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"Can I take responsibility for bringing a person to this world who will be part of the apocalypse!?": Ideological dilemmas and concerns for future well-being when bringing the climate crisis into reproductive decision-making

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ABSTRACT

In the wake of the ongoing climate crisis and its negative effects on public health, it has been questioned by climate activists whether it is right to bring more children into the world. Moreover, according to previous scholarship, having one fewer child is the most high-impact lifestyle change individuals in developed countries can make in order to reduce greenhouse gas emissions. But do climate awareness and recommendations to have fewer children have any impact on how lay people reason around reproductive decision-making? In this paper, which is based on focus group discussions with people from different generations, we show how various and sometimes conflicting discourses on reproductive norms and responsibility are negotiated. Even though participants were highly aware of the ongoing discussions around the climate crisis, in the end it had little bearing on their decision to have children or not, and they justified reproduction through addressing other ways to contribute to a better world.

1. Introduction

In the past decade, it has become clear that overpopulation in combination with unsustainable use of the earth's resources is leading to climate change that will have devastating consequences for public health. The need for actions that make a difference has thus become more urgent, and we see a surge in climate activism, especially among young people. Today, many young climate activists express hesitance about having children in the future, because of the carbon footprint of reproduction as well as concerns about the well-being of future children (Schneider- Mayerson, 2021; Dow, 2016). According to two widely referenced articles, the most high-impact lifestyle change individuals in developed countries can make to reduce greenhouse gas emission is to have one fewer child (Murtaugh and Schlax, 2009; Wynes and Nicholas, 2017). Furthermore, bringing a new person to the world does not only have direct high-emission consequences, it also results in a carbon legacy, as the child will also become an emitter, and potentially create even more people (emitters) in the future (Richie, 2014; Rieder, 2016). Consequently, the politics of reproduction and public health have become intertwined with environmental politics (Lappé et al., 2019). However, the discussion about reproduction in relation to environmental issues is not new, but can be traced back to the 1960s (Schneider- Mayerson, 2021).

A common argument against individuals' responsibility for the climate is that it takes too many people to change their habits to make a difference, owing to the scale of the problem. The responsibility should therefore not be placed on the individual, but on industries and governments. Ethicist Travis A Rieder confronts this argument by scrutinizing the ethical principles of harm and justice. He concludes that if humans have moral obligations to *not* contribute to massive, systematic harms, act unjustly, or have children who will have bad lives, we should not have children at all or at least not more than two (Rieder, 2016). This is especially true for people living in high-income countries, who often emit more than hundred times more carbon oxide than people living in low-income countries. However, Rieder's conclusion is in turn criticized by Rebecca Kukla, who argues that the focus on individual choices hides larger, often gendered, structures and promotes a culture of individual blame and accountability (Kukla, 2016).

The issue of reproduction is apparently engaging environmental political actors and ethicists, but do climate awareness and recommendations to have fewer children have any impact on how lay people reason around reproductive decision-making? In this paper we explore

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how people of different ages discuss and justify their stance concerning reproduction in relation to their knowledge about climate change and overpopulation. We investigate how reproductive decision-making in the face of climate change is negotiated in relation to different and sometimes conflicting discourses on reproductive norms, environmental politics and responsibility, and gender in a Swedish context.

1.1. Climate awareness and reproduction

According to reports, most people wish to have children, and many view reproduction as a/the meaning of life (see e.g. Statistics Sweden, 2009). However, along with the development of contraceptive methods and gender equality, reproduction has increasingly become regarded as a choice, in terms of *whether*, *when* and *how* to have children. As a consequence, reproductive decision-making is often determined by factors such as economic and relationship stability, fertility awareness and access to assisted reproduction, and the perceptions of individual/couple readiness and wellbeing (Agrillo and Nelini, 2008; Alvarez, 2018; Bodin et al., 2021; Boivin et al., 2018; Gato et al., 2017; Mills et al., 2011). While fertility rates have decreased in many European countries in the past decades, the Swedish fertility rates have remained remarkably stable since the 1970s, despite the fact that people have their first child later in life (Hellstrand et al., 2020).

International research on how people reason around reproductive decision-making in relation to climate change and overpopulation is scarce, but the few existing studies report a common finding: it is mostly those who already have a general environmental concern who seem ready to change their reproductive behavior (Arnocky et al., 2012; Schneider- Mayerson and Leong, 2020). Other studies have found that the transition to parenthood makes people more concerned about the environment (Thomas et al., 2018; Milfont et al., 2020). According to a Swedish survey with more than 3500 participants, parents were significantly more worried than non-parents about climate change and its effect on future generations, and felt more guilty when doing things that they knew were damaging for the environment (Ekholm, 2020; Ekholm and Olofsson, 2017). This survey also showed that women (regardless of parenthood status) and people on the political left worried more than men (especially non-fathers) and people on the political right.

What people more specifically worry about, in relation to climate change/overpopulation and reproduction, has not been well explored. According to a Scottish interview study with environmentalists, however, participants were concerned with whether it was responsible to bring future generations into an unequal world where human actions have changed the natural world as well as the ability to reproduce (Dow, 2016). They were also worried that the reduced ability to reproduce would increase the use of medically assisted reproduction, and thereby contribute to using up already stretched resources. The environmental issues related to the reproductive technology industry has previously been highlighted by bioethicist Christina Richie (2014), who argues that it is an often-overlooked source of environmental degradation that adds to worldwide carbon emissions through the birth of more children. Since reproductive technologies are primarily used by high-resource individuals, the industry reproduces the most resource-demanding people.

