

# Cryopreserved Embryos and *Dignitas Personae*: Another Option?\*

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ABSTRACT: Many of the thousands of human embryos currently in cryogenic storage will sooner or later be discarded, often after being experimented upon. Others will remain in storage indefinitely, left there by parents who have no plans either to bring them to term or to offer them for adoption. These facts, coupled with a commitment to the basic moral equality of all human beings at all stages of development, generate a pressing question: What should be done for these embryos whose vital activities have been suspended and whose futures look so bleak? This paper offers a case that allowing some of these cryogenically stored embryos to thaw and die, and to dispose of their remains in a manner that reflects their status, is morally acceptable in that it is consistent with the principles that many accept as governing the removal of life-sustaining treatment in end-of-life cases.

**F**OR QUITE SOME TIME NOW, a common treatment for infertility has been to fertilize multiple ova in vitro. Some of the resulting “fresh” embryos are then introduced into the patient’s uterus in the hopes that a pregnancy

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will follow. Others are frozen and stored for future pregnancy attempts. Still others are judged not to meet the criteria for the first two options and are discarded. As of 2003 (the last year for which reliable numbers are available), this practice had resulted in roughly 400,000 frozen embryos in cryogenic storage in U.S. fertility clinics.<sup>1</sup> While the parents of a good number of these embryos plan on using them in future pregnancy attempts, this paper focuses upon the large number of embryos who are not now, and are unlikely ever to be, part of anyone's pregnancy plan. To get a sense of the numbers of embryos in play here, consider that a recent survey of over one thousand individuals who currently had cryopreserved embryos found that "only 67% of patients were likely...to use embryos for reproduction." This same study also reported that 21% of the respondents were "very likely" to donate their embryos for research.<sup>2</sup> Applying these results to the 400,000 or so frozen embryos currently in storage yields some startling figures: over 100,000 embryos whose parents do not believe it likely that they will be used for reproduction, and over 80,000 whose parents are very likely to make them available for embryo-destructive research.<sup>3</sup>

The Catholic Church's Congregation for the Doctrine of the Faith's 2008 Instruction *Dignitas Personae*, echoing its 1987 Instruction *Donum Vitae*, explains that the practice of cryopreserving embryos as an standard element in the treatment of infertility is

incompatible with the respect owed to human embryos; it presupposes their production *in vitro*; it exposes them to the serious risk of death or physical harm, since a high percentage does not survive the process of freezing and thawing; it deprives them at least temporarily of maternal reception and gestation; it places them in a situation in

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<sup>1</sup> David Hoffman et al., "Cryopreserved Embryos in the United States and Their Availability for Research," *Fertility and Sterility* 79 (2003): 1063-69 at 1068.

<sup>2</sup> Anne Lysterly et al., "Fertility Patients' Views about Frozen Embryo Disposition: Results of a Multi-Institutional U.S. Survey," *Fertility and Sterility* 93 (2010): 499-509 at 502.

<sup>3</sup> Only 31% of those surveyed indicated that they were "very unlikely" to choose donation for research (Lysterly, p. 502). The authors of this study describe it as "the largest and only multi-site study directly measuring fertility patient preferences for disposition of cryopreserved embryos in the United States, Australia, or Europe" (Lysterly, p. 507).

which they are susceptible to further offense and manipulation.<sup>4</sup>

If one accepts this assessment of cryogenic storage and considers that it is likely that many, perhaps tens of thousands, of these stored embryos will not be given the opportunity to continue their development, one is left with a pressing moral question: What should be done with these excess embryos?<sup>5</sup>

In what follows I offer a somewhat tentative answer that assumes, with *Dignitatis Personae*, the equal moral status of all human beings, including embryos, and seeks to be consistent with both the aforementioned assessment of cryogenic storage and the principles that govern this moral tradition's casuistry in end-of-life cases.<sup>6</sup>

Possible "Solutions." Consider the following five options that might be offered regarding the disposition of these embryos:

1. Use these embryos in research that in due course destroys them.
2. Maintain them in their frozen state until they are no longer viable, then dispose of them as medical waste.<sup>7</sup>
3. End their frozen state now by disposing of them as medical waste.
4. Maintain them in their frozen state so that they may some day be transferred into adoptive mothers who would bring them to term.
5. Maintain them in their frozen state in the hope that artificial wombs, and consenting parents, may some day allow them to be brought to term.

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<sup>4</sup> *Dignitas personae* §18.

