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# Arguments on thin ice: on non-medical egg freezing and individualisation arguments

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## ABSTRACT

The aim of this article is to provide a systematic reconstruction and critique of what is taken to be a central ethical concern against the use of non-medical egg freezing (NMEF). The concern can be captured in what we can call the individualisation argument. The argument states, very roughly, that women should not use NMEF as it is an individualistic and morally problematic solution to the social problems that women face, for instance, in the labour market. Instead of allowing or expecting women to deal with them on an individual level, we should address them by challenging the patriarchal structures of the labour market—for example, by securing equal pay, or paid maternal leave, or 'paid paternal [partner] leave and sick leave and affordable child care'. It will be made clear that there are several versions of this argument. The author will try to elaborate this claim, and it will be explained that the differences depend on the way in which bioethicists believe that individuals use of NMEF is morally problematic, compared with the alternative of securing social change for women in, say, the labour market. Finally, a critical discussion of three versions of the individualisation argument will follow, and it will be shown why all versions are on rather thin ice, or in other words, that they are implausible.

## INTRODUCTION

One obvious use of cryopreservation technologies is to help people facing certain kinds of disease to improve their chances of having children. An example of this is women undergoing cancer treatment that may damage their oocytes. If such women can have their oocytes/eggs cryopreserved, they will have a better chance of having children when the treatment is over. This form of cryopreservation is often called 'medical egg freezing'.<sup>1,2</sup> Few scholars have argued that the cryopreservation of gametes from people undergoing fertility-damaging medical treatment is morally wrong in principle, or ought to be made illegal.<sup>1</sup>

A different and much more intensively debated aspect of cryopreservation focuses on the process whereby healthy women freeze their eggs to preserve their future fertility for reasons having nothing directly to do with medical issues.<sup>11</sup> With this use

of cryopreservation, sometimes called 'social egg freezing' or 'non-medical egg freezing (NMEF)', we are a long way from reaching a moral consensus. Some of the main arguments in favour of NMEF, and the deferment of childbearing by means of it are based on approval for increased gender equality and/or reproductive freedom.<sup>3</sup> As regards gender inequality, it is illegal in Denmark,<sup>iii</sup> for example, for women to cryopreserve their eggs for more than 5 years, while there is no such upper limit for men.<sup>4</sup> Furthermore, while men do not face the 'reproductive biological clock' that women do, the use of NMEF could, compared with men's opportunities, increase women's opportunity to have children. Concerning reproductive freedom, NMEF is able to increase the probability of some women having a child at all (depending, of course, on the number of eggs that are cryopreserved). According to some scholars, NMEF may also give a woman more time to find a suitable partner, more time to complete education and/or more time to mature and develop a career and financial security before embarking on parenthood.<sup>1,3</sup>

In recent years, however, and despite these advantages, concerns about NMEF have been growing, widening what is perceived to be a moral gap between NMEF and medical egg freezing. It is possible that the ethical concerns have intensified following some new empirical findings and some new practices. First, from a technical point of view, it has become more attractive for women to have their eggs frozen, as the latest medical developments within cryopreservation, and especially vitrification, now offer success rates close to those with fresh donor oocytes.<sup>5,6</sup> Second, large companies like Apple and Facebook, and the US Department of Defense, have begun to offer cryopreservation benefits to their employees in order to retain young female employees.<sup>7</sup>

Ethical concerns about, and objections to, the use of NMEF are numerous. The author shall indicate a range of them before narrowing down the more precise aim of this paper. Several bioethicists claim that NMEF, in particular, and assisted reproduction in general, might not increase the autonomy

For example, a woman 25 years of age may freeze her eggs for non-medical reasons; however, when she is 30 years old and, say, has unfortunately been diagnosed with cancer, her frozen eggs may now be used for medical reasons as a way to preserve her fertility.

<sup>iii</sup>The five-year storage limit, that from a practical point of view makes non-medical freezing or social freezing non-existent, also applies in some other countries, including Norway, Romania and the United Arab Emirates.

<sup>i</sup>Unless of course the retrieval of eggs by means of hormone stimulation may delay the cancer treatment.<sup>20</sup> In such cases, cryopreservation of gametes may not be the right medical solution.