Although the academic discussion around ethics of reproduction is vivid, for example as regards sex preselection, prenatal diagnosis, abortion, embryo transfer, adoption, and surrogacy (Kroløkke et al., 2015; Nilsson et al., 2020; Overall, 2013; Overall and Caplan, 2012; Whittaker, 2019), there is little academic research that investigates how people in general discuss reproduction in relation to climate change. Hence, the purpose of this paper is to explore whether, and if so how, people's reproductive reasonings are affected by such a worldwide crisis, and how people – from different generations – talk about the ethical and political aspects of having children in relation to their awareness about world conditions and environmental concerns. We will discuss how the participants talk about the moral obligation to act in a climate-friendly way and how it interferes with other social obligations, values and identities connected to norms and discourses around family, gender, and the meaning of life.

2. Material and methods

Data were collected through age-specific focus groups discussions (FGD), with people living in various parts of Skåne County, Sweden, between September 2019 and June 2020. FGD is a research technique where data is collected through group interaction around a topic determined by the researcher (Krueger and Casey, 2015; Halkier, 2010). The method is well suited for studies that aim to produce data on patterns around values and negotiations, and on social processes. The overall aim of the research project was to explore how reproductive decision-making has changed over generations and we therefore used a multiple-category design which allowed us to make comparisons in two ways; within as well as between age groups (Krueger and Casey, 2015). The main topic of conversation was reproductive decision-making and fertility, and "the world conditions" was one of the subtopics of the discussions [see Appendix: Questioning Route].

Participants were recruited to the study through an advertisement in social media and the university's website, as well as through the first author's personal and professional networks. Participants were also encouraged to invite their friends to the study (snowball sampling). The advertisement was directed towards people aged 15 and above, with and without (intention to have) children. The aim was to achieve a variety in the total sample with regard to gender identity, sexual orientation, family situation, occupations, socioeconomic background and ethnicity. However, the discussions were held only in Swedish, which excluded people who could not speak Swedish. In the end, the final sample has an overrepresentation of white, heterosexual, middle-class women.

Eligible participants were informed that the overall purpose of the study was to gain knowledge about how people of different ages reason around fertility and reproductive decision-making. They were also informed about how data would be collected and handled, that participation was completely voluntary and that the material would be deidentified and stored safely. The study was approved by the Swedish Ethical Review Authority.

We recruited 4–6 participants of approximately the same age to each focus group. This number is recommended based on the ideal that all participants could have eye contact, and to avoid any formation of subgroups (Halkier, 2010). However, in some cases one or two persons did not show up for the discussion, and therefore some FGDs only had three participants. FGDs took place in locations convenient to the group and lasted around 40–120 min (on average 76 min). Three of the discussions were conducted via video communication because of the COVID-19 pandemic. The first author moderated all discussions, and a colleague assisted as observer in larger groups. Some groups addressed the topic (the world conditions) spontaneously, while the remaining groups were directly asked about their views on reproduction in relation to the present world conditions. All discussions were audio recorded and transcribed verbatim. Fieldnotes were made during and after the discussions. Transcripts and notes were deidentified to protect the integrity of the participants, hence all names used in the paper are pseudonyms. Sociograms were not used in this study.

The material was analyzed with thematic analysis, a method for identifying, analyzing, and reporting patterns within data (Braun and Clarke, 2006). The analysis followed a stepwise procedure. First, data relevant to this particular study was extracted by the first author, forming a data set. Secondly, the data set was read several times, coded inductively and thematized by the two authors separately. Thereafter, the different interpretations of the data were discussed between the authors and the final themes were agreed upon. The analysis is, however, not a linear process where you simply move from one phase to the next, it is a more recursive process where you move back and forth as needed.

Our epistemological point of departure is constructionist and

poststructuralist; we see meaning as constructed through language and discourse, and since language is arbitrary and shifting, meaning is unstable. Thematic analysis conducted within a constructionist framework does not focus on motivation or individual psychologies, but seeks to theorize the socio-cultural contexts that enable the individual accounts (Braun and Clarke, 2006). The thematization was inspired by discursive psychology, as we see people's reasonings as ways of relating to various discourses (Edley, 2001; Wetherell and Potter, 1992). In particular, we were interested in the participants' reasonings, deliberations and opinions in relation to large discourses around environmentalism, reproduction, and gender. In order to understand how participants made sense of reproductive decision-making and climate change we used the concepts interpretative repertoires and ideological dilemmas. *Interpretative repertoires* are blocks of terms or metaphors used to talk about and describe events and objects, which build patterns across different people's talk. Identifying interpretative repertoires in the material helped us to understand the cultural context of a phenomenon, i.e. what can culturally be said or not said. They also aided us in understanding how participants dealt with the various *ideological dilemmas* they faced when discussing reproduction and climate change. Ideologies in this sense are lived; they are "composed of the beliefs, values and practices of a given society or culture" (Edley, 2001). When contrary and competing arguments are available simultaneously, ideological dilemmas emerge. Using interpretative repertoires becomes a way for people to deal with ideological dilemmas and solve them, at least temporarily, but as ideologies are dilemmatic at their core, the dilemmas cannot be permanently solved.

The paper is based on the discussions of 23 focus groups [Table 1], including a total of 98 persons aged 17–90 (mean age; 43). This means that the groups differ as to how close in time they are to the issue of reproductive decision-making, and that they are/have been "in reproductive age" at historically different times, which obviously affects their perspectives. Some groups consisted of complete strangers (n = 3), some of people who knew each other (n = 8), and some of a mixture of strangers and friends/colleagues/neighbors (n = 12). Sixty-four of the participants self-identified as women, one as gender fluid, and 33 as men. Half of the participants were parents (n = 49), 37 wanted children in the future, six did not want children and six were unsure.

