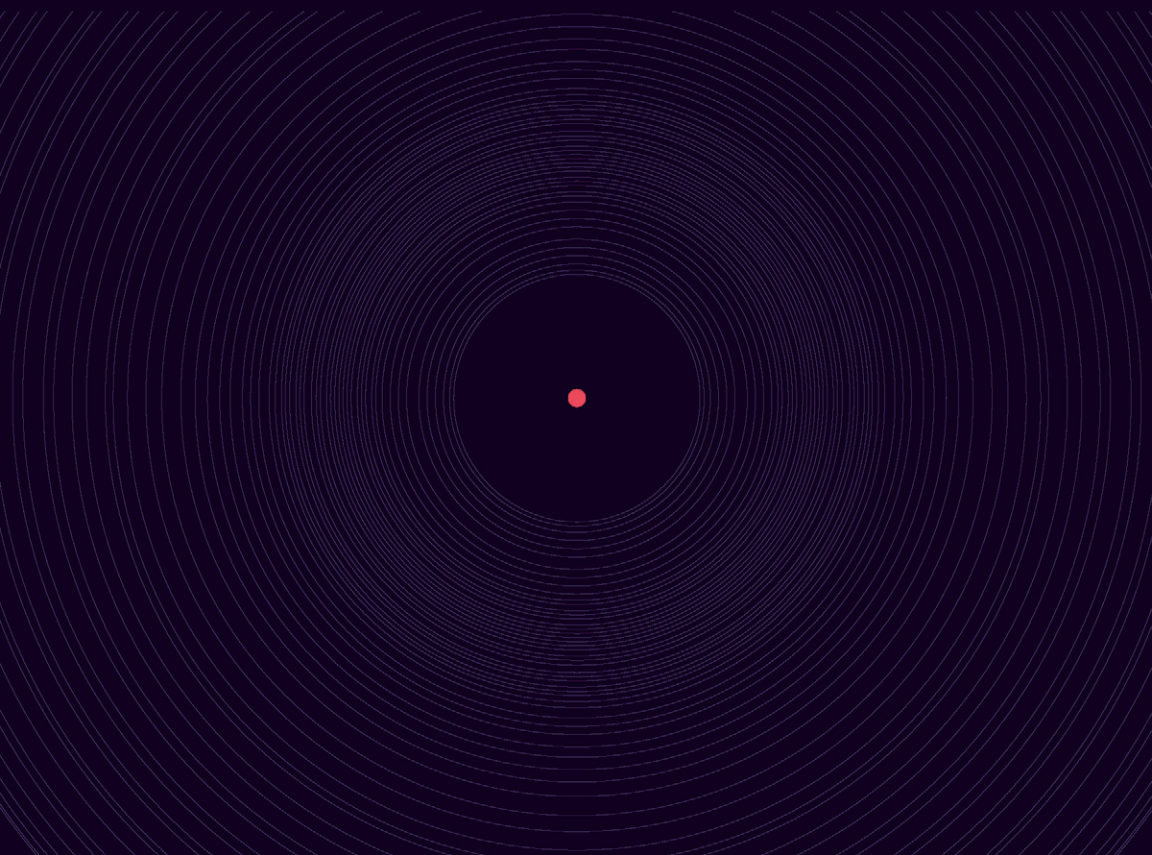


Emerald Studies in Reproduction, Culture and Society

Technologies of Reproduction Across the Lifecourse

Expanding
Reproductive Studies

Edited by Victoria Boydell and Katharine Dow



Technologies of Reproduction Across the Lifecourse

Emerald Studies in Reproduction, Culture and Society

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Technologies of Reproduction Across the Lifecourse: Expanding Reproductive Studies

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Foreword

There is sometimes a strange moment toward the end of a research project where the main noun, the primary object of one's analysis, begins to shimmer, starts to feel unstable and seems as though it might actually slip out of view completely. This happened to me as I was finishing my most recent book, *GUYnecology* (2020), a history and sociology of why there has been so little attention to men's reproductive health. As I was writing the conclusion, a phrase I had used throughout the book, and which I've encountered hundreds if not thousands of times in the work of others – 'reproductive body' – suddenly seemed vague. More than vague: thoroughly devoid of substantive meaning. What was, and is, a reproductive body? Using 'a' as an article instead of 'the' in front of reproductive body seems to open up the possibilities a bit, but does not begin to answer crucial questions about which parts of whose bodies would one demarcate as specifically (exclusively?) reproductive?