<sup>ii</sup>See Ref. 11 for a description of the difference between the narratives in which women freeze their eggs for medical reasons and those in which they do so for non-medical reasons. Further, the distinction between medical and NMEF is far from razor sharp.



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of women, as women are under intense social pressure to have children and preserve their fertility.<sup>iv8 9</sup> Others have argued that NMEF gives false hope to women<sup>2</sup> or that women are victims of an unscrupulous fertility industry.<sup>10</sup> Martin notes that some people tend to think that women who want non-medical cryopreservation demonstrate that they are selfish individuals who will not accept the dictates of their biological clocks.<sup>11</sup>

However important and interesting these ethical objections are, the aim of this article is to entirely focus on another ethical argument—one that has often been raised against the practice of NMEF. We can call this ‘the individualisation argument against NMEF’. The argument states, very roughly, that women should not use NMEF as it is an individualistic and morally problematic solution to the social problems that women face, for instance, in the labour market.<sup>8–10 12</sup> Instead of allowing or expecting women to deal with them on an individual level, we should address them by challenging the patriarchal structures of the labour market—for example, by securing equal pay, or paid maternal leave, or ‘paid paternal [partner] leave and sick leave, affordable child care, comprehensive health insurance ... and adequate wages’.<sup>12</sup>

The reason for writing a paper with this focus is that, to date, no one has tried to clarify different versions of this argument and critically discussed each of these versions. Until now, people have been content to just mention different versions of the argument, and apart from that they have actually made very few critical comments.<sup>v</sup> In the Reconstructing the individualisation argument, and its versions section, a systematic reconstruction of what the author takes to be the central ethical worry entailed in the individualisation argument will be provided. As already indicated, there are several versions of this argument. The author will try to elaborate this claim, and will explain that the differences depend on the way in which bioethicists believe that individuals use of NMEF is morally problematic, compared with the alternative of securing social change for women in, say, the labour market. The Critical discussion section critically discusses three versions of the individualisation argument, and it will be shown why all versions are on rather thin ice, or in other words, that they are implausible.

The investigation in this paper is relevant to practices other than NMEF. Similar individualisation arguments are used in other contexts, including, for instance, attacks on the use of cognitive enhancement drugs by healthy students and scholars.<sup>13 vi</sup> and on individual philanthropy.<sup>14 15vii</sup> Therefore, by paying careful attention to this kind of argument, we can reasonably hope to improve our understanding and reasoning about important ethical issues other than those associated with NMEF.

## RECONSTRUCTING THE INDIVIDUALISATION ARGUMENT, AND ITS VERSIONS

Before clarifying the different versions of the moral individualisation argument against the use of NMEF, a short reconstruction of the core of the argument will follow:

### The individualization argument against NMEF

P1: It is morally wrong to let individuals use technology X—in order to try to handle a problem that is social in nature—if the

use of X will somehow work against a social solution to a social problem P

P2: If individuals make use of a technology like NMEF, this will work against a social solution to P

C: It is therefore morally wrong for individuals to use NMEF.

The social problem mentioned in premises P1 and P2 could, for example, be that women are oppressed and/or harmed by a current labour market M, that favours male employees. M may require employees to be able to work long hours, with no balance between work and childcare. In M, women are, in many instances, underpaid compared with men,<sup>16 17</sup> or they may have poor or no pay while on maternity or sick leave. It may be that affordable childcare is not available—although it is obviously an option that might improve the career prospects of women in M. In what follows, the author will focus on version of the argument that explicitly believes that individuals use of NMEF will, in different ways, work against social solutions to problems that women often face in the current labour market M.

I will now specify some contrasting explanations of why the proponents of the individualization argument believe that the use of NMEF is morally wrong, compared with a social solution to social problems as mentioned in P1 and P2.

