Future Environment and Family Planning: Is It a Concern?

MSc Environmental Economics and Climate Change

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Disclaimer

Part of this essay, I have included a section on a previous project that I have submitted for the course MY421 Qualitative Research Methods. The section is a summary of the project which I have submitted for MY421, which includes aim, methodology, and conclusions. This dissertation has similarities compared to the previous project; however, the aim and research questions are different. The previous project focused on understanding, how people perceive the environment and or climate change, how would people perceive a limiting birth policy, and options to fight climate change. This dissertation focused on how people construct family planning decisions, how people perceive future environments and or climate change, and how people perceive adoption. The overlap in research questions in these two essays is the theme on exploring perceptions of environmental changes and/or climate change. Without the central component of climate change, both projects would cease to exist. The dissertation differs such that it uses both in-person interviews and email interviews. Email interviews are offered for people who felt uncomfortable to do it in-person or do not have time. Besides the overlapped literature on climate change and population, the dissertation also focused on the economics of population.

Introduction

Dan Brown's book (2013), *Inferno*, chronicles the famous Professor Langdon, from *the Da Vinci Code* (Brown, 2003), trying to save mankind from an unknown biohazard weapon. The weapon was designed as a vector virus which could randomly genetically modify a third of the human population into infertility. The main reason why the antagonist has done so is to address the overpopulation issue, and by spreading the virus, a third of human population would become sterile, thus reducing the amount of people being born in this world. Some might believe that the method described in the novel is inhumane and totalitarian, but it also reflects the intricate difficulty of the overpopulation issue.

Overpopulation issues are filled with ethical and moral dilemmas. In one extreme, there was the one-child policy in the People's Republic of China to curb its own population between the years of 1979 to 2015 (Attané, 2016). True to its name, the one-child policy allowed families to have one single child. In essence, the policy cuts the next generation in half. However, the one-child policy is plagued with social problems. One of the problems resulted from the policy is a biased sex ratio from the new born babies. This is because in Chinese culture, there is a tendency to favour males rather than females (Hesketh et al., 2005), which has also spawned a trend in abortion according to the biological gender of the baby.

On the other end, there were also cases in history where sterilization was forced upon individuals. In the United States, there was the case of 1907 Eugenics Law in Indiana where sterilization was performed upon inmates that could not be mentally improved (Reilly, 2015). This was done because back then, people believed criminal activities are hereditary. Even until recently, there are still cases of coerced sterilization in some parts of the world targeting minority groups in countries like China and India (Reilly, 2015). This forced sterilization, often against the individual's wishes, is to meet the specific quotas of childbirths in China (Amnesty International, 2010).

Ecopsychology is defined as, by the Australian Psychological Society, an interdisciplinary study between people and their surroundings (APS, 2018). Commonly this

field of psychology has dealt with the immediate effect of the changing environment with regards to people, for example, Seasonal Affective Disorder, but lately, there has been additional research on how climate change has affected humans psychologically. Sally Gillespie (2014) studied the impact of psychological health with people who felt affected by climate change. Some of her interviewees expressed that because they are extremely affected by climate change, they will not have children (p. 59); in other words, the participants felt that because of how much the environment is changing and their perceived visions of future are negative, they do not want to bring a child into this world. This calls into question why people feel this way and how relevant is the future environment with family planning decisions today?

The main research question is, 'How do people factor future environmental changes into family planning decisions?'. This question evokes several sub-issues, such as: What do people take into consideration when planning a family? How do people think of environmental changes? How might adoption be a viewed as a substitute to conception? These sub-questions help to further shape the main research question by pulling apart the finer details with regards to the changing environment and the factors in family planning and the possibility of adoption.

This paper aims to explore the relationships between family planning, adoption, and environmental changes. The paper also aims to understand further how climate change is perceived and the perception of climate change relates to the population issue. This paper is not intending to prove or disprove the objective facts about climate change or family planning but rather to create an initial understanding of individuals' subjective views on the topics in relation to their futures. The next sections will include a literature review on economic theories of population, family planning, and climate change, a brief synopsis of previous related research, methodology of the research undertaken, findings from the interviews, and discussions and limitations.

Background Information

According to the Environmental Kuznets Curve, as per capital income increases, environmental degradation will continue to increase until it hits a turning point and then starts decreasing (Tietenberg and Lewis, 2016). This curve is based on the assumption that as society progresses and has passed through various stages of growth, there will be a turning point such that environmental degradation will start to decrease. Although the empirical evidence for the Environmental Kuznets Curve is still contested (Dinda, 2004) (Perman and Stern, 2003), the theory of such curve is novel and still currently included in textbooks (Tietenberg and Lewis, 2016).

The Environmental Kuznets Curve stemmed from the original Kuznets Curve which is the inverse U relationship between income and inequality. The idea of the inverted U relationship has also spurred investigations with other economic factors, such as trade liberalization with inequality. In a paper by Dobson and Ramlogan (2009), the two authors examined the relationship between inequality and trade openness in Latin American countries. The authors found that there is an inverted U relationship between the change in Gini coefficient and the change in trade ratio. The authors have advised that the Latin American countries should continue with liberalising trade, but at the same time pursue redistribution policies to tackle with the early disadvantages of trade.

A recent study by Valli and Saccone (2011), examined the relationship between the growth rate of population and the growth rate of GDP per capita. Their results showed that there exists an inverted U relationship between the growth rate of population and growth rate of GDP per capita. This means that as a country is getting wealthier, the expected rate of growth for the population would first increase, reaches a turning point, and then decrease. This particular curve is interesting because it postulates the possibility that the population growth will decrease as society becomes wealthier after reaching the turning point. Valli and Saccone (2011) have attributed this due to the aging population and limited household expenditures.

In relation to population, Thomas Malthus has written a population theory called the Malthusian Population Trap. The Malthusian Population Trap is defined as "…population increase was bound to stop because life-sustaining resources, which increase at an arithmetic rate, would be insufficient to support human population, which would increase at a geometric rate." (Todaro and Smith, 2011). Under Thomas Malthus' predictions, there would be a definitive point at which there would be more people on earth than the earth could provide for. However, this trap has been overcome by advances in society and technology (Todaro and Smith, 2011), such as technological advances in food production or social security schemes.

There is a trend that populations across the globe is aging (Powell, 2010). This means that the average age of populations is increasing and this is mainly due to a decrease in newborns and people having a longer lifespan. There are economic and social consequences for an aging population (Börsch-Supan, 1991). In societies where the current working population supports the retired population, an aging population means that over an expanse of time, the working population shrinks, and yet puts an even heavier burden on the current working population. This burden could possibly mean that the age of retirement will be extended in order to support the retired population. Germany has the ratio where 100 employed, working people are supporting 40 retired people. It has been projected that by 2030, 100 employed people would have to support 85 retired people (Börsch-Supan, 1991). This means that before, 1 working person needs to provide for 1.4 persons socially, and by projection in 2030, 1 working person needs to provide for 1.85 persons.