Reading through this marvelous collection of research essays edited by Vicky Boydell and Katie Dow makes me think that this phenomenon, the feeling of losing one's grasp on precisely the thing you've just spent months or years studying, can happen not only with particular research projects but with entire fields. It appears to be happening at the moment in the social scientific study of reproduction, as scholars train their attention on some of the core terms in the field, raising questions about how they have been defined, what they include and what they do not, and identifying the assumptions on which they are based. Far from cause for concern, I think this process heralds the continuing growth and expansion of a field, and it makes possible exciting new opportunities for thinking about what comes next.

In the Introduction to this volume, Boydell and Dow argue for the integration of research on reproductive technologies, noting that they are defining both 'reproductive' and 'technologies' in expansive ways. In doing so, they are building on long-standing efforts by anthropologists, sociologists and historians to examine the wide range of social, cultural and historical processes that shape individual experiences of reproduction, which can include pregnancy, birth, contraception, abortion and a wide array of reproductive technologies. Faye Ginsburg and Rayna Rapp (1991) offered a powerfully generative label for conceptualising these processes – the politics of reproduction – and the subsequent outpouring of research provided the basis for my own working definition of reproduction: 'the biological and social process of having or not having children' (Almeling, 2015, p. 430).

Boydell and Dow's integrative framework takes up this approach to reproduction and enlivens it with empirically innovative studies of reproductive technologies. In particular, the essays in this volume illustrate the importance of comparative research, such as comparisons of how individuals experience different kinds of reproductive technologies (Kasstan; Van de Wiel; Whitacre) and comparisons of their experiences at different points in the lifecourse (Nandagiri; Boydell). Indeed, Boydell and Dow's emphasis on temporality ensures that scholars are thinking longitudinally not only about the past and the present (Hudson and Law; Han) but also how reproductive technologies figure into 'anticipated futures' (Buhler; Hamper; Pickard). Importantly, this volume expands beyond the experiences of cis-women, the typical population researched by reproductive scholars, to include men's and LGBTQI people's experiences of reproductive technologies (Mackenzie; Wilson; Appleton). And like so many others working in the vibrant politics-of-reproduction tradition, the editors and contributors to this volume emphasise how the inner workings of governments and markets and biomedicine have real consequences for the reproductive aspects of people's everyday lives.

In essence, Boydell and Dow's integrative approach to research on reproductive technologies expands the viewscope well beyond the traditional 'snapshot', in which researchers concentrate on a single reproductive technology at a particular point in time and place for one group of people. It makes possible new questions about the relationship between processes that are usually considered somewhat distinct, such as those around contraceptive and conceptive technologies. Going forward, there is an ongoing need to analyse how reproductive technologies and reproductive processes more broadly, from the cellular to the global, are shaped not only by gendered norms and beliefs but also by inequalities rooted in racism and heteronormativity, as well as widely varying levels of economic and educational resources across and within countries (e.g. Briggs, 2018; Roberts, 1997; Ross & Solinger, 2017). In addition to several of the essays in this volume that take an intersectional approach, I would also encourage readers to seek out Natali Valdez and Daisy Deomampo's (2019) excellent special issue of *Medical Anthropology* on race, racism, and reproduction.

Of course, there will never be one correct, true-through-all-of-history answer to questions such as what is a reproductive body or what is reproduction or what is reproductive justice. Decades of social scientific and humanistic scholarship on science and bodies, and especially research on processes surrounding gender, race, sexuality, ability and their intersections, reveal that definitions, understandings, and experiences of reproductive processes are rooted in particular times and places and approaches, the latter of which can be academic, activist or neither. The impossibility of objectivity is not a fact to mourn, but an invitation to consider the full range of complexities in how knowledge is made and the uses to which it can be put. It is a chance to deepen our understanding of the nouns we work with, to examine the assumptions built into these seemingly straightforward words and an opportunity to use such reflections to ask new questions.