3. Results

The discussions clearly showed that climate change in relation to reproduction is a burning topic across age groups, not only in the sense that climate change is a current issue but also in the way that the matter was described as "difficult", "sensitive" and "provoking". Several participants spontaneously initiated discussions on climate change in relation to reproduction, and also those who did not bring up the subject themselves were aware of the current discourse on climate change. Even if groups were asked by the moderator to reflect upon "the world conditions", they almost exclusively discussed climate change and overpopulation. Most had heard that having children is bad for the environment and many expressed that they suffered from 'climate anxiety'.

On the one hand, most participants were worried about climate change and were aware of the fact that having children has a negative impact on climate change. On the other, many participants had or wanted to have children and saw reproduction as the meaning of life. These opposite beliefs created an ideological dilemma for many participants, and the conversations centered around whether it was justifiable to have children or not, and to some extent around *how* to have children. Even though the awareness of climate issues was high, it was striking how little significance it eventually had in the reasonings around reproductive decision-making. Often, people found new ways to negotiate around and justify their wish to reproduce. In the following, we will present how participants in different ways handled the ideological dilemma related to climate change/overpopulation and reproduction.

Table 1
Characteristics of participants (n = 98) in various focus group discussions (FGD); age, genders, highest level of education or current education, occupation/profession and parental status.

FGD	Ages (years)	Gender (s)	Level of education	Occupation or profession	Are parents
1	17	Mixed	High-school	High-school students (vocational)	No
2	18	Female	High-school	High-school students (scientific)	No
3	17–19	Male	High-school	High-school students (vocational)	No
4	22–26	Female	University	University students	No
5	23–24	Mixed	Mixed	Students/Health care workers	No
6	25–26	Female	University	University students	No
7	26–27	Mixed	High-school/ vocational training	Blue collar workers	No
8	28–32	Female	University	Students/Health care workers	No
9	30–32	Male	University/ college	Teacher/Office holders	No
10	31–33	Mixed	University/ college	Students/Teacher	No
11	33–36	Mixed	University/ college	Students/Office holders	No
12	33–44	Female	University/ college	Health care workers	Yes
13	35–54	Mixed	University/ college	Health care workers/Teacher	Mixed
14	39–41	Female	Mixed	Office holders	Yes
15	49–57	Mixed	Mixed	Teachers/Health care workers	Yes
16	50–51	Male	Mixed	Teachers/Office holders	Mixed
17	50–59	Male	High-school/ vocational training	Blue collar workers/Office holder	Yes
18	62–66	Female	Mixed	Office holders	Yes
19	63–65	Female	University/ college	Teacher/Health care workers	Yes
20	67–75	Female	Mixed	Teachers/Office holders	Yes
21	70–90	Female	Mixed	Teachers/Office holders/Health care workers	Yes
22	71–74	Male	Mixed	Teachers/Office holders/Blue collar worker	Yes
23	77–83	Female	University/ college	Teachers/Office holders	Yes

3.1. Selfish or caring?

Participants mainly dealt with two overlapping issues when discussing reproduction in the face of climate crisis; they talked about how child-rearing negatively impacts climate change, and they worried about future children who would grow up in a world that will be negatively affected by climate change. A doomsday feeling dominated the early phase of the discussions around "the world conditions", and participants worried that any children they may have would get a worse life than themselves. This was captured by one man in a group of young adults asking *"Can I take responsibility for bringing a person to this world, who will be part of the apocalypse!?" [FGD10]*. What this (post)apocalyptic life would be like was never specified.

When the issue of climate change was brought up in the conversations the participants went from discussing reproduction as a matter of "having children" to talking about "bringing children to this world". This linguistic change highlights how reproduction in this context is not seen only as a personal decision but also as something that impacts and

is impacted by larger circumstances, framing the issue as more political. The conversation also more explicitly centered on morality, and selfishness was contrasted with caring, especially among female participants. Several participants talked about having children as selfish, when considering what world the child would grow up in. Having children as a project for self-realization was also considered egotistical. But *remaining childfree* could just as well be seen as selfish, especially for women. It is well-established that motherhood is still positioned at the core of femininity, and women who choose not to become mothers tend to be viewed as selfish and less of a proper woman (Gillespie, 2000; Rodgers et al., 2021). Young female participants who did not want children described how their choice was often met with resistance and challenged by others. One of them said that "*You cannot discuss childfreedom and the environment online without being told to 'take your own life instead, and do the planet a favor in that way'" [FGD8]*. Although it was not her main reason to remain childfree, this woman used the climate as a powerful argument to justify her choice.

Women who were unsure about their reproductive intentions also juggled the climate benefits with the stigma of remaining childfree. A group of female university students discussed this issue:

> Malin: Now I do not speak for the entire Swedish population but I have also been told that it is selfish, that you can't take responsibility, that you only care about yourself and don't like to contribute to humanity and so on. But on the other hand, I'm very divided on whether I want to have children or not. I really do not know.
>
> Pernilla: Contribute to humanity, that's the dumbest argument I've ever heard!
>
> Anna: There's already a lot of people anyway.
>
> Pernilla: It's really overcrowded […] You can say that you are doing something good for the environment!
>
> Malin: Exactly, it's climate smart [chuckles] No, but I actually do not know if I want or not want [children], because then you think, well it would have been nice with a family, because I also have the dream of a family, security and love and my own little clique and so on. And then I think about the future, well, will it be good to have a family in the future, or do you want to go other ways? You can adopt, because we are overpopulated here, and there are many children who may not have parents. Or there are other alternatives, you can have foster children, or be an on-call family if you just want children sometimes / … / so I think a bit in all directions actually. *[FGD4]*

In this discussion, Malin throws light on her indecisiveness around having children through the interpretative repertoires discussed above: remaining childfree for the sake of the climate and childfree women as selfish. When describing how she dreams of a family in the future, Malin draws on social norms for family building, an interpretative repertoire that places having a (nuclear) family of one's own as part of a good life.