Family planning takes in many factors such as job security (Lynn et al., 2018) (e.g. where women delayed having children so they could secure a better job), political factors, socioeconomic factors, and many others. A classic example of political factor would be the one-child policy in China. This was a policy implementation from the Chinese government to decrease the overall population (Attané, 2016). Socioeconomic factors, such as wealth and social rank, have been widely discussed in literature (Bailey et al., 2014), but current literature has yet to confirm how future environmental impacts could possibly affect family planning decisions made today.

The IPCC has mentioned that there is an issue of consideration of the expanding population in relation to alleviate climate change (Rogelj et al., 2018) and, this calls for an investigation in what could help lessen the growth of populations. One of the many suggestions was to use family planning methods as a tool to reduce population growth. Starbird et al. (2016) commented how family planning is an important tool that can benefit the five Sustainable Development Goals as defined by the United Nations. John Guillebaud, outlined in his paper why family planning should be used to alleviate climate change (2016), and he highlights that people from wealthier nations produce larger carbon footprints; thus, the effect would be greater if families in wealthier nations have less children.

The research above is only considering family planning hypothetically in relation with the environment. Realistically, would individuals in society have less children due to climate change? This is a two-fold issue. One side of the coin is if individuals would have less children so that they could enjoy a better future by not bringing another human being and the other side of the coin is about if individuals would have less children as they think about potential future environmental changes. This paper explores the second side of the coin and aims to delve deep into the potential issues with individuals' relations with family planning decisions and the future environment.

Previous Research

In my previous project, written for MY421 Qualitative Research Methods, I explored individuals' reactions to the potential use of government intervention in order to curb overpopulation (Hung, 2019). In that study, I interviewed three people, two males and one female, in the style of semi-structured interviews. The participants' average age was around 26 years old. Each interview lasted around one to one and a half hours. The participants were recruited in London and all interviews were voice-recorded. The study focused specifically on climate change, birth policy, and ways to fight climate change. This study was particularly interested if birth policies, such as one child policies, would be socially acceptable and if not, what other solutions might be identified in order to curb the overpopulation issue.

In general, from the three interviews, it was clear that a policy to restrict child births would not work in the Western context. Policies that would restrict childbirth are seen as an infringement on personal liberty and freedom. (It must be stated that this is not the same as reproductive healthcare systems, such as sexual health clinics provided by the NHS, where they provide information on child births or abortions, etc. Reproductive healthcare systems ultimately provide the patient with all relevant information and then the final choice is dependent on the patient themselves.). This infringement is fundamentally against the democratic principles of Western societies, such as Iceland and France. The participants also noted an encouragement for better public understanding of climate change. This is because some of the participants themselves know a bit about climate change, yet if someone asks their opinion, they wouldn't feel qualified to discuss it. All of the participants called for a top-down approach to deal with climate change, and they believed that while social and individual movements are great, they will still not have a big impact. They specifically mentioned that big organizations, such as firms or governments, must be more proactive in dealing with climate change.

Data Collection

Since family planning decisions are quite personal and sensitive and just as intricate and complex, I decided to study this topic through in-depth interviews, either in person or through emails. I reasoned that by using in-depth, semi-structured interviews, I would be able to further probe the view and perceptions of future environmental changes with regards to other family planning decision factors. I will also have a short demographic survey at the end of the interview for the interviewees to fill out; however, the main purpose of this survey is to distinguish how wide of a population sample I managed to recruit. The interviews will be voice recorded and the voice recordings will be destroyed once transcription and analysis are complete. The survey itself is completely anonymized and the interviewees able to either do it by hand in hard-copy or through an online survey.

The interview topic guide is included in the appendix. The topic guide includes an ice-breaker, the list of core, thematic questions and a cool-down. The ice-breaker includes a self-introduction and a question of their current relationship status. I hope by using an ice-

breaker, it would be able to break down the initial tension and awkwardness of the participant being interviewed. I have designed the topic guide to explore 3 themes. The first theme seeks to distinguish factors of family planning using questions, such as: "Do you guys currently have children or planning to have children?", "What made you want to have children?", and "What are some of the things you consider when planning to have children?" The second theme aims to identify whether future environmental changes act as a family planning factor: "With the yearly reports on climate change and environmental degradation (e.g. sea-level rising, increasing air pollution), would you think this is a factor of consideration in family planning?" and "Let's go back to the factors for considering having children. Where would you put climate change / the changing environment in the list of factors? Why?" The third theme is about exploring the interviewees' general views on climate change, with questions like: "How do you feel about the environment changing?" and "How bad do you think climate change is impacting our lives?". Through this theme progression, I will be able to unpack individuals' values, beliefs, and perspectives in regards to climate change and family planning and ask follow-up information on the respondent's answers. The cool-down section of the interview is for me to ask if there are anything that the participant felt that they have missed or would like to expand on in the interview and also a debrief and a general of the topics we had discussed.

In the middle of my interview, I also included a short 9-minutes video as a visual aid and a topic of discussion. The video is a Ted Talk by former actress Alexandra Paul expressing her views on climate change and population (Tedx Talks, 2013). Her views in the video could be seen as extreme for some people where she is promoting one-child families. Because of this kind of extremity, it could prompt the interviewees to express more of their personal thoughts and opinions about family planning issues and climate change (Deeb et al., 2018).

I have recruited participants through convenience and snowball sampling where I have put up posters or canvassed around LSE and my previous universities in Paris and The Hague to recruit from a broader audience. In addition, at the tail end of interviews, I asked interviewees to recommend other people who they think will be interested in participating. I believe through recruiting participants in three drastically different metropolitan cities, I

will be able to reach a broader audience, and, therefore, a wider variety of views and opinions. Most of the interviewees are either students or educated salaried workers, thus there could exist a bias.

I decided to interview individuals in person or through emails, if the individual felt more comfortable responding through emails.. The email interviews are conducted in three stages. The first stage is where I ask the participant for their consent and have attached an information sheet and a consent form. The second stage is where I would give the participants a list of questions derived from the interview topic guide and have a few follow up questions. The third stage is where I ask the participants to fill out the demographic survey. The main difference between the two interviewing strategies is that through emails, it tends to take a lot longer for the participants to respond, especially if I have follow up questions for them. With emails, they have more time to consider their responses so participants can be more reflective. Also, they can answer them out of order, breaking the "progression" you had envisaged.

To make proper adjustments to aspects that were unnecessary or confusing, I piloted this topic with a couple on the 23rd February 2019 where the respondents provided feedback and a few notes about their experiences in this interview. They were very interested in the topic because it has never really crossed their mind why future environmental changes could be a factor, but, at the same time, they both felt that the questions were difficult and required some personal reflection before answering. The couple also felt that some of the questions posed were personal and sensitive, particularly the following questions: "Why would you like to have children? What made you want to have children?" and "What are some of the things you consider when planning to have children?"