Rene Almeling
New Haven, Connecticut
June 2021

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Chapter 1

Introduction: Technologies of Reproduction Across the Lifecourse

Katharine Dow and Victoria Boydell

Abstract

This edited collection proposes an interdisciplinary and integrated approach to the study of reproductive technologies (RTs), which reflects the fact that many people use different technologies throughout their lifecourse and resists the disciplinary siloing of research on these technologies. The ever-expanding availability of RTs, the continued roll-out of ‘family planning’ and maternity services across low- and middle-income settings and the rapid development of the fertility industry mean that it is more likely than ever that individuals, especially women and trans* people, will engage with more than one RT at some point in their life. These multiple engagements with RTs will affect users’ expectations and uptake, as well as the technologies’ availability, commercial success, ethical status and social meanings. We offer this book as part of a wider movement in the study of reproduction and RTs, which takes inspiration from the reproductive justice framework to address forms of exclusion, discrimination and stratification that are perpetuated in the development and application of RTs *and* the ways in which they are studied and theorised. Here, we introduce the project and outline the structure of the book.

Keywords: Reproductive technologies; lifecourse; reproductive justice; methodology; biomedicine; inequality

This book comes out of a workshop hosted on the picturesque Lake Geneva. By those same shores, just over 200 years earlier, Mary Shelley conceived her most famous novel, *Frankenstein*. *Frankenstein* emerged as a popular trope in early public discussions of assisted reproductive technologies (ARTs) (Turney, 1998), signifying an intense discomfort with ideas of ‘playing god’. It is fitting that both

Frankenstein and its technology of reviving the long-dead, in order to create new lives, are (science) fictional, since much of the controversy around ARTs is based in speculations about what *might* be done with them and how they could be put to use in the ‘wrong’ hands, which still resonate with Shelley’s warning to her readers about tinkering with natural forces. Shelley could be described as one of the earliest theorists of reproductive technologies (RTs). Like many social scientists studying RTs, she used the example of Dr Frankenstein and his Creature as a lens to examine broader social and political currents and to warn about what happens when those with dubious goals and few scruples are given power over life and death. *Frankenstein* is not anti-technology or anti-science: Shelley makes it clear that technologies are anthropogenic, and so humans must take responsibility for their use, and the meanings and values that drive those uses.

Two centuries after *Frankenstein’s* publication, both the facilitation and the prevention of human reproduction are mediated through many technologies, which may appear ‘ordinary’ or ‘extraordinary’ (Han, 2013), ‘low-’ or ‘high-tech’. In this book, we draw on Rene Almeling’s helpful definition of reproduction as ‘the biological and social process of having or not having children’ (2015, p. 430); we understand this to encompass conception, contraception, pre-conception care, pregnancy, infertility, birth, abortion and neonatal and infant care. We use the term ‘technology’ to include pharmaceuticals, devices, tools, digital applications, clinical and diagnostic procedures. Crucially, while ‘RT’ has often come to be a shorthand for ARTs, *we consider any technology that facilitates the biological and social process of having or not having children, or which is imagined to do so, a RT.*

In *Frankenstein*, Shelley draws on the Gothic genre to depict the destructive power of those with wealth and position, arguing that political systems have the capacity to victimise those who are empowered as well as those who are disempowered, illustrated by the fates of Frankenstein and his Creature (Bennett, 1998). While we would modify this to take account of the fact that, while politics has the capacity to corrupt all, its potential for violence is typically disproportionately aimed at the already disempowered, we do agree with Shelley’s focus on the political, moral and social forces that drive technologies. Technologies are shaped by the epistemic norms, cultural values, financial pressures and political possibilities of the contexts in which they are developed and made available. The cultural scripts of developers and promoters can make technologies (un)thinkable, yet these precepts and values are not necessarily replicated in local practice or individual experience and may in fact also be sites of creativity and resistance (Beaudevin & Pordié, 2016; Cuboniks, 2018; Hardon & Moyer, 2014; Lewis, 2019; Sanabria, 2016; Sheoran, 2015). But, this is not a one-way process – we agree with Lock and Nguyen (2018, p. 20) that ‘technologies should be understood as both produced through culture and as productive of culture’.