The focus group discussions confirmed that to reflect upon "the world conditions" in relation to reproduction is not something new. While the younger participants reflected on whether to take climate change into account in their reproductive decisions, the oldest participants had thought about other aspects. They talked about the post-war period as an optimistic and carefree era, but that attitudes had started to change in the 1960s when people learned about the Vietnam war, overpopulation, poverty and famines. One woman, who had been active in the political protests of 1968, said that, at that period in time, *"you ought almost to be ashamed if you had children, since there were so many to care for already" [FGD23]*. Still, all of them had had biological children, but some adopted a third or fourth child as a way to contribute to a fairer world. If they had been young now, they said, they might not have chosen to have children given the current world conditions.

3.2. Assets and debts: other ways of contributing to a better world

When discussing reproduction in relation to climate change, participants often highlighted actions that affect the climate in terms of assets and debts, which invokes an economic and consumerist discourse that suggests that contributions that counter the climate change have a value that can be used for trading. One participant half-jokingly said that if he ends up not becoming a parent, he could buy a sports car instead. Another participant used childfreedom as an excuse to fly: *"Well, when people say, 'Are you really flying to Berlin just for the weekend?', I think like this: I have no children! Why can't we fly to Berlin and save some time?" [FGD13]*. Statements like these picture the childfree as people with less environmental debt.

Despite the negative climate effects, refraining from parenthood was not presented as a viable option to most participants of reproductive age. The economic discourse became a way for them of dealing with this dilemma. They emphasized how their urge to have children stood in the way of "doing the right thing", but if they did not have children, their lives would not have any meaning. A mother of three in a group of 30-year-olds, said *"There is bad conscience, but if I had not had children, it would not have made sense to do so much [about the climate]. It gives me reason to try" [FGD12]*. She argued that it is her children that give her a reason to contribute to a better environment, indicating that she would not have worked for a better environment had she not had any children. Other participants discussed how to have children in a more responsible way:

> Elsa: When my partner and I have talked about how many children we want, we have somewhere landed in that I want more than one child because I grew up as a single child and I want to give my child a sibling because I did not get that, but at the same time we have somewhere limited ourselves to the fact that we are two people, then we will have two children so that we will not increase the number of people in the world but we keep it where it is. I do not mind people who want more children, but there is probably a bit of this climate anxiety, now we just continue as it is, we do not increase [the population]. Maybe that calms the climate anxiety a bit. *[FGD4]*

Several participants considered having fewer children than they originally wished to have, to reduce their environmental debt. These participants generally believed that two is a good compromise between giving the child a sibling and not contributing to overpopulation. Other participants shifted focus and solved the ideological dilemma by criticizing the normative, consumerist lifestyle that often comes with having children. They argued that it can be justifiable to have children if you live a more climate-friendly family life, also known as *green parenting* (Schneider- Mayerson, 2021), for example by eating a plant-based diet and organic food and shopping second-hand. This sometimes led to a discussion about how much responsibility that could in fact be placed on individuals. It was argued that it is much better to target the major industries and have an economic system that distributes resources more evenly, rather than to stop having children. In a group of young women without children, the discussion became clearly political:

> Shirin: For my part, I think there are other ways, than not having children. I think of the big companies, the aviation industry, the emissions. I think there are other ways to go, that we can reduce diapers if we are going to talk about children, that there are other ways to do it. There are other parts of the world where diapers are not used. I myself grew up during a war and there we did not use diapers, the women did not even have sanitary napkins, so it is possible to do things in other ways, you get to be creative. But I do not think that, not giving birth to children, it may be one way but I do not think it is the most fruitful way. I think we should strike upwards.

Alice: Mm I think a bit like you. I have not escaped the debate on this particular issue, on children and the climate, and I have struggled and thought it is quite difficult, because I am still a person who talks a lot about and advocates climate-friendly alternatives and thinks it is a very very important issue. But when it comes down to it, I have not felt that this is something I want to compromise on. I have experienced that it has been quite difficult, to advocate like this "You have to compromise on things that you yourself hold very high", but on this issue, it does not feel as obvious to me. So, I still think it is hard, but as you mentioned, I have also felt that it is such a complex issue but the solution is not to stop having children, there are many more factors that matter. Without buying myself free by saying that "I recycle so then I can do other things as well", I still try in some way to put it in some bigger perspective and think that there is a lot more [than not having children] you can do too [for the climate]. *[FGD8*].

In Alice's and other participants' stories, different ways of contributing to a better world are balanced against each other, and participants allow themselves to do things that negatively impacts climate change if they are also doing something that has a positive impact. By drawing on an economic and consumerist discourse they deal with the ideological dilemma between taking responsibility for climate change and having children by positioning contributions to the environment as assets and debts in a zero-sum game.

3.3. Reproduction and climate change: not in the same equation

Other participants handled the ideological dilemma between showing climate awareness and wanting to have children by arguing that it is not reasonable to include reproduction in the equation at all. These participants discussed reproduction and climate crisis as completely different and (ethically or politically) unrelated matters:

Sam: [It] hasn't affected me at all, I would say. No but I can't, I just don't connect these issues. Children are one bubble, climate is another. I know that having children is the worst thing you can do for the climate, but I don't give a damn about that. It's like, climate is what actions I perform, if I fly or take the train, that is how I view it, but children are not in that equation. *[FGD21]*

Kim: I can't see that "OK, I am doing the planet a favor now", by not trying to have a child. It does not feel reasonable. We can't all just stop, what will be the meaning of life if everyone just stops? Then I think the debate has lost focus in some way. You have to stop flying first, and then we can think about this, if it is important that humans remain. *[FGD9]*

Sam draws on the economic and consumerist discourse that participants in the previous section used to justify their urge to reproduce, but does it in a different way. Instead of seeing having children as part of the assets and debts, Sam positions reproduction outside the zero-sum game. Kim discusses reproduction in a similar way, without explicitly using economic terms, but also introduces another interpretative repertoire: children as the meaning of life.