Through the pilot I learned that due to the sensitive nature of the questions, more prompts and probing from me as the interviewer would need to occur in order for the interviewees to respond with more information. Additionally, in cases where the couple is quite shy or reserved, I should probably start off with second or third theme questions to ease them in to the topic. During the interviews, I recognized a potential power-relation

between me, the interviewer, and the couple, the interviewees. The power dynamic exists due to the couple being a team and I am a single subject in this relationship. This 'team effort' goes amazingly well when the couple has different views, so the couple will discuss between themselves, considering options and debating answers, before reaching a final conclusion. This observable dynamic I have witnessed is also present in focus groups (Crossley, 2002). However, this 'team effort' can also be a bit daunting when I have been asked questions by the interviewees, but I just took a brief moment of pause, and gathered some courage and kept the dialogue going.

However, one of the spouse later approached me and told me that they had a falling out after this interview because of their differences in opinions. In light of this, and to prevent any further uncomfortable situations, I decided to only interview participants individually, thereby limiting any future harm to the participants' relationships.

After changing the topic guide to be more individual focused, I have piloted the interviews twice with two different people. However, these two participants have both felt that the topics are very interesting, but it was a bit dry. I have thus revised the topic guide again and included the video mentioned above as a stimulus to keep the interview captivating.

Across London, Paris, and The Hague, I recruited 11 different nationalities namely: American (US), French, Chinese, British, Romanian, Dutch, Korean, Canadian, South African, Sudanese, and Mexican. The interviewees consist of six males and eight females. The average age of the interviewees is 25.4 years, ranging from 21 to 34 years old. Although most of the interviewees are students, but some are research associate in a private firm, interns, a copywriter, a veteran/freelancer, and a business associate. One participant already has children and some participants are planning to have children. More information regarding participants' information could be found in the appendix.

Ethics and Reflexivity

There are no ethical concerns regarding this research project according to the ethical checklist and questionnaire completed and uploaded on Moodle. However, there are potential concerns that comes from the kind of questions asked in the interview to the interviewee.

One of the first concerns was identified when I ran a pilot study on a couple: the couple in question fought for three weeks after their interview due to different answers, reflecting contradictory ideals. On top of this, during the interview I sensed a strong tension between the two partners where they would resort to speaking in their maternal language to reach a consensus or to explain the question better to each other. In light of this, I have decided to only interview people individually, believing that I could both diminish the potential for interviewee conflict and increase the communication between interviewer and interviewees.

The nature of the questions involved in this interview is sensitive and for some could seem controversial with polarizing views (Hamilton, 2011). Questions such as "Why would you like to have children?" or "What are some of the advantages in having children?" could be intrusive because it asks the interviewee their personal beliefs and for some, it could possibly question their sexuality. Other questions such as "Do you think adoption is a better option for the environment than having your own children?" are controversial because of the contrary nature on public opinions of climate change issues but also because it requires individuals to discuss their values and beliefs about what constitutes a family.

Through my various interviews, I often found myself simultaneously acting as an insider and an outsider. My very confusing accent (US/South African) was often pointed out at the end of the interview and it did provoke further discussions on general family planning or climate change issues in South Africa. Being a liberal and democratic person often gave me an insider status with the interviewees by sharing similar values with the interviewees, but me being a non-heterosexual and Asian/African person, specifically Taiwanese and South African, often gave me an outsider status in the interviews. Only 4 out of 16 participants partially share my cultural heritage, but having lived in Europe for 5 years and received an American education, I do not feel uneased with other cultures. As a cis-gender

homosexual, I cannot produce children biologically, unless through surrogacy. Most of my interviewees are heterosexuals and thus gave me an opportunity to be an unbiased outsider through the lens of heterosexual individuals.

There was one interview that led me to recognize myself as a complete outsider. During this interview, my interviewee was a far-right, Marxist, conservative, and traditional person. Her beliefs completely contradicted with my own which took a few minutes for me to swallow and adjust. It was difficult to try to not take her beliefs as a personal attack on my own beliefs, but I have managed to overcome this by taking a deep breath and then stayed neutral as a researcher. I am glad that I have overcome this obstacle as her views are distinct from my other interviewees and provided more diversity in my research.

Something important to note is that most of the interviewees stated that they felt unqualified to answer topics related to climate change. This stems from their belief that they do not know enough about climate change in order to provide a sufficient answer. To overcome this, I have reassured them that the purpose of this interview is to ask for their opinions and views of climate change related topics, and not to examine their knowledge on climate change. This helped with the interviewing process and relaxed the interviewees.

When discussing climate change related topics, I often found myself to be an insider due to my coursework in climate change and the interviewees often found that to be intimidating. This is because most interviewees felt that they are expected to give the scientifically correct answer; however, reassuring them again that it's their views that matter for this interview, they felt more at ease with the questions. I often encountered not scientifically sound comments on climate change during my interviews, such as 'climate change is a social construct', but I have expected this from my course on climate change (GY427) and most of the time chose to ignore it and probe deeper into other issues.

Data Analysis

The framework of analysis used in this paper is thematic discourse analysis. Thematic discourse analysis is defined as a framework that, "identifies discursive themes and patterns in data and applies the tools of discourse analysis 'lightly' to explore how themes construct reality in particular ways;" (Braun and Clarke, 2013). With this method of analysis, I will be able to understand the underlying implications and meanings from the interviews further with emerging patterns of themes when discussing climate change and having children.

I used the method defined by Taylor and Ussher (2001) in their paper, *Making Sense of S&M*, which stemmed from the structure developed by Johnathan Porter and Margaret Wetherell (1987). During the initial stage, codes and themes are established when listening to the voice recordings. Codes and themes are then further classified into general patterns or themes. General themes or patterns are then checked against the voice recordings. Specific examples are then found by listening to the voice recordings again and transcribed specific sections that fit the themes. New themes or codes during this step of the process will also be incorporated.

As for the email interviews, a similar analyzing procedure will be performed. All of the responses will first be read through, identifying themes and codes. Codes and themes are then further analyzed and grouped into general patterns or themes and then specific examples are then found to fit for the themes or patterns developed.

In the findings section, I have structured my analysis with subsections of themes or patterns provided with proofs, followed by discussions and limitations.

Findings

From both email and in-person interviews, I have found 3 main discursive themes that are evident when the interviews are analyzed. These 3 themes respond to the main research question and the sub-questions. In the subsequent sections, I have labelled participants as different characters of the alphabet.

The Human Experience

The first theme that became apparent was the theme of the human experience, which includes other sub-themes, such as the meaning of life, self-fulfillment, and the idea of creating a family.

In the sub-theme of meaning of life, interviewees often alluded to the natural process of having children and the search for love and happiness; for example, "… I view having children as a more natural process, devoid of inherent interest and part of humans' continuous search for happiness and love" and "It doesn't make sense to not do things that give you great pleasure, or gives your life meaning. Otherwise what's the point of being here?" From the first quote, one can see the respondent's strong assertion on the innate occurrence of having children and also appeals to the question of human life, which, in this case, the interviewee believes to be a quest to find love and happiness. The second quote takes this idea further where the respondent has used a rhetorical question to further strengthen his idea of the quest of happiness and the true meaning of life. The respondent posed the rhetoric of what else is there to live for besides taking joy in living.

The second sub-theme that became apparent is self-fulfillment. The respondents often use the specific joys of having children as examples of why having children is a fulfilling choice.

