.

The 'mixed' chronotype of embryo research

The highly publicized and often dramatic contestations surrounding the Alton Bill during the late 1980s, in which a tactical temporality of developmental biology was employed to gain political ground in the battle to lower the upper time limit for legal abortion, were interestingly paralleled and reworked in the closely proximate, and simultaneous, public and parliamentary debate over assisted conception and embryo research which extended from 1980 to 1990. Triggered by the birth of Louise Brown in 1978, which was seen to reveal the existence of a 'legal vacuum' concerning assisted

conception, a lengthy process of deliberation and consultation, both within and outside Parliament, was begun with the publication of the Warnock Report in 1984 (and has not really ceased since then in the UK). In the human fertilization and embryology debate, both biological development and biological facts played a somewhat different role from that described above in the context of the Alton Bill. Indeed it is possible to argue that the debate over the precise details of human conception, rather than gestation, revealed a reverse process – a ‘Christianization’ of biology, in the form of pro-embryo research arguments emphasizing a parliamentary duty of care, an obligation to the reproductive future of the population, and the necessity for scientific progress (Franklin 1997). Just as in the context of the Alton debate, where a desired future is contrasted with an inadequate present, so too was the debate over the future of assisted conception, and in particular that of human embryo research, fundamentally based on a defence of the value of scientific research. However, and as we shall see below, the argument from biology in favour of protecting human embryo research as a source of progress for the benefit of humanity deployed a different set of ‘core symbols’ and favoured images, as well as an alternative means of harnessing biological time.

To remind us briefly of the unprecedented UK debate concerning ‘human fertilization and embryology’ that began in 1980 with the commissioning of the Warnock Committee, and culminated in 1990 with the passage of the first HFE Act, it is worth noting that considerable parliamentary time and government resources were dedicated to the promotion of a deliberately lengthy, inclusive, and vigorous public scrutiny of these issues. It is also worth remembering (as I have analysed in much depth elsewhere: Franklin 1993; 1997; 1999a) what an unusual combination of arguments about kinship, technology, and reproductive politics this debate involved. Of course this was a passionate debate, often argued with much feeling, and often invoking distinctive types of personal testimony, imagery, and witnessing. Two of these types of testimony deserve brief mention. One was from Members of Parliament who had themselves had children who suffered from genetic disease – most notably Peter Thurnham and Daffyd Wigley (the latter of whom famously broke the arm off the speaker’s chair in one of the more heated debates about the future of embryo research). The other was the frequent ‘conversion testimony’ from MPs and Lords who had visited assisted conception units where they had personally met women and couples whose own lives had been transformed by the option of pursuing new techniques such as *in vitro* fertilization (IVF).

As Marilyn Strathern (1992b) has memorably argued, these debates were about ‘reproducing the future’ in more than one respect. It was not only future offspring, but the future of technology that was being fought for by proponents of permissive legislation. Above all, the principle being promoted was of the need to protect scientific and technological progress, from which, it was argued, future human benefits were more likely to emerge, thus relieving the burden of human suffering. Arguments against scientific and technological progress were frequently cast by its supporters as nothing less than arguments against humanity itself. Indeed, noticeably throughout the debate over human embryo research, the future of human technological and scientific progress was often deemed synonymous with life itself, including also the life and health of the population, the future reproductive prospects of infertile couples, and the role of new genetic technologies in the effort to alleviate the severe burden of genetic pathology (Franklin & Roberts 2006; Johnson & Theodosiou 2011).

Thus, for example, in the Upper Chamber, Lord Ennals referred to ‘the lives and hopes of thousands of families now and in the future’ (HL, 7.12.89, c.1012), whereas, in

the House of Commons, Peter Thurnham invoked the hope that couples might ‘enjoy marriages in which they can look forward to producing children free of ... dreadful diseases’ (HC, 23.4.90, c.62). Lord Jakobovits invoked the effort ‘to promote the generation of life for those who would otherwise be infertile’ (HL, 7.12.89, c.1492). Through such rhetoric, scientific and technological innovation are woven into the very ‘fabric of humanity’ and MP Seamus Mallon (HC, 23.4.90, c.68) could state that: ‘I am convinced that research and experimentation are a natural part of the development of the human condition. They are almost an essential part of the development of our lives’. As I wrote in my own research on this debate during the 1990s:

Here, ‘embryology’, in the sense of the *study* of embryos, is seen in almost organic terms, as an ‘essential’ component of human development. Hence, embryonic development, the study of this process, ‘the human condition’ and ‘the development of our lives’ are linked together by a shared, essential developmental trajectory. It is the striking metonymy of these accounts, whereby each individual trajectory not only ‘stands for’, but is conflated with, the others which is of note. In sum there is a theme of progress, in its many senses, and particularly in its modernist sense (as a kind of essential truth which is in fact a kind of faith) (Franklin 1999b: 146, original emphasis).