First, the ethical objection to the use of NMEF made by Line Morgan and Janelle Taylor is captured in the following:

[T]he problem with egg freezing is that it represents an individualized, private, expensive, high-tech medical solution to what is fundamentally a collective, social problem. ... Worse, it [non-medical egg freezing] isn't a social solution, so it cannot address the social causes that make it so difficult to balance career and family.<sup>12</sup>

Karey Harwood seems to argue along the same lines when she writes:

[NMEF] does not *substantially* alter the social structures that have constructed inequalities out of the biological differences between women and men, including women's more limited window of time to reproduce biologically. Since continued sexual inequality undermines the full exercise of women's reproductive autonomy, it is appropriate to question the role that egg freezing may play in leaving this societal injustice intact.<sup>8</sup>

A decade later, Harwood wrote: ‘I would like to suggest that [non-medical] egg freezing may leave the hard work of moving society toward greater sexual equality untouched’.<sup>10</sup>

The author takes it that the moral problem, for Morgan and Taylor and also for Harwood, is that individuals use of NMEF cannot, or cannot substantially, address the sexual inequality that women endure in, among other places, the current labour market. In other words, individuals use of NMEF cannot address the social problems women are faced with, as it will leave the ‘societal injustice intact’ or ‘untouched’. Let us call this view *the non-address view*. A more lenient version of the non-address view claims that while NMEF can address some of the problematic social problems for women in the current labour market, it still should not be used—not because it does nothing to change (or cannot address) the social problems, but because it cannot (or is inadequate to) *solve* the social problems in question. In the Critical discussion section, the author proposes to critically discuss the initial, less lenient formulation of the non-address view. This is because it seems to be what Morgan, Taylor and Harwood have in mind, and because it often seems very wrong to reject a technology on the grounds

<sup>iv</sup>For critical discussion of this objection, see for example, Ref. 21.

<sup>v</sup>For example, critically discuss the individualisation argument (or one version of it, at least) in a few sentences.

<sup>vi</sup>For a critique of this view and similar positions, see Ref. 22.

<sup>vii</sup>For a critique of this perspective, see for example, Ref. 23.

that it cannot solve a problem, while admitting that, all things considered, it can diminish the problem for some women for whom it works.<sup>viii</sup>

Other critical voices of NMEF, like Petropanagos, have argued that, instead of claiming that individuals use of NMEF does not address social problems for women, there is something morally worse going on; namely, that 'egg freezing unduly ... obscures the influence of social structures that can contribute to delayed childbearing in the first place'.<sup>9</sup> In other words, by using an individual solution like NMEF, we *obscure* or draw *attention and effort* away from social solutions to the social problems, including employment problems, which women currently face on the labour market. Let us call this view *the distraction view*.

Although there are likely to be empirical connections between the non-address view and the distraction view, in the sense that failure to address an issue, may be linked to the fact that there are distractions from that issue and vice versa, the two views are not identical. While the non-address view claims that the problem with individuals use of NMEF is that NMEF does not address the social problem for women, the distraction view claims that womens use of NMEF obscures or draws attention away from social solutions to social problems.

In a third version of the individualisation argument, the moral worry is intensified compared with the non-address view and the distraction view, as the claim here, by Harwood is that womens use of NMEF does worsen the oppression of women because 'technological solutions to social problems [such as NMEF] ... often result in the further oppression of disadvantaged groups'.<sup>10</sup> One way in which this kind of oppression can take place, according to Harwood, is that not every woman can pay for egg freezing. Thus, let us call this view *the further oppression view*. In the next section, these three different views will all be criticised.

## CRITICAL DISCUSSION

Before embarking on a critical discussion, it will be shown why all three of the versions of the individualisation argument that have been distinguished so far, are morally appealing. They are all deeply motivated by a very sympathetic concern with improving the lives of women by changing social structures in a way that will increase women's opportunities to thrive in (among other things) the labour market. Furthermore, let us accept that the current labour market in many countries is highly morally problematic, since, on many parameters, it does not give women equal opportunities, compared with men, when it comes to pay and paid maternity/paternity leave, for example. However, in our quest for social change, we should make sure that individuals use of NMEF has been given a fair hearing. In what follows, we shall see that several challenges can be made to the three versions of the individualisation argument.