> T: They give you a purpose, you can watch them learn and develop, there is something funny happening every day.
>
> D: the (hopefully) unconditional love of children as well as the joy of creating life with my partner
>
> Z: you can see how they excel in the future in specific fields. Or see how they perceive the world compared to you.
>
> T: … the unreserved love and laughter from children is something you simply do not get any other way.
>
> J: It can be a contribution in itself, and I think it will be a very rewarding process – to raise someone like that.

All three responses in this case pointed out the various things that could bring one fulfillment. Both T, J, and Z mentioned the process of observing how the child develops as an example of how children bring fulfillment to parents. Also D and T mentioned children's unconditional love as examples of why the process of having children is fulfilling. This is especially in the case of T who said that the love from children is unparalleled.

The last sub-theme that was repeated several times was the idea of having a family. Some interviewees were not sure why, but others were more certain as to why they would want to start a family.

D: I'd like to make my own family with my partner.

C: We dream of having a family together

In these two quotes, it's is important to note that both interviewees would want to have children with their partner as if it was a collective decision making. This collective decision making is exemplified through the use of specific diction such as 'we', 'together', and 'partner'.

L: I hope to have children but I am not really sure why. I just want to raise a family.

C: I've first felt I want to have children after meeting my wife. It's one of the feelings I can't say I can explain logically, like falling in love or wanderlust.

In the case of C, he said that after meeting his partner, he wanted to have children and it's something he cannot explain. In the case of L, he wanted to have children, but not sure why. C might just have answered himself and links this with the other subthemes of self-fulfillment and a potential meaning that individuals assign to life – love. In the case of C, it is love that prompts the desire of having children. It is love that is fulfilling and gives meaning to life.

These three sub-themes of meaning of life, self-fulfillment, and having a family all links with each other. The common denominator of these three sub-themes is love and happiness. Some of the participants include assumptions of love and happiness in their

visions of the future which motivates them wanting to have children. In the case of this study, having children is the personification of love and happiness and in turn, a part of the human experience.

Personal Choice

When discussing about factors of consideration before starting a family, many participants have said that financial security is one of the biggest concerns. This is particularly exemplified through the specific diction of 'expensive', 'costs', 'financial', 'stability', and 'security'.

T: Clearly, there are costs involved: it's probably the most expensive decision you make.

D: I wouldn't consider having children until after I'm 32 or 25 mostly because of financial stability. I don't see my career goals being fully met until that age.

Z: I want to have the security to know that I would not neglect them.

It is also important to note that D and T are the only interviewees to state other factors of consideration besides finance. T mentioned the biological aspect of conceiving, where after a certain age, it's considered a high-risk activity for women to give birth. At the same time, T also meant that there's another aspect of having children, which is that they are physically demanding, thus having them while the partners are younger and more capable of keeping up with the children is more desirable. Both D and H mentioned the mental ability to have a child.

T: Let's do it now before we're too old. Let's start trying now, because we having everything in place, and don't know how long it's going to take.

D: I would consider my financial situation, mental state, and relationship status.

H: I think they'll consider if they were in a good place mentally to have a child, if they're able to take care of a child.

A participant has mentioned social and political climate could be a factor of consideration when she would plan to have a child.

> J: … bring a child into the world also about what kind of world you bring them into. And yeah, on that, also includes how politics, like in how society's values and how much freedom they have when they grow up.

Another common sub-theme that is frequently discussed is the cultural and societal aspect of having children. Many have divulged that having children is culturally-dependent. Some cultures expect partners to have children more than others, and this is could be attributed to how such cultures are structured socially. This is especially the case when there is a tendency for the younger generation to look after the older generation. But this could also reflect how the overall society is structured, where the social security system is burdened on the current generation of the workforce to pay for it.

> C: I believe in the value of having a strong social care system for an aging population, which inherently calls for a younger workforce to provide support.
> T: Is there societal pressure to have children? Yes, very much depending on individual cultures.
> J: … your friends and people you know has entered this kind of life. And I've seen myself, you know, kind of being influenced by this sort of thing.
> D: making my parents happy by seeing the fruits of their labor and legacy continuing.
> D: …much more important for some cultures, where older generations are financially or physically taken care of by younger generations. This act of inter-generational care isn't just symbolic, but especially necessary in countries where governments have failed to provide adequate health-care or pension systems for the elderly.

In one instance, the societal pressure of having children is heavily embedded in specific cultures; thus it was seen as a natural step after marriage, a topic which could be broached by people that are not related in your personal life.

J: I think a bigger problem is that you know, having the relationship, especially if you enter marriage… It's not about the two of you, especially in China. It's about the rest of them as well… maybe about your employers. Employers are like, 'Oh, are you going to have a child?' You know, all these different elements, and that's… that's really scary.

In another instance, the participant has mentioned that there is a societal attitude, where a woman is treated with more respect and dignity if they do have a child.

H: And I think that in a lot of societies also, if you have children, you're respected more. You are treated as if you are more important in society.

The themes present with adoption issues stems from personal choice, but also an act of goodness. When asked about adoption, the respondents have divided opinions. Some have said that it is not quite like having you own child (T and L) and there are some interviewees who see no difference. It could be purely coincidental, but one tendency throughout the research was that most of the heterosexual female interviewees saw no difference between having your own child and adoption whereas the heterosexual male interviewees are not as keen on adoption compared to conceiving. This could probably be due to the fact that females tend to be more socialized and empathetic towards others' perceptions and feelings, which could link to a mothering instinct (Norscia, 2016).

T: …we could think about that – but it's not really an alternative (we wouldn't have further children at that point). It is different – you don't see them from the start. You can't mold them quite as fully.
D: Other than that, adoption is the same in that it will be a product of me, my partner and my family.
Z: I have always thought of adoption as a way of becoming parent. I think if I were to adopt, I would do it a at a slightly older age. I do not see any difference between adoption and having your own kids.
L: I would consider adoption in the case my future wife or myself is infertile but I would like to have my own kids, they're like mini me!

Some participants have also noted that adoption could be a way for people not wanting to conceive, but it's a social and moral act of goodness that directly helps those in need.

> H: I think it is, because you're not contributing more to the problem by adopting, because these children are going to exist in a foster care system or in an orphanage or eventually, in some situations in some countries, they'll end up in slavery.
> J: I do think that it is nice… a child from.. a very unfortunate background who his parents couldn't – their parents couldn't bring them up…
> B: … adopting is a very interesting way to do so, because it's somehow a political act, you know? And it's much better than renting someone's body to have your children being generated… I think that when you adopt, you contribute to this like distribution and equalization of inequalities… hopefully giving a better condition to someone who is already here.

From the three sub-themes described above with financial security, cultural and societal influences, and different opinions about adoption, it is a deep reflection of personal choice that leads to the decision for individuals to have children or not. When having children, one generally chooses to be financially secure in order to provide for the child. Although societal and cultural influences could be strong, it is still up to the partners or individuals in the end if they would like to have children. Personal choice is the most evident with the adoption sub-theme. It is the most differentiated sub-theme with various opinions.