For all of these reasons, which were repeatedly reproduced within the extensive testimony by Members of Parliament concerning the benefits of basic scientific research into early human development, MP Jo Richardson could claim in her summing up of the debates in the House of Commons in April 1990, as a final vote neared, that:

Research can be beneficial to humankind ... it can be creative rather than destructive. Some of that research will not bear fruit for many years, perhaps not until we in this House have retired or passed on. Therefore, we are legislating for the future and for the future of later generations (HC, 23.4.90, c. 47).

What I want to draw attention to in this extract is not only the quasi-religious imagery of fruitfulness and creation, or the implicit tree of life that will connect these benefits to later generations. In particular I also want to draw attention to the underlying social contract upon which this appeal to legislate in favour of embryo research relies, namely an exchange between life and death. Thus, because IVF requires embryo research in order to be ethically practised (just as it required such research to come into being to begin with), so, as a result, does the ‘gift of life’ that is IVF require sacrifice, indeed mortal sacrifice – the sacrificial bodies of dead human embryos laid down on the path to new life. Similarly, by less explicit but no less direct an analogy, the lives of parliamentarians and their own offspring are invoked through the mortal language of sacrifice: today, Richardson is saying, we can gift our descendants a creative, beneficial, humane legacy by granting them access to the fruits of knowledge they will otherwise be denied. We may not even live to see this fruit, she reminds her colleagues – indeed we might even be dead, she adds. When she advocates legislation for the future, and for the future of later generations, she is thus linking the tree of knowledge with the tree of life in an ardent arboreal tribute to the benefits of scientific progress – a linkage that implies not only an obligation to the future, but also a duty to uphold and defend these values in the face of opposition.

Here, then, we see the reverse process of that described in the context of the Alton debate, when, during exactly the same time period, the biologization of life by Christian

Right-to-Life activists was pursued as a tactical political means of *secularizing* the Right-to-Life campaign. In the same way that these activists metonymized biological with divine life – the process of biological development with the gift of life, and faith in biology with faith in the Father – so too were both Christian and secular parliamentarians involved in a similar form of ‘cross-fertilization’: sowing the seeds of religious devotion in their impassioned defences of science. In the context of the debate over human embryo research, a defence of experimental biology, and of basic science, was couched in the idiom of salvation and of a quasi-religious duty to humanity. Infused with the idioms of life, generation, and sacrifice, the defence of science was not so much timeless as embedded in the forward temporality of scientific and technological progress. Witnessing, used in both contexts, serves as a crucial resource in the rhetoric of persuasion – directed both at the general public, and at the parliamentarians involved in a free, or ‘conscience’, vote on the limits of the law.

Ultimately, the Alton Bill was defeated, and a compromise measure was introduced into the HFE Bill to lower the upper time limit of abortion. But this too was defeated, resulting in the situation which has prevailed since 1967, namely that abortion is permitted until the twenty-fourth week of pregnancy, but that in cases of substantial risk to the pregnant woman, there is no time limit. Two doctors must agree that the abortion is in the woman’s best interest, and that continuing to carry the pregnancy would put the pregnant woman at greater risk than a termination. The abortion must take place in approved premises that are subject to inspection by the Secretary of State.

The primitive streak

The lengthy debate over human fertilization and embryology during the 1980s not only involved interesting new mixtures of Christian and scientific imagery (which in other respects are not really new, since they animate much of Western science, as well as British colonial expansion), but also new mixtures of legal and biological language. One of the most elaborate of these, which introduces another example of the politicization of biological temporality, was the debate over the so-called ‘primitive streak’. This curious tale has often been told, but is one that continues to reveal new dimensions (Franklin 1999*a*; Spallone 1996).

In the context of the HFE debate, both the ruling Conservative government (which, under Margaret Thatcher, was very pro-science) and the leading members of the Warnock Committee (namely the philosopher Mary Warnock and the biologist Anne McLaren) were aware of the significant danger of either parliamentary deadlock or defeat on the key issue of embryo research – not least because of its proximity to the intense and unpredictable abortion controversy. Through recent historical research on this period, including interviews with both McLaren (sadly now deceased) and Warnock (who remains deeply involved in this area),² it has become possible to explore in depth one of the most important decisions responsible for the eventual success of the HFE Act – the only piece of legislation of its kind ever to come into existence, under criminal law, covering the entire gamut of technologically assisted conception methods (as well as non-technological ones, such as surrogacy and artificial insemination), and thus a piece of legislation whose successful passage into law defied considerable odds.