First, it will be shown that some of the empirical claims used to support the three views are not adequately evidenced. If this is true, the different versions of the individualisation argument do not get well off the ground. Let me give examples for each of the three views. First, the non-address view implies that NMEF *cannot* address sexual inequality between men and women, but this is not necessarily true and is nowhere backed up with evidence. It seems to be an open question whether it is true that

NMEF cannot address the issue of sexual inequality. If some women can benefit from NMEF in the sense that it makes it easier for them to balance career and family life, this will, all else being equal, bring greater equality between at least some women and some men when it comes to having children, reproductive freedom and career opportunities.

Further, in relation to the distraction view, there is little or no evidence that womens use of NMEF will divert attention from the search for social solutions to social problems like those posed by a patriarchal labour market. Actually, ethical discussion among politicians, the public and scholars of NMEF usually *attracts* attention to the huge social moral problems that women often face in the current labour market. This is true, at least, of the discussions in all of the papers mentioned and analysed in this article. A parallel example of this is the following. If more people were to donate money to charity organisations, and seriously accept that we, as individuals, ought to do a lot more to fight global poverty and climate change, politicians would be more willing to vote for social policies diminishing global poverty and arresting climate change. The same kind of reasoning can be applied to argue in favour of NMEF, in the sense that debates about women's opportunities to secure greater reproductive autonomy and equality through their access to NMEF may inspire discussion among politicians, the public and scholars about women's autonomy and equality in today's labour market. As we have seen, Petropanagos *et al*<sup>9</sup> suggest that the notion of an individual solution is morally problematic because it 'obscures the influence of social structures that can contribute to delayed childbearing', but this, again, is not backed by empirical data. It could be true that the use of NMEF will give some individuals enhanced power and awareness of the issues on which to focus, and in that way support social solutions to social problems in the labour market and, for example, the education system. Furthermore, it would take a lot of evidence to show that the use of NMEF would obscure or make it less likely that the labour market will change in the direction of creating more opportunities for women. This is so especially because a women-unfriendly labour market existed long before the invention of egg freezing and the introduction of NMEF, and because the improvements for women on the labour market that have occurred, have taken place during the last 30 years or so, at a time when egg freezing has been introduced as a technological possibility. So, it is at least possible that social change towards more equality between the sexes on the labour market can exist alongside technologies like NMEF.

Moreover, the empirical basis of the further oppression view is also unconvincing. Harwood offers no support for her claim that 'technological solutions to social problems ... often result in the further oppression of disadvantaged groups'. Harwood may be right, but the evidence is lacking. And even if Harwood is right to make this *general* claim, she still needs to present evidence for the more specific assertion that the use of a technology like NMEF will lead to further oppression of disadvantaged groups. Whether the use of NMEF will further oppress, for example, low-income women, is not obvious. If NMEF is offered in a welfare state, as is the case in, for example, Sweden or is offered and paid for by big companies, low-income women may also have access to NMEF.

Finally, the author believes that it is fair to challenge the idea that women mainly use NMEF due to social problems on the labour market. In fact, a recent study shows that women who choose to use NMEF do it primarily because they want to have children and because they lack a suitable partner.<sup>18</sup> This problem with finding a suitable partner is far from being fixed

<sup>viii</sup>Unless, of course, a technology T that can only partly solve a problem X will ensure that X will not be wholly solved.

by having better access to free childcare, paid paternity leave, and so on. In the same study, only 1% of respondents said that they used NMEF in order to have better opportunities in the labour market.

However, let us now turn to some of the moral problems with versions of the individualisation argument. We can raise the first moral challenge if we are convinced by one empirical plausible claim and one plausible expectation. The empirical claim is that it is not true that women's use of NMEF will work against the realisation of a fair labour market. As the latter paragraphs have shown, there are some reasons to accept this. The expectation is that the preferred social solutions to an unfair, patriarchal labour market (e.g., equal pay, paid paternity/maternity leave, fully funded or subsidised childcare) are unlikely to be implemented immediately. However, given the delay, and that the delay is not caused by women's use of NMEF, it seems morally wrong not to allow women to try to tackle their problems by using NMEF. The social changes needed to combat the problems that distort the labour market may only materialise 30 years from now. By choosing to focus only on long-term social solutions, we ignore the women and their partners and relatives who can benefit from NMEF *now*. In fact, the social changes may *never* occur. If that were to be the case, it would be even more morally wrong not to let women use individual solutions like NMEF.