Conflicted Climate Change Views

A theme that became clear with the interviews is the conflicted nature of social aspects intertwined with climate change. This theme is further divided into immediate effects, region dependence, and conflicts of interest.

Many interviewees cited the immediate effects of climate change and it often overlapped with the other sub-themes. From the quote below, the immediate effects could

be described as the environmental changes that directly affect the quality of life for some people. This is reflected in the case of D, where she said it's vital to provide clean air for her offsprings. This is particularly interesting because her statement is one of the few that suggests she has previously imagined a list of resources that includes environmental factors (i.e. clean air) that she requires in order to feel confident in raising her children. Another way of looking at immediate effects is the social impacts of climate change. Z has provided examples of government policy as a direct impact on her, such as being taxed more and then commented on how it has impacted the standard of living. T and J have commented that the effects of climate change are often not felt immediately, but we can usually observe large, impactful differences over a longer period of time.

> T: Right now and personally? Not that bad. But we are on the cusp of things becoming much worse. It often hits the poor hardest. The real problem is that it won't impact us directly until it's much too late.
>
> Z: Our government has instructed us to shower for a certain amount of time. Some people are being taxed more if they have a pool or pets. So I say it is have negatively impacted the standard of living for some people.
>
> D: I think it's important to provide my potential children with clean air and instill in them a respect for the planet.
>
> J: There is a direct consequence, but it doesn't impact in such a traumatic way that I would say that you know, I'm like the direct victim of climate change… A catastrophe, yes, incident, but more like it's a prolonged… reality that we all face.

The immediate effects also are accompanied with uncertainty and helplessness. This is particularly illustrated through the use of diction indicating uncertainty, such as 'don't know' and 'probably something'.

> T: I don't know what I'll tell my kids when they figure out what a mess they are inheriting, but probably something along those lines.

Respondents have often pointed out that climate change effects are region dependent. This regional dependency is often linked with the wealth of the country and the

ability to adapt. This is particularly exemplified by L where he said that he himself wouldn't necessarily be affected by climate change, but the less developed nations will be more vulnerable.

> C: Agriculture, which used to be one of the most important industries in the region has been affected because of lack of water for irrigation. Many people lost their jobs and now depend on government help.
> D: My life doesn't explicitly suffer from climate change but, for example, some residents of my native state, California, have suffered from the destruction of their homes caused by wildfires.
> L: In a wealthy, developed nation, the impact for me might just be the summers are a little hotter at the moment. In poorer nations, the impact is far worse with rising sea levels and the inability to prevent flooding.

The interviewees have also pointed out that it is a wider issue and not just a personal one. Many believed that it is a societal issue that should be dealt with, but they also recommended a change in the way our society functions. C, D, and L all pointed out a need for change in our current society. L and C both pointed out a lack of knowledge about climate change. D believed that there is a systemic fault in our society which hinders progress of a better future.

> C: Consumer culture is to be blamed, and I believe that we need a deep change in our collective values as a society and in the way we use education to teach about climate change.
> D: Providing incentives for healthier communities and environments by removing the GDP-as-growth model and making other economic indicators equally or more important is one solution.
> T: I have some faith in technology, but this much more a societal and political problem.
> L: I feel although their intentions are good, they will not have a severe impact. Additionally those are the people you would prefer to have children as they are

more environmentally conscious, the people you wouldn't want to have kids are the uninformed and those without knowledge of the consequences.

A participant has noted that when dealing with climate change, people often looked at the present benefits and heavily discount the future, because it's something that they cannot enjoy immediately. This participant has used the yellow vest movement (i.e. Gilet Jaune) that happened in France as an example. This in essence echoes the above statements where L and T have pointed out that there is a lack of knowledge regarding climate change.

> H: I feel like people, they're either not taking it seriously or they're thinking about their benefit now versus what's going to be good for them in the future.
> H: They would not have benefitted from this immediately. They would have benefitted from this over the next 10-15 years. But these people are not concerned over the next 10-15 years. They want results now, so they're saying, 'OK, you are making us pay more now. We're pissed. Okay?'

When discussing climate change and family planning together, some participants felt that although climate change is important and could potentially be a factor of consideration in family planning, it will generally not impact them in having children. However, this is a direct contrast with the other participant she mentioned she would include 'clean air' as a needed resource.

> Z: So, I would first factor job security and finances. Second where I am located, am I in an area I know children will be able to develop. Third would then be climate change.
> Z: I agree that overpopulation is a problem and is causing our demise. To be honest, I cannot really say I am either for or against having only one child until I am in the situation.
> C: I do feel a bit selfish wanting to have a large family, so this is something I might need to rethink in the future.

L: I do believe they are important consideration, but it will not prevent me from having children (2 is below the replacement rate of 2.1 anyway), although I do try to conserve resources where I can.

However, there are a few participants who expressed that their desire for not having children is because that they felt a generally negative view of the future. This negative view is particularly portrayed through the diction of 'destruction', 'hopelessness', 'burden', and 'pessimistic'. This negative view is connected to a broader "hopelessness" and sentiment (i.e. an overall socially communicated feeling) rather than an explicit, logical concern of restricted resources, for example, clean water.

H: I don't want to contribute to the destruction of the planet and of society by bringing more people into the world.

H: I've met other people who have decided not to have children, because of the environment in the world that the world cannot support that many people.

B: … when I look to the future, it… it feels hopelessness hopeless, you know? … I think that having children could be a burden for the child itself and for all the rest. It's a very pessimistic view.

The statements in this section are evidently conflicted. It is conflicted because the respondents understand that there is an overpopulation problem, but having such problems will not stop them from having their own children. It is conflicted because the wealth differences in the world allows people from certain areas to be more adaptable while the poor and vulnerable become more destitute. It is conflicted because there are inherent dangers of climate change, but the effects are not felt at the present time, thus it is often ignored. Consequently, cautionary measures are not always implemented or, in the case of the Gilet Jaune, the public protests occur against measures that are meant to greatly advantage them in the long run.

Discussions and Limitations

Answering the Research Question

What do people take into consideration when planning a family? This question is answered by the theme of Personal Choice, specifically the subthemes of financial security and cultural and societal aspects of having children: most participants consider financial security as their first priority when planning to have children. Some participants also stated they would consider their mental health or relationship with their partner as factors of consideration. One participant mentioned that she will assess the political and social climate before having children. Some participants have also expressed pressure from their surroundings to have children. The pressure could be exhibited through peer pressure, pressure from their family, or pressure to support the overall society. In general, people take into considerations of financial security, mental health, current relationship, social and political climate, and pressure from external sources.

How do people think of environmental changes? This question is answered primarily through the theme of Conflicted Climate Change Views. The answer to this question consists of several layers. Generally, people feel "sad", "helpless", or "hopeless" about these environmental changes and their future impacts on the world. When asked if they have felt personally affected by climate change, participants almost unanimously said no, but they do feel personally affected by the climate-related policies that governments have employed to address climate concerns, such as higher taxes. This suggests that there is a general understanding that climate change effects and/or environmental changes are negative. The helpless and hopeless emotional responses of interviewees were often accompanied by conclusions that personal efforts are not enough and wider societal and political actions should be pursued. The participants also mentioned the faults of consumerism and faults in societal structure, specifically GDP, as an indicator of growth and a lack of public understanding of climate change. GDP has often been criticized for its inability to accurately measure the general well-being of society (Stiglitz et al, 2017).