The strategy initiated by McLaren, and implemented by Warnock (most likely with the help of Thatcher), of avoiding a deadlocked debate on the thorny and intransigent issue of ‘the moral status of the human embryo’ was simple but effective. McLaren in particular sought to avoid this particular phrase altogether by proposing an alternative formulation.

In lieu of the philosophically intractable and awkward moral status question, the aim was to provide instead a quasi-biological basis for limiting embryo research – a ‘natural line’ of sorts (which of course does not exist ‘biologically’) as a basis for proposed legislation. The need for a ‘line to be drawn’ itself symbolized the core principle of the proposed Act, namely that some form of limitation to research was essential. The ‘natural line’ proposed by McLaren had the added advantage of establishing a kind of compromise: in exchange for allowing a strictly limited amount of embryo research, such research would be subject to the very strictest regulatory standards, including a dedicated ‘watchdog’ body, which would have at its disposal the use of criminal sanctions. The new HFE Authority would be ultimately responsible to Parliament, but it would draw up and enforce a ‘Code of Practice’ – by which all fertility treatment and all embryo research in the UK would be tightly controlled and licensed. Here, as in the exchange of embryo sacrifice for future human lives, was a second ‘deal’: in exchange for allowing a limited amount of research, the limits would be enforced by Parliament itself.

Strict enforcement of the limits to permissible research had, as a consequence, to have a credible basis in law, and ultimately this was found in the form of a natural fact of biological temporality manifest as a stage in early embryonic development known as the formation of the ‘primitive streak’. The basis of this argument was initially made to Warnock by McLaren, and later by both of them to the entire committee. The logic was impeccable – if biologically a bit of a stretch. In effect, McLaren drew on her prodigious knowledge as one of the world’s leading mammalian developmental biologists (and the first woman to hold office in the Royal Society) and her equally renowned abilities as a communicator (Warnock has described her as the best teacher she has ever met) to provide the committee with a thorough grounding in human embryonic development. Included in this instruction was a description of the process by which, after approximately fourteen days, the primitive nervous system of the developing embryo begins to become differentiated from the parts of the embryo that will go on to become the placenta, the supporting tissues and nutritive elements necessary to support pregnancy – but not the actual foetal body itself. In other words, at approximately fourteen days, with the formation of the emergent spinal column, visible as a tiny ‘streak’ on the body of the developing conceptus, a ‘natural’ dividing line separates the formation of a distinct human individual from its supporting environment, and thus also provides a morally sound (and anatomically convenient) point in the otherwise continuous process of early development at which to determine a ‘natural’ legal limit.

The so-called ‘fourteen-day rule’ proved a success with the committee, and later became one of the core elements of the Warnock Report (published in 1984). It was in turn imported into the proposed HFE Bill, and has since proven to be the signature element of one of the UK’s most famous pieces of twentieth-century legislation. This principle, through which the time of the law (two weeks) and the time of biology are united, has been widely emulated all over the world. Moreover, this widespread adoption of the fourteen-day rule has prevailed in the face of significant doubts concerning its legitimacy from philosophers, biologists, legal scholars, and theologians. Critics, for example, have pointed out that the terminology of the so-called ‘pre-embryo’, brought in to distinguish the pre-fourteen-day entity from its biological sequel (and to attribute a lesser humanity to the former), is not a proper scientific term at all, but a convenient piece of made-up quasi-scientific jargon (Harris 1985). Others have noted that the fourteen-day rule, although supposedly based on the formation of the primitive streak, is in fact entirely arbitrary, since the streak sometimes emerges at fourteen days, but

may emerge at twelve, or fifteen, or sixteen (Spallone 1996). The convenient two-week limit has also been criticized by feminists for the same reasons foetal personhood arguments have been – because they reinforce 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 1991). From the point of view of anyone who believes life begins at conception, the primitive streak argument – however scientific or unscientific it may be – purports an indefensible divide between protected and unprotected human life.