We embrace a fairly broad definition of RT here – for example, the chapters include genetic testing, Viagra and HIV medication – and we do so deliberately, to provoke thinking about RTs that breaks down methodological assumptions and disciplinary silos, as we will explain in this introductory chapter. We recognise that focusing on RTs can provoke an assumption of a technologist bias, yet it is our explicit intention to cover a range of quite ‘ordinary’ technologies alongside

the more high-tech. As Sallie Han's chapter in this book shows, even apparently playful RTs such as home genetic testing kits can have spectacular and upsetting results, while as Sonja Mackenzie's chapter shows something that is not usually thought of as an RT like birth certificates, passports or borders can still be enmeshed in questions of who counts as a parent. We also point out that medicine and medical technologies play a role in a large number of people's lives and RTs are widely known and/or available (at least in theory) in high-, middle- and low-income countries (Franklin, 2013; Wahlberg, 2016). Indeed, in many contexts, it is fair to say that RTs have become normalised to the extent that their use is determined as a moral or cultural imperative (Franklin & Roberts, 2006; Gammeltoft & Wahlberg, 2014; Murphy, 2017; Sandelowski, 1993; Russel, Thompson, & Sobo, 2000; Solinger, 2001; Strathern, 1992; Wahlberg, 2008).

Reproduction is the result of series of ongoing decisions, made individually and collaboratively, with more or less agency and with different levels of support. This could be envisaged as a series of socio-ecological concentric circles that surround an individual as they relate to reproduction and RTs at different points in their lives. The immediate circle would be their everyday (and, in many cases, long-term) relationships with partners, children, kin, friends, mentors and co-workers. Thinking about this circle reminds us of an obvious point, though it is often occluded by a focus on individuals in the discourse surrounding reproductive decision-making, that *reproduction is relational*. Another circle that surrounds and shapes an individual's reproductive life is technology itself, and the industries and infrastructures that facilitate its use, availability and accessibility. Beyond this, is the circle of culture and society, with its structures of political, economic and moral power and its intersecting inequalities, and alongside this, public discourses and media representations that contribute to the meanings and assumed use(r)s of different RTs. Another further circle represents globalised and universalising forces that help shape national and local contexts. This is particularly evident if we consider global discourses and programmes around 'family planning', which are enshrined in many international agreements such as the UN's Sustainable Development Goals.

The central tenet of this collection is that RTs are not imagined or experienced in isolation by the people who use them. However, clinical, public health and even social scientific research often reflects a parcelling out of reproduction into specialist areas of biomedical intervention. Studies tend to be bound to specific physiological events, technologies (particularly those that are more obviously high-tech or novel) and people – namely cis, heterosexual women. Yet, with the ever-expanding horizon of RT and the rapid development of the fertility industry, the reality is that many individuals will engage with more than one RT at some point in their life. Their differential access to and experience of one technology is therefore likely to be shaped by their previous or concurrent experience with another, and this will have effects on their expectations and uptake, as well as the technologies' availability, commercial success, ethical status, legal regulation and social meaning. This point is poignantly illustrated by Sharmila Rudrappa's (2015) account of transnational surrogacy in India in the early twenty-first century, in which the ubiquity of female sterilisation made relatively poor women's

bodies 'bioavailable' (Colen, 1995) for surrogacy and built Indian medical professionals' expertise in obstetrical and gynaecological surgery (see also Nandagiri, this volume), which we consider exemplary of an integrated account of RTs. As Rudrappa puts it, 'surrogacy in India cannot be understood outside the context of population control programs. Markets in life – and surrogacy is a prime example of such a market – have to be located in the larger medicotechnical interventions that make certain bodies, specifically those of working-class Indian women, the foundation for reproductive assembly lines' (2015, pp. 10–11). In this example, working-class Indian women's bodies were intervened in to both curtail their own fertility, which was deemed undesirable according to the logics of historical and contemporary population control, and to facilitate the reproduction of middle- and upper-class (and, at the time, typically white Global North) families who accessed their reproductive capacity through financial means.