However, suppose now that all the empirical claims made, or implied, in the three versions of the individualisation argument turn out to be true. Even if this was the case it will be argued that all three versions would be challenged by moral problems. There are at least two such problems.

The first is that there are good reasons to question the moral idea expressed in P1—that is, the idea that it is morally wrong to let individuals use technology X, if the use of X will somehow work against a social solution to a social problem P. As a point of departure, we can note that there seem to be many cases where it appears morally acceptable for individuals themselves to try to deal with the causes of social/political/structural problems, even if this will *not address or draw attention away* from the social problems, or even if it will *further oppress* some women. First, imagine a case where, all else being equal, 1000 people/parents a year have a child thanks to NMEF, but where the use of NMEF *does not address* the social inequality between men and women on the labour market. It is not obvious that this is a morally problematic scenario. Especially, if we accept that it will bring some additional well-being to the 1000 people who each year have a child, because of NMEF.<sup>19ix</sup> Imagine, furthermore, that the use of NMEF will *draw attention away* from a social solution. Whether this is morally problematic depends again on the relevant comparison. Imagine again that the use of NMEF will help 1000 people a year to have a child of their own. Imagine further that the use of the technology will draw attention away from a relevant social problem in a way that will delay the day where we will have, for example, a fair labour market by 1 week. Therefore, instead of having a fair labour market in 30 years, we would have a fair labour market in 30 years and 1 week. Again, it is not obvious that it is morally better to make sure that a fair labour market will be achieved in 30 years instead of in 30 years

<sup>ix</sup> Several empirical several studies show that it will increase people's well-being to have children; see, for example, Refs. 19 24 25.

and 1 week than to prohibit 30 000 ( $30 \times 1000$ ) people from being parents. In addition, the same kind of reasoning can be used even if NMEF will *further oppress* some women. Whether this is morally right or not depends on how many women are oppressed and how severely they are being oppressed because some women use NMEF, and on how many women benefit (and to what extent) from NMEF. If, for example, a handful of women are being oppressed to a small degree because 1000 women have a child by means of NMEF, this is not obviously morally wrong, as the amount of well-being gained by the parents may easily outweigh the harm a handful of women may experience by being oppressed to a small degree.

Second, rather than morally rejecting women's use of NMEF and focusing solely on collective solutions to social problems, for example, in the labour market, we should direct resources (time, effort, funding, etc.) *both* to helping individual women gain reproductive autonomy *and* improving the labour market in a way that gives more women opportunities. In other words, given that NMEF is safe to use, and assuming that women are informed about its consequences, we should accept that women are entitled to use NMEF if they believe this will benefit them. At the same time, however, we ought to combat a damagingly unfair labour market through politics and social change—and make that labour market as attractive for women as it is for men. It might be objected that it is impossible to do both of these things. But, again, this objection has not been supported by evidence that women (or men) who address the problems they have in an individualistic way care less, or not at all, about the general social problem of women's opportunities in the labour market. It does not necessarily follow that women who use NMEF to increase their chances of having offspring do not believe in improving opportunities for women in the labour market, or are less active in such efforts. What is needed are empirical studies *showing* that people using NMEF do not care about the inequality women face in different sectors.

## CONCLUSION

The moral objections to the use of NMEF that have been examined in this article all seem to arise from genuine and sympathetic concern for women's opportunities and well-being. However, the three versions of the argument against NMEF the author has distinguished need to be kept apart, and further we should recognise that all of them are far from convincing. They all rely on unsupported empirical claims and morally problematic reasoning. Although the versions of the individualisation argument that have been analysed in this paper do not seem convincing, they might be improved in ways the author has overlooked. Moreover, of course, and as indicated in the introduction, there may be other arguments for the conclusion that the use of NMEF is morally wrong, but they are not dealt with in this paper. However, the author hopes that the discussion in this paper has made some progress in helping us to understand ethical objections to NMEF that are based on individualisation arguments, and why the versions of these arguments, discussed in the article, are implausible.