Here, then, as above, is not so much a bracketing off of a separate kind of political time as an example of what Mikhail Bakhtin (1981) might call the formation of a distinct chronotope: the generic time of a specific event-space that allows certain kinds of things to happen.³ However, the breach in developmental time signified by the emergence of the primitive streak is not intended *only* to be a distinct time-space event; indeed it is imagined to belong to the biological time of life itself, and to all of humanity, in perpetuity. Biological development is a useful idiom precisely because of the extent to which it can be seen as a non-specific discourse of temporality, existing in a realm that is both supra-legal and scientifically verifiable. Paradoxically, though, it can *only* be a distinct time-space event (such as the formation of the primitive streak) that enables the law to ‘make a new kind of time’ (a fourteen-day rule) if this time-space event (a precise phase in biological development) is *not* specific unto itself, but rather belongs to an objective world of natural facts that are universally valid, neutral, ‘timeless’, and true.

Leaving aside the somewhat paradoxical features of the fourteen-day rule, what we can observe here is an excellent example of what the organizers of the seminar series on which this volume is based described as ‘the complex temporal reality of political events such as campaigns, protests and revolutions’. It can be added that the fourteen-day rule is also an example of the highly contested nature of time-events and chronologies in politics. A further point, which as we shall shortly see has acquired increasing political importance, is that both the teleological and ontological constitution of the primitive streak-as-legal-limit argument are *mixed*, or *hybrid* – drawing together *a surfeit of seemingly overlapping logics* (moral, legal, biological) to constitute a single, decisive moment in time – thus achieving by a kind of condensation, or ‘layering’, parliamentary consent to a ‘line’ that is (by other reckonings) neither logically nor morally legitimate (or momentary, single, scientific, or decisive).⁴

Above all, what can be observed by comparing the uses of biological time and temporality in the context of two simultaneous British debates over reproductive politics in the 1980s is the extent to which time and temporality operate as spaces of conversion. As Judith Butler notes in her analysis of time as a component of cultural and sexual politics, these are ‘already imbued with the problem of time, of progress in particular, and in certain notions of what it means to unfold a future of freedom in time’ (2008: 1). How temporality is organized, argues Butler, ‘already divides us’ because its organization both reveals and conceals ‘which histories have turned out to be formative’ and ‘how they intersect – or fail to intersect with other histories’ (2008: 1). In the case of the borrowing of secular time by Right-to-Life abortion activists, in order to further their political goal (to ban all abortions) by disguising it as modern, rational, and scientific, biological temporality performs a function of conversion: by camouflaging Christian fundamentalist tenets in the cloak of biogenetic reason, it becomes possible to ground a religious argument in allegedly secular biological facts. Similarly, the primitive streak argument posits a universal developmental event – a biological fact of life – in order to convert a pragmatic

legal objective into a simple matter of deductive biological reasoning. Again, time and temporality provide a space for reworking one idiom as another, repositioning the form of one temporality as the content of another's time.

Thus the primitive streak argument relies both on a 'moment' in time (as do many accounts of conception) and on the form of temporality, or chronotope, which determines what kind of time this is, and what it can contain or signify. What is noticeable about the impassioned invocation of the reproductive time of future generations from the pro-embryo research lobby in the HFE Act debate is its ironic relationship to the identical form of time depicted by the Right-to-Life lobby in their effort to protect the future lives of the unborn. Here, then, we have what the seminar organizers (see above) call the conflict in 'what it means to unfold a future of freedom in time', but evinced through similar genres of time. It is thus the composition of time and the mobilization of different temporal configurations that offer what Strathern (1992a) has identified as the 'plural universe' of temporality.

The case of the primitive streak similarly demonstrates how the mobilization of plural temporalities can be strategically orientated toward specific political goals – through what we might denominate as 'chronopolitical' conversions.⁵ Through the figure of primitive streak are combined the 'natural' temporality of the biological and the statutory time of the law in the form of an apparently self-evident empirical reality, appearing as a visible line. The aim of this strategic alignment of biological development with legal requirement is politically pragmatic: the intersection they create is both a deliberately diversionary tactic (to avoid the 'moral status of the human embryo question') and strategic (by providing a legitimate basis for future governance of human fertilization and embryology). Both past time (in the form of the 'pre-embryo') and future time (in the form of legalized human embryo research) are conflated through a layered temporal construct that functions as a conversion device (to convert an early human embryo from a continuous path of development into a partitioned process of transformation). That this logic contradicts itself (since a human embryo used for research or clinical purposes must be continuously developing in order to be useful for either medicine or science) is not only why, but also how, its 'chronopolitics' are manifest. In the British debates over abortion law and the HFE Bill in the 1980s, time and temporality were crucial political resources in a battle over 'which histories have turned out to be formative' and 'how they intersect – or fail to intersect with other histories' (Butler 2008: 1).