This interpretative repertoire is linked to the idea of reproduction as a strong urge, impossible to resist. This idea was invoked in the discussion in a group of men in their 70s, who expressed skepticism about climate awareness as the true reason behind other people's decisions:

Olle: Well, many people say: you should not have children in our time.

Nils: They have always said that [chuckles]

Olle: Now, that's ridiculous, you're talking bullshit.

Nils: But people have always discussed this, in all times, it has always been bad times and some refrain from having children!

Paul: Well, but then you actually don't want to [have children] / … / It is just a bad excuse; in that case you are not motivated enough if you say that it is the wrong time to have children. If you want children, then that is a stronger force than then the current times. *[FGD22]*

This discussion describes the urge to have children as inherent and something one is inclined to follow, since it is "a stronger force", regardless of external circumstances. In a similar way, a new mother dismissed her husband's climate-related arguments against having children as empty talk, concluding that *"he had to realize that it was mostly theory" [FGD14]*. The dominant and long-standing position of the discourse that frames the urge to reproduce or not as stronger than the climate threat was also supported by the fact that several participants, across age groups, responded "no" when asked whether thoughts of the environment had affected their plans to have (or not have) children.

The quote above also shows how the discussion of reproduction in relation to world conditions is not new, which was confirmed by a group of women in their 60s. These women acknowledged the historical continuity of the feeling that the world is doomed, especially when being young, but they also highlighted how it is a feeling that passes when maturing.

3.4. Who is going to make the most difference?": local or global, us or them

It was quite common during the discussions to refer to "other people" who would refrain from parenthood because of climate awareness. Through referring to "other people", the participants showed climate awareness, but also placed this practice somewhere else, thus distancing themselves from it.

Individual decisions were not only compared to other people's reproductive decisions but also related to local and global perspectives, bringing foreign policy to the table. At several occasions, a clash occurred when people discussed whether issues around reproduction should be viewed from a local or global perspective, for example when reflecting upon overpopulation in general and in relation to decreasing birth rates in the Global North. A group of male high-school students compared Sweden to other parts of the world:

Jake: I think it's a bit silly […] that people would advocate for that here, where the least number of children is being born, where each family has perhaps one or two children, and then in another part of the world they might have five or six. I mean, Sweden has 10 million inhabitants and China 1.4 billion, what should be seen as most important?

Kevin: Like, who is going to make the most difference?

Lucas: It feels so, like, pitiful, a small country struggling to do more than we can. Because if we think more generally, our emissions are low, we do the least harm, there are the others that need to [change]. *[FGD3]*

This conversation introduces an interpretative repertoire that frames Sweden as a small environment-friendly country that does not need to change. Reproduction in Sweden was hence seen as insignificant in a global perspective. Also, some participants suggested that we (Swedes) need not worry that much about the future since we belong to a resourceful society, and therefore *our* children are likely to have a good life either way. A new mother further argued that it would take so many people who decided not to have children for it to make any difference, which was not seen as realistic, and therefore she would not let the climate hinder herself either. Instead, she, and several others, were more focused on the local environment and to offer their child a safe space to grow up in. Hence, by drawing on interpretative repertoires that allow them to see reproductive choices in a larger perspective these participants concluded that there is no need to change.

In contrast, other (usually older) participants were critical of recent attempts to increase birth rates in the Nordic countries and argued that we have to take care of the children who already exist and welcome people who need to flee their countries because of war and climate change. Encouraging people to move to less populated areas was seen as one way to solve overpopulation. Several participants drew on an interpretative repertoire that frames the lifestyle of people in the Global North as having major impact on climate change. Paul was one of these participants, saying: *"What kind of people become too much for the Earth? Who wear the most on everything? That's us, it is the group of people that we belong to that is too much." [FGD22]* Contrary to the discussion among the male high-school students where global perspectives were utilized to justify status quo in Sweden, in these conversations global perspectives were used to urge people in the Global North to take responsibility for their carbon footprint and contribute to a better world. Paul's argument was not, however, unchallenged by his peers, and the discussion became quite heated as the discussion continued.

The discussions around local and global perspectives often became political, displaying different ideological views on caring and responsibility, as well as moral dilemmas. The clash between these interpretative repertoires created tension in the groups but also caused ideological dilemmas for individuals. In a group of women in their 60s this dilemma was described as an "ethical collapse or crash in the head" and the women did not know whether to think globally or not:

> Inger: Is having children a human right? I do not think it is a constitutional right in any case … But that is easy to say when you already have your children [chuckles].
>
> Kerstin: Yes, sometimes you can feel that you do not have the right to an opinion when you already have children, but I sometimes think, when you hear how many ways you can have children today, surrogate mothers and all these ways … I'm happy if people can have children if they want children, it goes without saying that I think so, but at what cost? And who will pay for it? In relation to other things that are needed in our society.
>
> Inger: There is some kind of ethical collapse or crash in the head when we simultaneously discuss [the right to children and] environmental issues and how we should survive in the world, and knowing that we must reduce childbirth globally. Sure, not too many children are born here [in Sweden], but in other parts of the world, and it becomes so difficult to combine this with the idea that children are to be born at any cost … But maybe you should not think globally? I do not know … *[FGD19]*