Studies of RTs have provided important empirical data about the social meanings and personal experience of RTs in recent decades. Reproductive scholars have also made substantial theoretical contributions to our understandings of gender, race, disability, sexuality, religion, nature, genetics, medicine, ageing, kinship, marriage, adoption, parenting and much more. This book seeks to encourage further reflection on what reproductive studies have achieved and also what methodological, empirical and theoretical blind-spots have built up as the field has developed. Building on interdisciplinary dialogue between sociology, anthropology, history, epidemiology, gender studies, psychology, cultural studies and public health, in this book, we identify overlaps and discontinuities both in users' experiences and analytical approaches to these technologies. The following chapters explore the local dynamics surrounding RTs, their use and their effects, alongside the broader interrelated logics that drive their production, promotion and use. It also reflects on what the intended and unintended effects of our methodologies for researching RTs are. In this introduction, we will draw on the reproductive justice framework to explain why we think it is important to take an integrated and comparative approach to the study of RTs, as well as to propose how to build such an approach. However, our intention is to be more experimental than didactic, so this book also serves as an invitation to encourage others to take up and test these propositions, too.

The workshop in November 2019 was sponsored and hosted by the Fondation Brocher in Switzerland, which promotes pluridisciplinary research on the ethical, legal and social issues (ELSI) arising from new medical development and health policies.¹ The workshop brought together sociologists, anthropologists, gender studies and science studies scholars, clinicians and public health professionals of the World Health Organization. The participants spanned a range of career stages and together represent a broad expertise in RTs and different methodological approaches to their study. We had two days of traditional workshop format, punctuated with refreshing views of Lake Geneva and mini Toblerones provided by the Foundation. On the third day, we used creative and collaborative approaches to identify our exact aims for the project and to consider what might be the best contribution we could make to academic knowledge and even to policy discussions. Many of the original workshop members agreed to contribute a

chapter to this book. We have also invited a handful of others to contribute, with the aim of broadening and deepening the range of topics and experiences we present here. For many of the contributors, this has been an opportunity to go back to data they always wanted to do something with, but were unsure how to do so, or to have the opportunity to draw comparative links between different datasets, which has been a joyful process for us, as editors, to midwife. Around a year after the original workshop, we held a further set of workshops – online, this time, due to COVID-19 restrictions – in which authors were paired up as discussants on each other’s draft chapters. This allowed us both to provide in-depth feedback to each author and to foster a sense of collective engagement with and involvement in the book amongst the contributors.

This book focuses particularly on time, timing and temporality in people’s engagements with RTs, proposing an approach to studying RTs that takes greater account of the lifecourse. This is an attempt to get at the richness of people’s experiences, whilst also trying to retain a sense of the complex, social, political, economic, religious, moral and cultural forces that shape that experience – and how they might shift over time and at particular historical moments. The chapters in this collection aim to show the different temporalities at work in the operation of RTs, including how different RTs come to make sense (or not) at different points in individuals’ lifecourses; how technologies themselves have lifecourses, which may reflect the current pre-occupations of (putative) users, and also the state of technology and the broader socio-political and demographic concerns of the time. Another aspect of this is the ways in which RTs themselves do and do not work together across lifecourses – some technologies are imagined to complement and extend each other, while others are thought to negate the need for or replace others, while some technologies are used in ways that were not anticipated by their developers or promoters. In this way, we take a relational approach to time that considers how people relate to, with and over time.

In the remainder of this introduction, we explain in more detail what an integrated approach to the study of RTs means and propose how it might be achieved (see also [Boydell & Dow, 2021](#)). In the next two sections, we outline why we think the reproductive justice framework is vital to the study of RTs and how it is relevant to the integrated approach that we are proposing, before going on to argue that we need to take account of the lifecourse of individuals, families and technologies in order to fully understand RTs and the context in which they are used (and refused). Focusing on the lifecourse – which we never imagine to be a singular or universal experience – helps us to explicate the importance of time and temporalities in the lives of RTs and their users and to consider how we might extend and adapt our methodologies to reflect this; this point is taken up in the following section. We end on a summary of the book’s structure, synthesised with a description of some of the main themes from the chapters, to propose what an integrated approach might look like. The empirical chapters are divided into three parts, which will all also have their own short introductions in order to explore the themes in a little more depth.