Of course, we should not expect the law to be other than a fiction to itself that is upheld by other means – including symbolic and performative devices, such as protocols, procedures, and elaborate recording apparatus (hence the elaborate rituals of Parliament). For the law to reproduce itself credibly and effectively, there must be disagreement and debate. As Warnock herself stated, the basis of the law need not be 'right' in order to be 'alright' to enough people that it is workable. Thus it is not surprising that the various kinds of 'leakage' from the first incarnation of the HFE Act, passed in 1990, have required periodic visits from the parliamentary plumbers. The next, and last, example moves us forward in time to the Act's amendment by Parliament, a process referred to as the HFE Act II, and introduces a new chrono-typic event that poses the question of hybrid temporalities in the context of new biological mixtures. This debate concerned the formation of admixed human embryos for research, using the eggs of cows combined with human nuclei to create new biological tools. These were also known as the cybrid chimera debates of the early twenty-first century, which dominated the politics of HFE Act II much as the embryo debates had

dominated the politics of HFE Act I two decades earlier (a politics that is very much with us in 2014 due to what we might call HFE Act III – the current effort to dissolve the HFE Authority).

Human admixed embryos

During 2008, an eventful year for reproductive politics in the UK, the thirtieth anniversary of the birth of Louise Brown almost exactly coincided with the unamended passage of a new HFE Bill ('HFE Act II'). In conspicuous contrast to the US, the UK strengthened its position as the most highly regulated but scientifically permissive climate for human embryo research anywhere in the world. Uniquely in Europe, human embryo research in the UK, including human embryonic stem cell derivation, has had consistently strong support from all of the major political parties, the major religious groups, and the general public, as does the production of cloned human embryos for research and human-animal, or 'cybrid', embryos. Indeed this area of research is something of a jewel in the crown as far as UK bioscience and biomedicine are concerned and is one of the very few areas not to have received extensive budget cuts under the current Coalition government's draconian plans to reduce the nation's budget deficit (although, as noted above, the HFE Authority itself may, ironically, not survive in its present form much longer under the new emphasis on 'austerity').

As part of my ongoing ethnographic research on human stem cell research in the UK, I attended one of the major demonstrations outside Parliament in support of, and against, the new HFE Bill at a key point during its passage through Parliament in 2008. It was a beautiful sunny day and it was a short bike ride from my office at the London School of Economics down the Embankment to Old Palace Yard in Westminster, where I arrived just after 1 p.m. In the announcement of the 12 May pro-embryo research demonstration, 'Show Your Support', organized by the office of MP Evan Harris (the *de facto* leader of the pro-embryo research lobby), it was suggested that:

In recent months there has been intensive lobbying of MPs, particularly from groups who are opposed to embryo research to continue in the UK, including embryonic stem cell science and the animal-human hybrid work. MPs may not have heard quite so clearly from those who strongly support the proposals in the Bill, and know that it is vitally important that the legislation is not watered down.

It went on:

A YouGov poll in August 2005 showed that 77% of people accept embryo research for life-threatening diseases. But for far too long, the most prominent shows of feeling on this issue have come from those who wish to impede carefully regulated embryo research and important and ethical clinical interventions like preimplantation genetic diagnosis.

The announcement concluded that on 12 May, just before the start of the Bill's Second Reading in the House of Commons,

hundreds of patient groups would join with scientists, doctors and other supporters to represent the breadth and depth of support for the Bill, and in particular to confirm support for the government proposal that embryo research should continue in the UK, and should include animal-human hybrid work as well as embryonic stem cell science.

In fact, on the day, there were fewer than a dozen patients and representatives of patient groups available to comment to the media – most of whom had left by the time I

arrived. The only scientists present were those who had taken time off from their work at the Guy's Hospital research centre near Borough market, where the first UK human embryonic stem cell lines were derived in 2003 (Franklin 2007). The fear that the pro-embryo research lobby would be swamped by the Right-to-Life rally also scheduled the same afternoon just before the start of the Second Reading, at 2 p.m., proved groundless, as it too was poorly attended and lack-lustre, the weather perhaps too glorious to support a mood of indignation.

Riding back to my office to watch the Second Reading live on Parliament TV, I reflected on what a different situation it had been in the late spring of 1990 when the first HFE Bill was passed. Then, not so long after a Private Members Bill introduced by MP Enoch Powell had attempted to ban embryo research entirely, the question of how Parliament would vote on the amendment to allow embryo research was far from certain. The Right-to-Life lobby were much larger and more well organized, and on something of a crusade. In a dramatic show of opposition to abortion, they had showered the chambers of Parliament with postcards emblazoned with images of aborted fetuses.