This group also introduced another interpretative repertoire: having children as a human right. They discussed the financial dimension of this interpretative repertoire ("Who will pay for it?") and suggested that the increasing use of reproductive technology in the Global North contributes to overpopulation globally. This group did not use the interpretative repertoire of children as a human right to solve an ideological dilemma but invoked it to acknowledge the complexity of the issue of reproduction in the face of climate change. The participants indicated that having children at any cost could be seen as slightly selfish and that resources could be used better elsewhere, but at least Inger is unsure of whether to see reproduction in a global perspective or not. As Edley (2001) points out, the dilemmatic nature of ideologies tends to generate argument and deliberation rather than resolution, and the same ideological dilemmas can rumble on through a conversation. In this conversation, Inger's use of words like "collapse" and "crash" as well as the final words in the quote above—"I do not know …"—indicate that the ideological dilemma remains unsolved.

3.5. *I am not denying the climate crisis, but …": the climate as a less pressing problem*

Not all participants had a gloomy outlook on the future. They did not deny the climate crisis but argued, as we have shown above, that this is not the first crisis in human history; bad things have always happened and we cannot walk around being afraid all the time. Men and young people most often argued in this way. A participant in a group of male high-school students said *"I am not denying the climate crisis, of course the ice is melting and the sea levels are rising, but I think we can save it. It is just about, if everyone does something small, I think we will be able to save it. It will take time, but … "[FGD3]*. Shortly after, he denied that the climate crisis would have any effect on his reproductive intentions.

A group of female high-school students also talked about the climate as a very important issue, and they had read about people who refrained from parenthood because of this, but they were in fact not worried about the future themselves. One of them admitted:

> Lina: I am not afraid of the future in that way. You are not really allowed to say that aloud, but I'm not. I don't know, I'm not thinking in that way, I don't have that kind of climate anxiety. Many have it. I don't. *[FGD2]*

Lina here highlights a dominant discourse where young people are expected to be concerned about the climate, and she seems slightly ashamed to confess that she is not worried. A participant in a group of men in their fifties, who had had children at a young age, could relate to this less worried mindset of youngsters. To him, the outside world perspective came to him as he matured:

> Jens: For me, maybe it's something I started to think about when I grew up, when I got older and more brooding. Those thoughts have come now. At the same time, I think it is changing, it's different times now / … / when I became a father, I just honked the trumpet and went for it.
>
> Moderator: What do you think of your children then? Those who are about the age you were when you had children, do you think they care about the climate?
>
> Jens: There I would like to answer "Yes they do" and say that they are so conscious and socially sympathetic that they probably have such thoughts, but I must say that they do not [chuckles] It is not their thing. They probably live for the day. [FGD16]

The climate crisis seemed to be an abstract threat to many young people, whose consequences it could be hard to grasp. The ongoing COVID-19 pandemic, on the other hand, was brought up as a more concrete threat. One young man said that the pandemic was more likely to affect his reproductive decision-making as he was afraid that he might lose his job owing to the recession, explaining that *"If I am in a situation where I am looking for a job, I personally do not feel that I have the stability to bring a little mini-me to the planet" [FGD9]*. The threat of financial problems in the present seems to be easier to relate to than a more abstract and global threat of climate change in the unforeseeable future.

3.6. *Giving birth to the new Greta: faith in a new generation*

Even though the young people in our sample were not highly worried, many adult participants put a lot of faith in the younger generations. They hoped that a younger generation would give birth to a new Greta Thunberg, Nelson Mandela, Bill Gates, or someone who in the future would solve the climate issue, or other global crises. Even if they said this half-jokingly it was clear from the discussions that this faith could even be a reason to *have* children. When asked whether the climate had affected their reproductive choices, a man in a group of people in their mid-twenties responded:

> Simon: Yes, we [me and my partner] have talked about the need for new generations who think in the right way, and I believe, or we have talked a lot about that, well, if we raise the younger generation in the right way things will go better. We need a generation after us that, well according to me and my partner, needs to be raised according to our values. I feel like that's some hope for the future. So I guess it affects me in the opposite way: to counter the negative through giving birth to something positive, perhaps. *[FGD7]*

Simon was not the only young participant who had faith in a new generation; several others said things like *"If we are lucky and are good parents, we will bring a bunch of environmental activists to the world" [FGD8]*. Transferring the responsibility to the next generation became a way for younger participants to solve the ideological dilemma between wanting to have children and trying to contribute to the environment. But faith in the younger generation was found across age groups, and the older participants sometimes referred to the young people today as more aware of climate issues. Several of the oldest participants also believed that young people took climate change into account when thinking about having children:

> Berit: Something I have thought about is this with the climate and how young people reason now. Do you dare to have children when you are in this situation as we are now? I think it is terrible for them to be able to take a stand on that. Because we did not have those problems.
>
> Gunilla: You did not have a thought about it.
>
> Berit: No, you did not … No, I think it is the worst thing, when you think of your children and grandchildren, do they dare to have children or is it over with this family to which I belong? *[FGD21]*

Older participants believed that the younger generations took climate change into account before having children, but, generally, the faith in younger generations was not linked to an expectation that they would save the world through reduced childbirth, but rather that they would solve the crisis in some other innovative way. Meanwhile, the high-school students in our sample unanimously said that climate change did not have any impact on their decision to become parents in the future. Participants in their 20s and 30s were more concerned about climate change, but it did not stop them from having or wanting to have children.