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## REFERENCES

- Lockwood GM. Social egg freezing: the prospect of reproductive 'immortality' or a dangerous delusion? *Reprod Biomed Online* 2011;23(3):334–40.
- Mertes H, Pennings G. Social egg freezing: for better, not for worse. *Reprod Biomed Online* 2011;23(7):824–9.
- Goold I, Savulescu J. In favour of freezing eggs for non-medical reasons. *Bioethics* 2009;23(1):47–58.
- Kroløkke C, Petersen TS, Hermann JR, et al. *The Cryopolitics of Reproduction: A New Scandinavian Ice Age*. Emerald Publishing 2020.
- Trokoudes KM, Pavliades C, Zhang X, et al. Comparison outcome of fresh and vitrified donor oocytes in an egg-sharing donation program. *Fertil Steril* 2011;95(6):1996–2000.
- Rienzi L, Romano S, Albricci L, et al. Embryo development of fresh 'versus' vitrified metaphase II oocytes after ICSI: a prospective randomized sibling-oocyte study. *Hum Reprod* 2010;25(1):66–73.
- Mohapatra S. Using egg freezing to extend the biological clock: fertility insurance or false hope. *Harv L & Pol'y Rev* 2008;8:381.
- Harwood K. Egg freezing: a breakthrough for reproductive autonomy? *Bioethics* 2009;23(1):39–46.
- Petropanagos A, Cattapan A, Baylis F, et al. Social egg freezing: risk, benefits and other considerations. *CMAJ* 2015;187(9):666–9.
- Harwood K. Egg Freezing and the Feminist Quest for Equality in the Workspace. In: Campo-Engelstein L, Brucher P, eds. *Reproductive Ethics: New Challenges and Conversations*. Springer, 2017: 63–73.
- Martin LJ. Anticipating infertility. *Gender & Society* 2010;24(4):526–45.
- Morgan LM, Taylor JS. Op-Ed: Egg Freezing: Why's this feminist? *The feminist wire* 2013.
- Schwartz A. The Selling of attention deficit disorder, *New York times* 2013.
- Gomberg P. The fallacy of philanthropy. *Can J Philos* 2002;32(1):29–65.
- Schweickart D. Global poverty: alternative perspectives on what we should Do-and why. *J Soc Philos* 2008;39(4):471–91.
- O'Reilly J, Smith M, Deakin S, et al. Equal pay as a moving target: international perspectives on forty-years of addressing the gender pay gap. *Cambridge J Econ* 2015;39(2):299–317.
- Dahl GB, Løken KV, Mogstad M, et al. What is the case for paid maternity leave? *Rev Econ Stat* 2016;98(4):655–70.
- Inhorn MC, Birenbaum-Carmeli D, Westphal LM, et al. Ten pathways to elective egg freezing: a binational analysis. *J Assist Reprod Genet* 2018;35(11):2003–11.
- Myrskylä M, Margolis R. Happiness: before and after the kids. *Demography* 2014;51(5):1843–66.
- Jeruss JS, Woodruff TK. Preservation of fertility in patients with cancer. *N Engl J Med* 2009;360(9):902–11.
- Petersen TS. A woman's choice? on women, assisted reproduction and social coercion. *Ethical Theory Moral Pract* 2004;7(1):81–90.
- Petersen TS. Should the state prohibit healthy people's access to pharmacological cognitive enhancers? on arguments from coercion and individualization. *Int J Law Psychiatry* 2019;65:101382.
- Wichmann SS, Petersen TS. Poverty relief: philanthropy versus changing the system: a critical discussion of some objections to the 'Singer Solution'. *Journal of Global Ethics* 2013;9(1):3–11.
- Kohler HP, Behrman J, Skythe A. *Partner+Children=Happiness?: an assessment of fertility and partnerships on subjective well being*. Philadelphia: University of Pennsylvania, Department of Economics, 2005.
- Becker C, Kirchmaier I, Trautmann ST. Marriage, parenthood and social network: subjective well-being and mental health in old age. *PLoS One* 2019;14(7):e0218704.