How might adoption be viewed as a substitute to conception? This is a particularly divided question. This is primarily explained through the subtheme of adoption in the theme of Personal Choice. As mentioned earlier, most of the heterosexual female interviewees felt no difference between adoption and conception, whereas the heterosexual male

interviewees prefer to conceive their own children. Some participants have also noted that adoption is also a very generous act where you are giving someone else a chance to be better in life.

When asked if adoption is a better option for the environment, most people said yes, but some would still prefer to have their own child. In one particular instance, the participant was angered by this question, because it provoked her personal moral stances about human beings in general.

D: I really don't want to go here, because human beings aren't commodities, but if you're going to treat children as elements contributing to the worsening of the environment, their waste is already a "sunk cost" so to speak.

In essence, adoption could and could not be viewed as a substitute to conception. It could only be viewed as a substitute when the individual personally choose for adoption above conception. This refers back to the general theme of personal choice.

How do people factor future environmental changes into family planning decisions? This question is answered through the theme of Personal Choice, but before that, one needs to understand why people want to have children, which is explained through the theme of The Human Experience. Some participants have mentioned that having children is a natural process which contributes towards the search of love and happiness. Participants have also mentioned that seeing children grow up is a fulfilling process. "Making a family" is common subtheme that participants have mentioned. The three subthemes all have the elements of love and happiness, and thus the embodiment of love and happiness is having children, and a portion of being human.

Several participants have mentioned that they do consider climate change as a factor of consideration when planning to have children, but, even then, many stated that it will generally not impact them in having more or less children. They have mentioned that the incorporation of climate change as a factor is due to their understandings of climate change, thus a logical inclusion. Some participants also mentioned that they do not want to

have children because of their negative views about the future environment. When asked to rank the different factors of family planning, most participants will put climate change above the middle of their personal considerations. In comparison, all participants have mentioned financial security as their first order of consideration. However, there are participants who would factor climate change as the least of their worries. A future research idea could be understanding why participants rank family planning factors in a specific order. All participants have mentioned financial security as their first order of consideration.

Other Findings and Implications

One of a common discursive theme present in the interviews was the use of rhetorical questions. Often the interviewees use it to strengthen their point of view and pose other, often unsolvable, implications. These unsolvable implications are more general and philosophical discussions that is present in our society, for example, the meaning of life (mentioned by T), the problems of capitalism (mentioned by J), and ethical and moral dilemmas of population. It could also be seen that the participants are trying to deflect, because of conflicting societal ideas.

> J: … this stuff brought like grand discussion about how do we cut population? How do we control country population?
>
> T: It doesn't make sense to not do things that give you great pleasure, or gives your life meaning. Otherwise what's the point of being here?
>
> J: And I think an important thing about – on climate trends and all sort of like environment – is about thinking. Why's that the case? What were used as much? Why do we consume this way? Why do we produce this way?
>
> H: At some point, humanity is going to have to ask itself, 'Do we need to make laws against having too many children? Or do we need to do something, some kind of reward program for people not to have children?

As mentioned in the background information, there is a trend of decline in birth rates. However, this has negative economic consequences, such as future generations would have to support more people in the social security system. This in particular is

another case of conflicted views in society, where overpopulation is an issue, but people are needed in the economy. This reflects a possible need for a change in economic thinking. A participant has suggested for a shift away from the traditional growth definitions of Gross Domestic Product. The same participant has also suggested an immigration-based policy to make up for the declining birth rates.

D: Providing incentives for healthier communities and environments by removing the GDP-as-growth model and making other economic indicators equally or more important is one solution. Providing more incentives for people to move to rural areas instead of flocking to the biggest cities is another solution. Embracing immigration as a way to bolster the economy is another solution.

Some participants have mentioned during the debrief of the interview, the slight paradoxical nature of this research, because some countries are actively promoting more childbirths, for example, Hungary (Ellyatt, 2019). Hungary is actively providing economic incentives for its citizens to encourage child births such as personal tax breaks and subsidies. However, it is also important to note that while pursuing this policy, the current Hungarian administration is right-wing and anti-immigration.

Limitations

One particular limitation of this research are the participants. Most of the participants are either currently in tertiary education or have completed at least an undergraduate degree. This deems my sample of participants as highly educated, which was already noted in the method collection section and may suggest a need for further research with more diverse samples. A broader audience with varying education background could, theoretically, give completely opposing answers, but this information would be vital into uncovering a full picture of how society and individuals view environmental change in family planning. For example, individuals recruited from poorer regions, even of developed countries, may be more likely to live closer to polluted areas and observe how the climate and environment react and affect their lives in more concrete ways. Contrastingly, they might also be too habituated to these sights and fail to take note.

I also recognize that this research is heavily hetero-centric. This is probably due to the nature of the questions and research aim involved. However, I have managed to interview one non-heterosexual and have adapted the questions accordingly. A more inclusive sample should be aimed for further research. If done so, there will be even more diverse answers and questions which would include surrogacy, multi-partner families, and having pets as their own children.

Another limitation is the age group and relationship status. This research has interviewed generally younger people. This could be a potential benefit since that most of these people generally entering the stage of considering having children, thus it is highly relevant point in their lives for these decisions. On the other hand, interviewing older individuals could provide a helpful point of contrast to see if perspectives have changed since previous generations, especially as climate change is becoming a more publicized and accredited issue. Some are considering having children in the near future and one participant has two children. A more varying age group for further research would be suggested for more diverse data.

Concluding Statement

In spite of climate change becoming a more broadcasted and highly politicized issue, individuals in developed countries generally do not feel the effects on their daily lives. This is important because although the participants in this research tended to rate climate change and environmental awareness as important to our society's future well-being, they do not immediately "see" how its negative effects, aside from governmental and organizational regulations, touch their own lives.

This is relevant to the research topic in question, individuals' perspectives on climate change and how it affects family planning, in several ways. The first is that it does not usually demote individuals' desire for children, but it may be an important factor of consideration when planning to have children. The second is that there is a general negative

view about climate change, and the hopelessness associated with it. The third is that there could be a possibility of adoption in lieu of conception.

Thanks to this research, we now know future environmental changes or climate change is a factor of consideration in family planning. However, we should still aim to discover more about how willing are people going to adopt instead of conception, as well as possibly explore other substitutes to encouraging families to have fewer children. This could lead to better, more accepted governmental policies and regulations in dividing and distributing resources that we are currently concerned about.

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Appendix A: In-depth Interview Topic Guide: Future Environment and Family Planning

Introduction

- Introduce myself. Thank participant for coming. Hope you will enjoy our topic today. Talk through the consent form and information sheet.
- This session will be voice-recorded, but however you will be anonymized and voice recordings will be destroyed once transcribing and analysis has been done.
- Once we leave this interview, I hope we can keep our conversations as confidential as possible. You are allowed to leave this interview at any point of the session. This session takes about 60 minutes in total and afterwards we will fill out a survey and debrief.
- Tell participants about where the exits are and the nearest facilities. Signing consent form and explain what this research is about. Are there any questions before we begin?