However, the reduced size and fervour of the demonstrations for and against embryo research were not the only measure of the difference between 1990 and 2008. Looking back, we can see that although some forms of reproductive technology – such as cloning, human-animal hybrids, and stem cells – still engender controversy, the logic of progress associated with assisted conception has been sedimented into a naturalized trajectory of intervention in the name of human betterment in which technological manipulation of human embryos is not only a viable alternative to 'natural' reproduction, but also a *necessary path* to the continued improvement of human health. If severe, debilitating, and destructive conditions can be potentially alleviated through embryo experimentation, this is a path that must be followed out of an ethical responsibility not to deny future generations the fruits of promising scientific research. In a sense, the connection between IVF and generation which we saw in the earlier episodes of reproductive politics discussed above has become more visible, and more unquestionable, as the dominant discourse, characterized by a general isomorphism between improvements to human health and well-being and the ability to culture human (or partially human) embryonic life 'in glass'.

The early twenty-first-century debate over cybrid embryos (e.g. mixed animal-human embryos) in the UK suggests that the cultural shift in reproductive politics over the past thirty years is not only a process through which the axiomatic status of natural facts has been displaced, but also one through which a newly naturalized, and quasi-theological, discourse of progress has become a form of moral commonsense. Here again is the recombinant mixture of past and future temporality as a form of chronopolitical mechanics. In the presumed utility and moral legitimacy of cybrid embryo research, we see not only the chronic failure of the anti-abortion rhetoric I wrote about as a graduate student in the 1980s, but also its complete, and almost burlesque, conversion into a form of quasi-religious faith in human salvation, expressed, celebrated, and defended as a duty to protect experimental science. Whereas the Right-to-Life movement turned to biological science as a strategic means of secularizing the abortion debate in the 1980s, but lost its way politically on this ground, the scientific lobby's turn to the quasi-theological language of witnessing, salvation, and the relief of human suffering has prevailed, ironically establishing a new temporality of 'marching forward into the unknown' as a moral obligation that has gained widespread public acceptance. It has even become a source of British national pride.

This conversion, whereby religious content was given secular biological form in one context, and biological science was embedded in a chronotope of salvation in another, has yielded an interesting chronopolitical comparison, whereby not only has the former effort lost ground to the latter, but it has also become a debased political currency in the process. Hence, for example, very much in contrast to the debate that took place in Parliament throughout the 1980s concerning embryo research, in which the Right-to-Life movement appeared to be gaining ground, the high-profile UK debate in 2008 concerning human-animal hybrids, or cybrids, relegated the Catholic Church Right-to-Life position to the 'extreme' fringe of public debate. Cardinal Keith O'Brien's strident 2008 Easter sermon condemning the revised HFE Bill was widely perceived to damage the reputation of Catholicism in the UK. 'It is difficult to imagine', O'Brien (2008) claimed, 'a single piece of legislation which, more comprehensively, attacks the sanctity and dignity of human life than this particular Bill':

What I am speaking of is the process whereby scientists create an embryo containing a mixture of animal and human genetic material. If I were preaching this homily in France, Germany, Italy, Canada, or Australia I would be commending the government for rightly banning such grotesque procedures. However here in Great Britain I am forced to condemn our government for not only permitting but encouraging such hideous practices ... This Bill represents a monstrous attack on human rights, human dignity and human life ... One might say that in our country we are about to have a public government endorsement of experiments of Frankenstein proportion. May God indeed help us to be Missionary at this present time and to hand on the saving message of Jesus Christ in a world which does not seem prepared to receive it.

Among those challenging this view was the prominent geneticist Mary Seller, also a Christian, whose commentary on cybrids published in *The Tablet* (Seller 2008) cited the teachings of Jesus Christ as a motivation not only to heal the sick but also to marvel at the splendour of God's creation.

God certainly intends healing of the sick. Jesus always healed when he encountered a person in need: he never passed one by. Indeed he often flouted authority to do so: he healed on the Sabbath, he touched untouchables, and vociferous criticism did not stop him. Furthermore, he gave power and authority to his disciples to go out on the highways and byways to do likewise. If today we are able to heal anyone through our new scientific endeavours, it is an expression of our discipleship, and can also be construed as another way in which we legitimately 'Play God'.

Seller's pragmatic interpretation of Christ's teaching neatly encapsulates the mainstream UK position of support for science based on a sense of moral duty to explore new avenues for the relief of human suffering. In her view, God's intentions are consistent with instrumental intervention, including biological experimentation. She invokes a tradition of active, mobile evangelism – flouting the state's authority to take to the road, 'the highways and byways', with tools to heal the sick. Scientific research, in this view, is no less than a form of discipleship.