4. Discussion

In this study, we have shown how people from different generations negotiate around reproductive decision-making in relation to global issues, and particularly the climate crisis. The awareness of the climate crisis was widespread among participants across age groups; no one had escaped the media headlines and how climate issues had risen on the political agenda, and most had some level of climate anxiety. The discussions brought out apocalyptic and sometimes postapocalyptic views of climate change (de Moor, 2021), but also a more optimistic view on the future. Many participants were aware of the carbon footprint of reproduction, and this knowledge created an ideological dilemma for those who had or wanted to have children, especially in the younger age groups. In their attempts to solve the ideological dilemma of having children in a time of climate change, the participants pushed the dilemma in many directions and drew on a variety of interpretative repertoires. Discourses that emphasized children as the meaning of life or the strong urge to reproduce were given more weight than the discourse that children are bad for the environment. Hence, our main conclusion is that the climate crisis does not seem to have a major impact on lay persons decision to have children or not. Participants found ways to justify their wish to have children (or not) by drawing on different interpretative repertoires and negotiating gendered expectations and reproductive norms. Moreover, our study shows that not only age groups that currently consider reproduction or that recently had children reason around family building in relation too environmental issues. Many of the older participants pointed out how these discussions were not new, and some had taken world conditions into account in their reproductive decisions during the 1960s and 1970s. Back then, the issues were mainly pollution and overpopulation, and international adoption was seen as an act of solidarity with the Global South. Today, the young face melting ices, rising sea levels and extreme weather, problems that they did not consider could be solved by childlessness or adoption. Still, a large part of young people's climate rhetoric could be traced back to political discussions from the 20th century.

In the discussions, there was a tension between individual reproductive autonomy and the collective responsibility for the common good and a common future. Ethicist Thomas N. Rieder (2016) describes such ideological dilemmas as a balance between ethically "competing goods". The competing goods can be other moral requirements, but it can also be things like pleasures and joy that make life exciting and worth living. In this study, we can see that the view of children as a/the meaning of life becomes a strong competing good. This obviously brings the dilemma to another level. Is it ethically justifiable to deprive people of their reason to live, in order to (potentially) save the climate? And as several participants wondered, for whose sake are we saving the climate, if not for our children? Participants who had or wanted to have children tried to find a balance between ethically competing goods, through living a more climate-friendly family life or by having fewer children (Schneider- Mayerson, 2021). In this way, they seemed to believe that they could reduce their moral debt.

Participants who did not have or want children balanced competing goods, too. Some indicated that being childfree could allow them to do other things that would bring them joy but increase their carbon footprint, such as doing more airplane travel. Hence, while people who decide to have children are bound to act as environment-friendly as possible to compensate and reduce their debt, people who decide not to have children (for other reasons than the environment) seem to gain some sort of imaginary climate voucher that can be used for travels. For some women in our study, the climate-friendly aspects could also be a way to justify being childfree. The rational childfree woman is usually not viewed with gentle eyes, since remaining childfree as a woman, and to *not* nurture children, challenges "the core of normal, healthy feminine identity" (Gillespie, 2000). However, remaining childfree *out of concern* for future generations could be regarded as an act of caring, and thus making women who are childfree by choice intelligible as "real" women.

In the discussions around how many children one should have, our participants negotiated climate change and reproduction in relation to reproductive norms. On the one hand, participants argued that one should have as few children as possible, and, on the other, that it is not healthy to be a single child. Giving a child a sibling can be seen as a way to live up to norms of good parenthood, as the needs and interests of the child are emphasized (Eldén and Anving, 2016; Forsberg, 2009), but it also reproduces the nuclear family norm. Here, the moral requirement of being a good parent and the rewards associated with following norms around the nuclear family, femininity and pronatalism become competing goods in the complex ideological dilemma that having children in a time of climate change is. However, by having two children, participants could confine to the family norm and simultaneously avoid contributing to population growth, which appeared to solve the dilemma.

The participants also discussed their own responsibilities in relation to others', both locally and globally. They were aware that humans need to use less of the earth's resources, but their focus was on the local environment and foremost on questions of security (e.g., a safe neighborhood), unrelated to climate threats. Several participants talked about the obligations of people living in the Global North and Global South respectively. While some were aware that people in the Global North consume more of the earth's resources and therefore believed that we have the responsibility to change, others argued in accordance with the

concept of causal impotence (Rieder, 2016), saying that we (in the Global North) are too few to make a significant difference and that we do not need to worry so much about the consequences since the crisis will not affect us as much as it will affect people in the Global South. To add reproduction to the individual responsibility for the climate was therefore rejected as "unreasonable" by some.

To conclude, the participants in our study described the wish to reproduce (or not) as stronger than the threat of climate change and overpopulation, and they found various ways to ethically and sometimes politically justify reproduction. Different moral requirements (like being a good parent) as well as the rewards associated with following norms around the nuclear family, gender and pronatalism were brought into the complex dilemma of having children in a time of crisis.

Credit author statement

Maja Bodin: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Validation; Writing – original draft; Writing – review & editing. Jenny Björklund: Conceptualization; Formal analysis; Validation; Writing – original draft; Writing – review & editing.