Reproductive Justice and Technologies of Reproduction

While, as many of the chapters in this collection show, individuals are constantly exercising agency and resisting norms and political pressures, it is important to recognise that reproductive decision-making is rarely, if ever, a free choice, because everyone is constrained by the contexts in which they live, the relationships of which they are part and, quite simply, by the availability of technologies themselves. As the different examples in the chapters show, individual experiences are situated within wider structures that determine different groups' access to and use of RTs, according to gender, race, sexuality, religion, disability or health status and class. Importantly, access to RTs is not understood here as simply whether one can afford or is legally allowed to use a technology, vitally important as that is, but also encompasses the subtle ways in which some technologies appear to be unthinkable or unsuitable for certain 'types' of people, according to insidious beliefs about whose reproduction should be facilitated and whose curtailed (Colen, 1995; Davis, 2019; Murphy, 2017; Roberts, 2017; Rudrappa, 2015; Solinger, 2001).

Reproductive justice scholars and activists have criticised second-wave feminists and reproductive rights campaigners for focusing on access to abortion at the expense of considering other forms of reproductive injustice that people face, as well as occluding the fact that access to any RT is determined by intersecting inequalities based on race, class, sexuality and disability as well as gender. Instead, they propose a three-part framework that is based in social justice: '(1) the right *not* to have a child; (2) the right to *have* a child; and (3) the right to *parent* children in safe and healthy environments' (Ross & Solinger, 2017, p. 9). This framework is vital for building a more representative picture of reproduction, reproductive rights and the ways in which inequality and injustice determine people's ability to fulfil their sexual and reproductive desires. It is also highly relevant for our project here. As Rishita Nandagiri points out in her chapter in this collection, studies of encounters with RTs that are attentive to individual experiences and local contexts, but which also take account of (trans)national and historical circumstances, can 'centre women's lived realities in the interrogation of power, making visible the mechanisms of injustice and the potential for activism in the pursuit of reproductive freedom' [p. 42].

Reproductive justice reminds us to take account of the complex contexts in which reproduction does and does not take place and the part that technologies play in upholding and/or circumventing those contexts. Treating RTs as singular technologies or their use as isolated experiences is not only naïve, but reproduces a privileged view that is wilfully blind to the experiences of vast numbers of people across the world who are subject to reproductive injustice. As noted, as well as attending to the concentric circles that contextualise any reproductive experience, in this book, we aim to pay particularly close attention to time. Reproductive justice is a movement that looks both forward and back, exhorting scholars and activists to remember the injustices of the past and how they structure the present, but also to work towards a liberatory future. Reproductive justice comes out of a particular set of experiences, specifically those of women of colour and Indigenous

women in the United States. It is a movement with its own lifecourse and we should be careful about applying it to other contexts, especially in the cases of those with relatively high levels of socio-economic privilege. Nonetheless, we feel that the key principles are an apt analytical framework in many, if not all, contexts and that applying these principles across a range of settings is a way of building solidarity between different movements for equality, social justice and reproductive autonomy.

Reproduction and the Lifecourse

Following Rene [Almeling's \(2015\)](#) call to re-conceptualise reproduction as 'a multi-layered biological and social process', we propose applying a life-course approach as a heuristic which places greater emphasis on time and historicity in conceptualising lives and our encounters with different technologies. This also accords with the three principles of reproductive justice outlined above, which establish the point that different RTs make sense at different points in people's lifecourses, depending on whether conception is desired or not and on what barriers might be in place to achieve this aim. RTs are encountered within specific historical moments in which people's lives unfold. For example, both reproductive justice activists and historians of medicine have shown how eugenic campaigns and the early feminist movement worked together to facilitate access to contraceptive technologies in the early twentieth century and how that determined who was given access, under what conditions and to which technologies ([Marks, 2001](#); [Watkins, 2012](#)). IVF, meanwhile, has become a 'platform' for a host of biotechnological applications ([Franklin, 2013](#)), yet, at the time it was developed in the late 1970s in the United Kingdom, it was presented as 'controversial', yet rapidly accepted as a means for facilitating the natural desires of 'respectable' heterosexual couples to have children ([Dow, 2018](#)).