In their press release, 'Human admixed embryos', prepared to accompany the debate in Parliament on human-animal hybrid embryos, the Genetic Interest Group (2008), representing patient groups in favour of the new legislation, took a similar view – describing the human *in vitro* embryo as 'a vital tool to advance the progress of research into the potential of embryonic stem cells' and thus as 'a potentially vital avenue for research which could greatly increase our understanding of serious medical conditions such as Parkinson's, motor neurone disease, Alzheimer's disease

and cystic fibrosis'. Such a statement strongly reinforces the initial UK government position set in place by the debate over Warnock – that some embryo research should be permitted in the effort to provide relief from human suffering – whilst also confirming, as does passage of the new legislation unamended, that this position has stood the test of time. As the (lack of) cybrid debate reveals, support for this view has, if anything, been strengthened to the extent that the value of the *in vitro* human embryo culture system as both *a tool and a way* has come to occupy the moral high ground. The strategically recombinant chronopolitics introduced by McLaren, endorsed by Warnock, and implemented by Thatcher's government over an unusual prolonged period of parliamentary debate has become, in Butler's words, the history that 'turned out to be formative' (2008: 1).

Conclusion

During the 1980s, many feminists were deeply concerned about the strategic adoption of a secularized biological time of foetal development by the Right-to-Life movement. This seemed a worryingly effective chronopolitical strategy, and one that was gaining ground by employing an already established, powerful idiom of development – namely biological science. I have referred to this as the 'time of biology' or 'biological time'. However, what emerged out of the clash of reproductive aspirations that occurred when the pro-embryo research lobby squared up against the Right-to-Life movement in the UK in the 1980s was that, somewhat ironically, an almost reverse scenario emerged – in which scientific progress emerged as the triumphant form of temporality, framed within a quasi-theological idiom of duty to humanity, and ethical obligation to future generations, by 'marching hopefully' into uncharted biological territory. This duty was then codified in law, inaugurating a social contract, or exchange, legitimating the sacrifice of existing human embryos in the name of future human health, prosperity, and progress. A specific 'time event' – namely the 'natural fact' of the 'primitive streak' – proved to be a crucial basis for this shift. The 'legal fiction' of the 'fourteen-day rule' entrenched the power of the progress argument – so much so that it now seems all but unassailable in the UK, whereas the Right-to-Life advocates appear to be at a loss to capture the public imagination, or the common ground of commonsense consensus, as they once did. Their chronopolitics, their version of history, and their attempt to reduce the upper time limit of abortion have failed: their history is not the formative one. Among other things, this reversal suggests that time is an important, but under-theorized, resource in the mobilization of social movements – and that it can operate as both form and content in political struggles.

Returning to the linearity of biological time described by Strathern at the outset of this paper, we can thus conclude that its 'literalism' serves more than one function, and is recursive in more than one sense for 'the English'. Taking 'literalism' in its Bakhtinian sense to mean what is generic to representation, as evidenced by how the chronotope formally structures not only written texts, but also the worldviews within which they operate, we can interpret the contrast between two social movements in the 1980s over reproductive, or biological, time as one not only of tactics but also of ethical culture, or, as Foucault (1990) described it, of biopower. While both pointing to specific moments in biological time, and insisting on their literalism, the two movements were also pointing in different directions, ethically, politically, and legally. While both employing the language of witnessing and conversion, the linear passage of time being pulled into focus by the two sides of the debate, and the 'natural facts' the passage of time 'revealed',

were also clothed in the empirical robes of 'objective fact'. At once represented as 'obvious', two different versions of early human development *in vivo* were situated within the 'literal' narration of biological facts, but utilized as symbolic political resources. This contrast thus also confirms that what 'the English are able to point to' when they invoke 'the "biological" experiencing of temporality as vindicating a linear interpretation of it' (Strathern 1992a: 62) is not obvious at all. Symbolically, ethically, 'literally', 'objectively', legally, politically, and culturally, such 'pointing' is, in fact, highly ambivalent. 'Biological time' may provide 'irrefutable evidence of linearity' (Strathern 1992a: 62), but this linearity is never sufficient evidence in itself to reveal what 'biological time' means. 'Biological time' turns out to be an inherited cultural resource, a chronotopic one perhaps, which is as malleable as any other.