Ice breaker

- Can you please introduce a bit about yourself?
- Are you currently in a relationship? (If yes, How do you guys imagine your future together?)

Questions

1. Do you currently have children or planning to have children (conceiving/adopting)? How many? Why that number? Where do you wish to raise your children?
2. Why would you like to have children? What made you want to have children?
3. Can you please tell me some of the advantages in having children? What are some disadvantages?
4. What are some of the things you consider when you are planning to have children? Can you please elaborate on that?
5. Around what age would you like to have children? Why?
6. With the yearly reports on climate change and environmental degradation e.g. sea-level rising, increasing air pollution, etc. would you think this is a factor of consideration in family planning?
7. If you could make a list of family planning factors and rank them according to their importance, where would you put climate change in that list of factors?
8. How do you feel about the environment changing? Do you believe in climate change?
9. https://youtu.be/fNxctzyNxC0 Now we are going watch a video. What do you think are the main messages in this video? Do you agree with these messages? How do you feel about this video?
10. Let's go back to the factors for considering having children. Where would you put climate change / the changing environment in the list of factors? Why?

11. Would you personally consider adoption? How do you think adoption is different than having your own kids?
12. Do you think adoption is a better option for the environment than having your own children? Why?
13. What are your views on climate change? How do you imagine the world in 50 years?
14. How bad do you think climate change is impacting our lives?
15. Some people say that they are not having children because of how much the environment is changing. How do you feel about that? Do you feel the same way?
16. In what ways would you change your lifestyle to help better the environment?

Cool-down

- Is there anything else you would like to add today? How do you feel about our interview today?
- Debrief of things talked about today.
- Thank you all for agreeing to participate in this interview. Before we end, there is a small survey that I would like you to fill out.

Appendix B: Interview Tabular

In-person Interviews

Date/Date Started Interview	2 July 2019	1 July 2019	1 July 2019	5 July 2019	10 July 2019
Duration	1.5 Hours	1 Hour	1.5 Hours	1 Hour	1 Hour
Place	London	London	London	The Hague	Paris
Age	22	25	27	24	30
Gender	Female	Female	Male	Female	Female
Cultural Heritage	Chinese	Korean	Brazilian	Dutch/Romanian	French/American
Education/Employment Status	Masters student studying political sociology	Masters student studying European culture	Masters student studying big data	Intern in legal fields	Veteran/Freelancer
Method of Recruitment	Convenience sampling. Responded through encountering.	Snowball sampling. Referred by another participant.	Convenience sampling. Responded through encountering.	Snowball sampling. Referred by one of the participants.	Convenience sampling. Responded through poster.
Relation to the topic	General interest in population/child birth.	General interest in having a family.	General interest in the environment.	Interested in the environment	Interested in the environment
Contextual Notes	The interviewee arrived 2 hours late to the interview, but was still willing to do the interview. Come from a one-child family.	The interviewee was a bit timid at first, but after a few more conversational starters, she became	The interviewee's parents were environmentalists and built an eco-house to live in, in Brazil. Arrived 10 minutes early.	The participant was a bit nervous but excited at first, but later felt more comfortable.	The participant is easily distracted, but very passionate everything. Army veteran.

In-person Interviews

Date/Date Started Interview	18 July 2019	10 July 2019	5 July 2019	3 July 2019	10 July 2019
In person/Email	In person	In person	In person	In person	In person
Duration	1.5 Hours	1.5 Hours	1 Hour	1 Hour	1 Hour
Place	London	Paris	The Hague	London	Paris
Age	26	27	24	23	23
Gender	Male	Male	Female	Female	Female
Cultural Heritage	Canadian	British/France	Dutch/Romanian	Chinese	American/French
Education/Employment Status	Masters student studying about the environment	BSc studying computer science	Intern in legal fields	Master student studying European studies	Researcher for a private company
Method of Recruitment	Convenience sampling. Responded through encountering.	Convenience sampling. Responded through encountering.	Snowball sampling. Referred by one of the participants.	Snowball sampling. Referred by one of the participants.	Convenience sampling. Responded through poster.
Relation to the topic	Interested in the environment	Interest in the environment	Interested in the environment	Interested in population topics	Interested in population
Contextual Notes	The Participant arrived 20 minutes earlier than expected. The interview went over time due to the natural rhythm and additional questions being asked from both sides.	The participant was extremely enthusiastic about all of the topics discussed. Often repeats himself several times and has unlimited ideas.	The participant was a bit nervous but excited at first, but later felt more comfortable.	The participant is very sharp, but defensive with her reasoning. Often goes off-topic. Comes from a one-child family.	The participant felt uncomfortable answering the questions a few times, but still managed to answer nonetheless.

Email Interviews

Date/Date Started Interview	28 June 2019	28 June 2019	1 July 2019	4 July 2019	15 July 2019
In person/Email	Email	Email	Email	Email	Email
Duration	1 week	3 days	1.5 weeks	4 days	2 days
Place	Paris	Paris	The Hague	Paris	London
Age	27	24	24	21	34
Gender	Male	Female	Female	Male	Male
Cultural Heritage	Romanian	Mexican/American	South African	American	Sudanese/British
Education/Employment Status	Business associate	Copywriter	Law intern	BSc studying civil engineering	Research associate
Method of Recruitment	Snowball sampling. Referred by one of the participants.	Convenience sampling. Responded through poster.	Convenience sampling. Responded through poster.	Snowball sampling. Referred by one of the participants.	Convenience sampling. Responded through encountering.
Relation to the topic	Interest in starting a family	Interest in starting a family	Interest in starting a family	Interest in the environment and population	Interest in population topics
Contextual Notes	Wish to start a family very soon.	Planning to have a family in the next 10 years.	Although not planning to have a family soon, but love kids, and want to have kids.	Planning to have a family in the future.	Currently have two kids.

Appendix C: Discourse Analysis Template

Discursive Elements	Examples/Quotes
The Human Experience: meaning of life, self-fulfillment, and creating a family	T: They bring meaning to life, and the unreserved love and laughter from children is something you simply do not get any other way. T: They give you a purpose, you can watch them learn and develop, there is something funny happening every day. T: instinct to want children is a powerful one, especially for women. T: When we consider the improbability of being here at all, and that all life is doomed in the long term, regardless of what we do... It doesn't make sense to not do things that give you great pleasure, or gives your life meaning. Otherwise what's the point of being here? To not enjoy your own life is the ultimate waste. D: I'd like to make my own family with my partner. J: It can be a contribution in itself, and I think it will be a very rewarding process – to raise someone like that. D: the (hopefully) unconditional love of children as well as the joy of creating life with my partner Z: Seeing them develop into the adults is always something I enjoyed. Z: you can see how they excel in the future in specific fields. Or see how they perceive the world compared to you. Z: If they do not want to have children, then so be it. I cannot stop them. I personally would like to be able to take care of them and see them become adults. C: we dream of having a family together C: I've first felt I want to have children after meeting my wife. It's one of the feelings I can't say I can explain logically, like falling in love or wanderlust. C: My views have changed recently, and I view having children as a more natural process, devoid of inherent interest and part of humans' continuous search for happiness and love.