<sup>5</sup> Perhaps a better way to formulate the question, a formulation that more clearly indicates the nature and direction of our obligation, would be: What should be done *for* these excess embryos?

<sup>6</sup> The assumption that all human beings, regardless of stage of development or decline, enjoy an equal moral status is an acceptable starting point for these reflections, and for a simple reason. It is this putative basic equality that generates the moral issue addressed in this article, namely, what to do for these fellow members of the moral community. If, as many believe, human embryos do not share this equal basic status with more developed members of the species, then the moral objections generated by their cryopreservation and disposal lose much, if not all, of their force, and with it goes the pressing need to find a more morally acceptable option.

<sup>7</sup> A 2003 survey of 175 IVF clinics that practiced embryo disposal found that 94% disposed of embryos "as biological waste material." Andrea Gurmankin et al., "Embryo Disposal Practices in IVF Clinics in the United States," *Politics and the Life Sciences* 22 (2003): 4-8 at 4.

Each of these options would presumably enjoy different degrees of popularity and surely enjoy different degrees of plausibility. Yet, were one to accept the assessment of cryogenic storage found in *Dignitas Personae* and the broader moral worldview and philosophical anthropology that ground that assessment, one would be led to the conclusion that each of these options is at best highly morally questionable. More specifically, *Dignitas Personae* explicitly rejects option (1). Its affirmation of the moral status of human beings at all stages of development and decline entails the rejection of options (2) and (3). In short, human embryos are fellow human beings and not objects to be experimented upon nor waste material to be discarded. What, though, of option (4)? *Dignitas Personae* has this to say about it:

It has been proposed solely in order to allow human beings to be born who are otherwise condemned to destruction, that there could be a form of “prenatal adoption.” This proposal, praiseworthy with regard to the intentions of respecting and defending human life, presents, however, various problems not dissimilar to those mentioned above.<sup>8</sup>

What exactly these “problems” are, however, is to many careful readers not clear. On one reading, the problems are those “of a medical, psychological, and legal nature” (mentioned earlier in the document). On another reading, the moral obstacles in play here run deeper than those just mentioned and are encountered when employing embryo adoption as a remedy to *infertility*. Such concerns, though, may not amount to insurmountable moral obstacles when prenatal adoptions are chosen as means to embryo *rescue*. Others, however, believe the “problems” referenced here are of the sort that are intrinsically inconsistent with marital fidelity, particularly the obligation that one become pregnant only through one’s spouse. If this is the case, then embryo adoption and implantation, even as a means of embryo *rescue*, would be morally unacceptable. Given what is at stake, clarification is needed.<sup>9</sup>

Yet, even if embryo adoption-for-rescue is morally licit, it seems unlikely that this practice would constitute a solution anywhere near the scale of the problem. In 2005 one professional in the area of infertility treatment reported that “[p]atients are conflicted regarding the disposition of their stored embryos,

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<sup>8</sup> *Dignitas Personae* §19.

<sup>9</sup> In this regard see “Symposium on *Dignitas Personae*,” ed. E. Christian Brugger, *National Catholic Bioethics Quarterly* 9/3 (2009): 461-539.

and choose disposal more often than other options. They rarely choose donation to another couple.”<sup>10</sup> Four years later, a study of 165 individuals who had embryos stored for three or more years reported that “only 4% indicated it was likely they would donate to other couples.”<sup>11</sup> A 2010 study of individuals who currently have embryos in storage confirmed this reluctance on the part of parents to put their stored embryos up for adoption, finding that

consistent with previous studies, few patients in this study were very likely to choose the option of reproductive donation...Only 7% of participants indicated that they are very likely to choose reproductive donation; in contrast 59% were very *unlikely* to choose this option.<sup>12</sup>

Finding embryo adoption an unacceptable solution, Tadeusz Pacholczyk suggests a version of option (2) for consideration.

[W]e continue to store the embryos in their current, frozen state as part of our moral duty to care for our own offspring. They could be cryopreserved until a morally acceptable option for rescuing them presents itself (if such an option, in fact, exists), or until they eventually die of their own accord in the deep freeze.<sup>13</sup>

When weighing this option, though, one must keep in mind just how unlikely it is that any of the tens of thousands of frozen embryos that we have identified would be adopted and brought to term in a gestational mother (or a mechanical uterus), and just how much more likely it is that they will be discarded by a lab employee or destroyed in research. Furthermore, cryopreserving an in-vitro produced embryo until it suits the plans of those who have authority over it, or until it can no longer be re-animated, brings significant harms to the embryo. The freezing arrests its natural, biological dynamism and, by setting it aside in this manner, its status as an individual member of the human community whose

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<sup>10</sup> Robert Shabanowitz, “The Disposer’s Dilemma,” *The American Journal of Bioethics* 5 (2005): 60-61 at 61.