A coda to this observation would be that we might expect biological time 'itself' also to change, and thus also its meanings to 'the English'. Significantly, this is exactly what happened in the period separating HFE Act I from its successor incarnation in HFE Act II, for it was in 1996 that the successful cloning of Dolly the sheep confirmed not only that biological development can be reversed, but also that it is possible to induce the 'backwards' de-development of mammalian cells. The importance of this new and unexpected discovery for understandings of developmental time is why cybrid embryos were needed to further the exploration of the possible health benefits of human embryonic stem cell therapy – now a major focus of scientific research in the UK and elsewhere. Of the many recursions the 'literal' meanings of 'biological time' can offer, we now, it appears, have not only 'more' time, but also more kinds of time, and thus more opportunities to be both literal and objective, as well as ethical and political, about going backwards as well as forwards within them. As Alice once had to learn, from her new location on the other side of the looking glass, times and temporalities do not all run alike: even when they are moving in the same direction, as the Red Queen points out, the fastest runners might be standing still:

'[I]n our country,' said Alice, still panting a little, 'you'd generally get to somewhere else – if you run very fast for a long time, as we've been doing.'

'A slow sort of country!' said the Queen. 'Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!' (Carroll 1998 [1871]: 345).

NOTES

¹ The term 'biological control' is used in the context of contemporary bioscience to refer to the increasing ability to manipulate biological components and pathways, including biological 'time', technologically and experimentally.

² With funding from the Wellcome Trust Medical Humanities programme, Martin Johnson and I have interviewed two dozen of the 'key players' in the emergence of IVF and human embryo research during the post-war period in the UK. These interviews are now archived at the British Library as part of a project on the emergence of mammalian developmental biology in the UK.

³ Bakhtin borrows from Einstein's relativity theory to define the concept of the 'chronotope' as a form of literary representation. He argues in *The dialogic imagination* (1981) that it is a form of 'time-space' that allows time in literature to become visible by being 'thickened'.

⁴ Significantly, by Strathern's account (1992a; 1992b), this plural, or 'merographic', time of the primitive streak 'chronotope' is *exactly what makes it modern*. Modernity, as Appadurai (1996: 1) notes, 'belongs to that small family of theories that both declares and desires universal applicability for itself' (thus non-reflexively instantiating the paradoxical terms of its own foundational narrative). Indeed the primitive streak example serves as a useful parable for modernity in many other ways too – not least its simultaneous invocation and erasure of the primordial.

⁵ The term 'chronopolitical' has been variously used in the past: for example, by George Wallis (1970) to describe a time of political transition, and by Paul Virilio (2007) to describe the effect of speed on politics and the relationship of space to time. For a review that is relevant to the contributions to this volume, see Klinke (2013), in particular the discussion of 'heterotemporality' to refer to a crucial element in modern geopolitics.

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Repenser la politique de la reproduction dans le temps et le temps dans la politique de la reproduction au Royaume-Uni : 1978-2008

Résumé

Le présent article explore deux débats différents, mais liés et contemporains, sur la politique de la reproduction, dans lesquels se manifestent au moins trois combinaisons distinctes de temps. Dans la première partie, l'auteure décrit l'orientation vers un temps « biologisé » dans les années 1980, sous l'impulsion des groupes britanniques chrétiens se réclamant d'un « droit à la vie » qui ont commencé à utiliser une ontogenèse sécularisée pour promouvoir et défendre une définition religieuse « du chemin, de la vérité, de la vie » et ont modifié une « théo-ontologie » basée sur l'équivalence de la valeur absolue de la vie humaine, de la vérité (de la vie biologique) et de la foi dans le Christ (source de vie éternelle). Dans la deuxième partie, elle décrit une ontologie opposée, « panachée » différemment (séculière ou semi-séculière, utilisant une chronométrie hybride à la fois biologique et juridique, mais orientée vers l'horizon intemporel du progrès), caractérisant pendant la même période le débat sur l'avenir de la fécondation *in vitro* et qui devait aboutir en 1990 à la première loi sur la fécondation humaine et l'embryologie (HFE Act) au Royaume-Uni. Dans la troisième partie, elle se penche sur l'héritage de ces débats dans l'éclairage qu'ils jettent sur les controverses politiques qui ont, plus récemment, accompagné l'adoption d'un HFE Act amendé en 2008 et sur le débat autour des embryons dits « cybrides ». Ces épisodes révèlent à quel point les mouvements sociaux « sont profondément modelés par des médiations et des conflits entre des représentations, technologies, disciplines sociales et rythmes temporels différents ». L'auteure avance que les diverses constructions de la temporalité dans la politique de la reproduction que font apparaître ces trois épisodes distincts sont cruciaux pour comprendre, en anthropologie, la signification du « contrôle biologique » dans le contexte de la recherche sur les cellules souches, du clonage, du génie tissulaire et de la biomédecine de la reproduction.