Historians and social scientists have shown that technologies have their own histories and that these are often interlinked with other technologies' successes and failures ([Hartmann, 1995](#); [Oudshoorn, 2003](#); [Solinger, 2001](#)), while Rayna [Rapp \(1999\)](#) notably characterised how early users of amniocentesis were put in the position of being 'moral pioneers' and [Charis Thompson \(2005\)](#) characterised the 'ontological choreography' of the first generation of intended parents using ARTs. An idea that stubbornly persists throughout these different histories is the assumption that women are primarily responsible for reproduction and its management and are therefore the main target for technological interventions ([Almeling, 2020](#); [Inhorn, 2020](#); see Wilson, this volume). Relatedly, RTs have been primarily envisaged as serving heterosexual (and in many cases, specifically married) couples, though this seems likely to shift as increasing numbers of LGBTQ + intended parents use RTs, thereby reshaping the technologies themselves, as well as inevitably provoking developers to explore new 'markets' (see also Mackenzie, this volume).

Just as there is no universal lifecourse, reproducing and preventing reproduction each make sense at different times in people's lives – and of course there

are many who never wish to reproduce at all. In studying people's histories and experiences, we must address the lived past and anticipated futures, but also how early experiences set the stage for future ones. As this suggests, the lifecourse might be seen as less a series of separate events and more as a cumulative process. RTs themselves have a very limited focus on preventing or facilitating conception (or 'live birth'). This is also, understandably, the focus of those who develop, administer and promote these technologies, or at least that is how they are presented (see van de Wiel, Whitacre this volume). But for (intended) parents, conception, pregnancy and birth, or their prevention, are not isolated events, but are a point on the lifecourse and a means towards a particular future – a live birth is not the end of the story, but in many ways, the beginning; this is certainly the case for the newborn child. This point also resonates with the third principle of reproductive justice, which enshrines the right to raise and care for children in healthy environments and here we also note our support for the argument put forward by [Charlotte Faircloth and Zeynep Gurtin \(2017\)](#) to create more space for dialogue between reproductive studies and parenting studies.

Lifecourses are made up of expectations, imaginaries and aspirations as well as concrete experiences. Disruption and surprise are common experiences, often associated with the use of technologies which can reveal new knowledge or make the unexpected or previously impossible happen. In many of the chapters of this book, engagements with RTs reflect and provoke ambivalence, uncertainty and the recalibration of expectations in relation to the lifecourse. This relates also to the ways in which public discourses and media representations play into positive and negative valuations of different stages in the lifecourse, as illustrated by Susan Pickard's chapter in this volume on media discourses around menopause and its biomedical management.

A lifecourse approach reminds us that individuals' ideas, aspirations, identities and relationships shift over time. Similarly, as noted, taking an integrated and comparative approach brings out the relational dimensions of RT. Again, this is revealed by focusing on how RTs relate to people's imaginaries and experiences of the(ir) lifecourse. Many studies of RTs offer insights into the ideologies and practices of the nuclear family, and particularly the pressures it brings in relation to expectations of balancing professional and domestic duties and living up to aspirations of 'good' parenting, but, as many chapters here show, reproduction is often a multigenerational affair. Focusing on conception and clinical encounters can obscure this, so we encourage studies of reproduction that look beyond the walls of the clinic or even the intended parents' home and consider what part their broader network of kin and other supporters plays in their reproductive imaginaries and realities. Furthermore, many studies of ART in the Global North focus on infertility related to later childbearing, but for many people around the world, secondary infertility is a pressing problem.

The array of RTs available to women (in particular – see Wilson, this volume) over their lifecourse creates endless decisions and scrutiny for those decisions – covering the clinic, the home, work, intimate relationships and leisure activities. Many RTs are associated together in clinical practice, both explicitly and implicitly – for example, foetal screening is often tied up with an assumption of