	L: I hope to have children but I am not really sure why. I just want to raise a family
Personal Choice: finance, cultural and societal influences, and polarized adoption opinions	T: Let's do it now before we're too old. Let's start trying now, because we having everything in place, and we don't know how long it's going to take. J: … bring a child into the world also about what kind of world you bring them into. And yeah, on that, also includes how politics, like in how society's values and how much freedom they have when they grow up. T: Clearly, there are costs involved: it's probably the most expensive decision you make. C: I believe in the value of having a strong social care system for an aging population, which inherently calls for a younger workforce to provide support. J: … your friends and people you know has entered this kind of life. And I've seen myself, you know, kind of being influenced by this sort of thing. L: Overall children are a large expense but you will have something to bring you a lot of joy in life and hopefully look after you in your old age. J: I think a bigger problem is that you know, having the relationship, especially if you enter marriage… It's not about the two of you, especially in China. IT's about the rest of them as well… maybe about your employers. Employers are like, 'Oh, are you going to have a child?' You know, all these different elements, and that's… that's really scary. H: And I think that in a lot of societies also, if you have children, you're respected more. You are treated as if you are more important in society. T: Is there societal pressure to have children? Yes, very much depending on individual cultures. D: I would consider my financial situation, mental state and relationship status. D: making my parents happy by seeing the fruits of their labor and legacy continuing

D: I wouldn't consider having children until after I'm 32 or 35 mostly because of financial stability. I don't see my career goals being fully met until that age.

T: …we could think about that - but it's not really an alternative (we wouldn't have further children at that point). It is different- you don't see them from the start. You can't mold them quite as fully.

D: …much more important for some cultures, where older generations are financially or physically taken care of by younger generations. This act of inter-generational care isn't just symbolic, but especially necessary in countries where governments have failed to provide adequate health-care or pension systems for the elderly.

H: I think it is, because you're not contributing more to the problem by adopting, because these children are going to exist in a foster care system or in an orphanage or eventually, in some situations in some countries, they'll end up in slavery.

J: I do think that it is nice… a child from.. a very unfortunate background who his parents couldn't – their parents couldn't bring them up…

Z: . I want to have the security to know that I would not neglect them.

B: … adopting is a very interesting way to do so, because it's somehow a political act, you know? And it's much better than renting someone's body to have your children being generated… I think that when you adopt, you contribute to this like distribution and equalization of inequalities… hopefully giving a better condition to someone who is already here.

D: Other than that, adoption is the same in that it will be a product of me, my partner and my family.

Z: I have always thought of adoption as a way of becoming parent. I think if I were to adopt, I would do it a at a slightly older age. I do not see any difference between adoption and having your own kids.

Z: If they do not want to have children, then so be it. I cannot stop them. I personally would like to be able to take care of them and see them become adults.

C: I think adopting might have a different psychological impact on us as future parents, as it wouldn't involve a pregnancy period. However, this brings me mixed feelings as I feel I would be missing out on the process of becoming a parent.

	C: Climate change will not impact my decision to have children, but other people should be able to make the decision for themselves. L: I would consider adoption in the case my future wife or myself is infertile but I would like to have my own kids, they're like mini me!
Conflicted Climate Change Views: immediate effects, region dependence, and conflicts of interest	T: it's more likely to be because they worry about bringing children to a doomed world, rather than because to lessen their environmental impact. D: For me, it's more of a geographical issue in terms of where I would like to raise my children. That means, a city with low air pollution and at a low risk of environmental destruction (for example, the tragedies of island nations that are at risk of being under water in the near future) C: Agriculture, which used to be one of the most important industries in the region has been affected because of lack of water for irrigation. Many people lost their jobs and now depend on government help. T: I have some faith in technology, but this much more a societal and political problem. T: Right now and personally? Not that bad. But we are on the cusp of things becoming much worse. It often hits the poor hardest. The real problem is that it won't impact us directly until it's much too late. J: There is a direct consequence, but it doesn't impact in such a traumatic way that I would say that you know, I'm like the direct victim of climate change… A catastrophe, yes, incident, but more like it's a prolonged… reality that we all face. T: I don't know what I'll tell my kids when they figure out what a mess they are inheriting, but probably something along those lines. H: I feel like people, they're either not taking it seriously or they're thinking about their benefit now versus what's going to be good for them in the future. H: They would not have benefitted from this immediately. They would have benefitted from this over the next 10-15 years. But these people are not concerned over the next 10-15 years. They want results now, so they're saying, 'OK, you are making us pay more now. We're pissed. Okay?'

D: Inherent in her dialogue is the danger of positing authority to governing bodies in deciding who is and isn't fit to procreate. This already started happening in the US in the 1900s, where minority women were unwillingly sterilized and in fact, continues to happen today in the imprisoned population.

D: Providing incentives for healthier communities and environments by removing the GDP-as-growth model and making other economic indicators equally or more important is one solution.

D: I think it's important to provide my potential children with clean air and instill in them a respect for the planet.

H: I don't want to contribute to the destruction of the planet and of society by bringing more people into the world.

H: I've met other people who have decided not to have children, because of the environment in the world that the world cannot support that many people.

B: … when I look to the future, it… it feels hopelessness hopeless, you know? … I think that having children could be a burden for the child itself and for all the rest. It's a very pessimistic view.

D: I really don't want to go here, because human beings aren't commodities, but if you're going to treat children as elements contributing to the worsening of the environment, their waste is already a "sunk cost" so to speak. Whether they're contributing to waste in my household or contributing about the same waste somewhere else doesn't matter on a net scale.

D: My life doesn't explicitly suffer from climate change but, for example, some residents of my native state, California, have suffered from the destruction of their homes caused by wildfires.

Z: I agree that overpopulation is a problem and is causing our demise. To be honest, I cannot really say I am either for or against having only one child until I am in the situation.

Z: Our government has instructed us to shower for a certain amount of time. Some people are being taxed more if they have a pool or pets. So I say it is have negatively impacted the standard of living for some people.

C: I do feel a bit selfish wanting to have a large family, so this is something I might need to rethink in the future.

	C: Consumer culture is to be blamed, and I believe that we need a deep change in our collective values as a society and in the way we use education to teach about climate change. Z: So, I would first factor job security and finances. Second where I am located, am I in an area I know children will be able to develop. Third would then be climate change. L: I do believe they are important consideration but it will not prevent me from having children (2 is below the replacement rate of 2.1 anyway), although I do try to conserve resources where I can. L: In a wealthy, developed nation, the impact for me might just be the summers are a little hotter at the moment. In poorer nations, the impact is far worse with rising sea levels and the inability to prevent flooding. L: I feel although their intentions are good, they will not have a severe impact. Additionally those are the people you would prefer to have children as they are more environmentally conscious, the people you wouldn't want to have kids are the uninformed and those without knowledge of the consequences.