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Appendix A. Supplementary data

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References

Agrillo, C., Nelini, C., 2008. Childfree by choice: a review. J. Cult. Geogr. 25, 347–363.
Alvarez, B., 2018. Reproductive decision making in Spain: heterosexual couples' narratives about how they chose to have children. J. Fam. Issues 39, 3487–3507.
Arnocky, S., Dupuis, D., Stroink, M.L., 2012. Environmental concern and fertility intentions among Canadian university students. Popul. Environ. 34, 279–292.
Bodin, M., Holmström, C., Plantin, L., Schmidt, L., Ziebe, S., Elmerstig, E., 2021. Preconditions to parenthood: changes over time and generations. Reprod. Biomed. Soc. Online 13, 14–23.
Boivin, J., Buntin, L., Kalebic, N., Harrison, C., 2018. What makes people ready to conceive? Findings from the international fertility decision-making study. Reprod. Biomed. Soc. Online 6, 90–101.
Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qual. Res. Psychol. 3, 77–101.
de Moor, J., 2021. Postapocalyptic narratives in climate activism: their place and impact in five European cities. Environ. Polit. 1–22.
Dow, K., 2016. What Gets Left behind for Future Generations? Reproduction and the Environment in Spey Bay, Scotland, vol. 22. Journal of the Royal Anthropological Institute, pp. 653–669.
Edley, N., 2001. Analysing masculinity : interpretative repertoires, ideological dilemmas and subject positions. In: Discourse as Data. Discourse as data London, 2001.
Ekholm, S., 2020. Swedish mothers' and fathers' worries about climate change: a gendered story. J. Risk Res. 23, 288–296.
Ekholm, S., Olofsson, A., 2017. Parenthood and worrying about climate change: the limitations of previous approaches: parenthood and worrying about climate change. Risk Anal. 37, 305–314.
Eldén, S., Anving, T., 2016. New ways of doing the 'good' and gender equal family: parents employing nannies and Au pairs in Sweden. Socio. Res. Online 21, 44–56.
Forsberg, L., 2009. Involved Parenthood: Everyday Lives of Swedish Middle-Class Families. Dissertation. Linköping University, Department of Child Studies.
Gato, J., Santos, S., Fontaine, A.M., 2017. To Have or Not to Have Children? that Is the Question. Factors Influencing Parental Decisions Among Lesbians and Gay Men, vol. 14. Sexuality Research & Social Policy, Berkeley, pp. 310–323.
Gillespie, R., 2000. When no means no: disbelief, disregard and deviance as discourses of voluntary childlessness. Wom. Stud. Int. Forum 23, 223–234.
Halkier, B., 2010. Fokusgrupper. 1. Uppl. Liber, Malmö.
Hellstrand, J., Nisén, J., Miranda, V., Fallesen, P., Dommermuth, L., Myrskylä, M., 2020. Not Just Later, but Fewer: Novel Trends in Cohort Fertility in the Nordic Countries, 0 edition. Max Planck Institute for Demographic Research, Rostock.
Kroløkke, C., Myong, L., Willum Adrian, S., Tjørnhøj-Thomsen, T., 2015. Critical Kinship Studies.
Krueger, R.A., Casey, M.A., 2015. Focus Groups: a Practical Guide for Applied Research, fifth ed. SAGE, Thousand Oaks, California.
Kukla, R., 2016. Whose job is it to fight climate change?: a response to Hickey, Rieder, and Earl. Soc. Theor. Pract. 42, 871–878.
Lappé, M., Jeffries Hein, R., Landecker, H., 2019. Environmental politics of reproduction. Annu. Rev. Anthropol. 48, 133–150.
Milfont, T.L., Poortinga, W., Sibley, C.G., 2020. Does having children increase environmental concern? Testing parenthood effects with longitudinal data from the New Zealand Attitudes and Values Study. PLoS One 15, e0230361.
Mills, M., Rindfuss, R.R., McDonald, P., te Velde, E., 2011. Why do people postpone parenthood? Reasons and social policy incentives. Hum. Reprod. Update 17, 848–860.
Murtaugh, P.A., Schlax, M.G., 2009. Reproduction and the carbon legacies of individuals. Global Environ. Change 19, 14–20.
Nilsson, E., 2020. Precarious pregnancies and precarious products. In: Griffin, G., Leibetseder, D. (Eds.), Bodily Interventions and Intimate Labour, first ed. Manchester University Press, pp. 113–130.
Overall, C., 2013. Ethics and Human Reproduction: a Feminist Analysis. Routledge, Abingdon, Oxon.
Overall, C., Caplan, A.L., 2012. Why Have Children?: the Ethical Debate. MIT Press, Cambridge, UNITED STATES.
Richie, C., 2014. Green" reproduction, resource conservation, and ecological responsibility. Worldviews 18, 144–172.
Rieder, T.N., 2016. Toward a Small Family Ethic. Springer International Publishing, Cham.
Rodgers, J.A., 2021. Contextualizing the choice to be childfree. In: Cummins, H.A., Rodgers, J.A., Dunkelberger Wouk, J. (Eds.), The Truth about (M)otherhood: Choosing to Be Childfree. Demeter Press, pp. 11–26.
Schneider-Mayerson, M., 2021. The environmental politics of reproductive choices in the age of climate change. Environ. Polit. 1–21.
Schneider-Mayerson, M., Leong, K.L., 2020. Eco-reproductive concerns in the age of climate change. Climatic Change 163, 1007–1023.
Statistics Sweden, 2009. Demographic Reports 2009:2, Having Children or Not? Results from a Questionnaire Survey about Women's and Men's Attitudes towards Having Children. SCB, Örebro.
Thomas, G.O., Fisher, R., Whitmarsh, L., Milfont, T.L., Poortinga, W., 2018. The impact of parenthood on environmental attitudes and behaviour: a longitudinal investigation of the legacy hypothesis. Popul. Environ. 39, 261–276.
Wetherell, M., Potter, J., 1992. Mapping the Language of Racism: Discourse and the Legitimation of Exploitation. Harvester Wheatsheaf, Hemel Hempstead.
Whittaker, A., 2019. International Surrogacy as Disruptive Industry in Southeast Asia. Rutgers University Press, New Brunswick, New Jersey.
Wynes, S., Nicholas, K.A., 2017. The climate mitigation gap: education and government recommendations miss the most effective individual actions. Environ. Res. Lett. 12, 074024.