<sup>11</sup> Catherine McMahon & Douglas Saunders, “Attitudes of Couples with Stored Frozen Embryos toward Conditional Embryo Donation,” *Fertility and Sterility* 91 (2009): 140-47 at 140.

<sup>12</sup> Lyerly et al. 2010, p. 507.

<sup>13</sup> Tadeusz Pacholczyk, “Frozen Embryo Adoptions Are Morally Objectionable,” *The Catholic Citizen: Proceedings from the 26<sup>th</sup> Annual Conference of the Fellowship of Catholic Scholars*, ed. Kenneth Whitehead (South Bend IN: St. Augustine’s Press, 2010), pp. 84-101.

interests must be valued and respected for its own sake is violated.<sup>14</sup> *Donum Vitae* explains that

the freezing of embryos, *even when carried out in order to preserve the life of an embryo* – cryopreservation – constitutes an offense against the respect due to human beings by exposing them to grave risks or harm to their physical integrity, and depriving them, at least temporarily, of maternal shelter and gestation, thus placing them in a situation in which further offenses and manipulation are possible.<sup>15</sup>

The choice to perpetuate this state is a choice that perpetuates these harms. Still, if the choice to keep these embryos frozen is not intrinsically wrong, and if the harm caused by this choice is unintended, then a proportionate good for the embryo would justify this option. But does cryogenic storage offer a benefit to the embryo proportionate to the harms it entails?

The most obvious answer to this question is that without this cryogenic storage the embryo, developing in-vitro, would soon die. Keeping this from happening is the proportionate good that may make this choice acceptable.<sup>16</sup> If the choice to cryopreserve the embryo could be licit, then the choice to continue this state when one might end it could be licit, too, and for the same reason(s). Yet it is reasonable to question whether, in *some* circumstances, for *some* embryos, the good of delaying death is as good as it seems (and thus proportionate to the harm entailed). Consider again the most likely fates of the embryos in question. In light of those possibilities, does continuation of cryogenic storage, itself an offense, until a still greater offense is committed (embryo destructive research and/or disposal as waste), promise a proportionate good to the embryo? It seems not. One may even make the case that, for the embryos in question, the choice to continue cryopreservation is *less* morally defensible than the prior choice to place them in cryopreservation since the original choice to freeze was part of a project that included a more plausible hope that the to-be-frozen embryo would one day be implanted and brought to term. As the likelihood of that good ever being realized diminishes over time, the claim that this hoped-for good is proportionate to the present and likely future harms becomes less and less plausible. We will return to this issue

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<sup>14</sup> Part of this failure to respect its basic moral statue is the failure to respond to its legitimate claim to be nurtured by its parents and the community.

<sup>15</sup> *Donum Vitae* §6 (emphasis added).

<sup>16</sup> This appears to be the reasoning suggested by Fr. Pacholczyk above.

shortly.

As for option (5), given the implausibility of all that would have to occur (technologically, socially, and politically) for this option to be implemented on the necessary scale, it too appears vulnerable to the line of criticism just offered. Before this becomes a real option that could possibly justify the continued cryopreservation of currently frozen embryos, the technology must be developed and the parents of the tens of thousands of frozen embryos in question would have to consent to allowing their offspring to be gestated in artificial wombs. Given that many of these embryos are in their current predicament because their parents no longer desire to bring them to term as part of their family plans and will not make them available for adoption, this latter requirement seems a practical impossibility for many of these embryos. Even if these rather significant hurdles were cleared, others concerning the costs associated with this proposal – especially the question of who would bear them – would remain. For these reasons, one may well wonder whether this option will ever be available (and employed) on a scale sufficient to tilt the assessment in favor of continuing to preserve these embryos in their frozen state in the expectation that someday they will be allowed to continue their lives. Finally, it may be the case that waiting for artificial wombs here is analogous to maintaining somebody on a ventilator indefinitely in the wild hope of a miracle cure being discovered at some point in the future. Given the burdens of cryogenic storage (to be discussed below), given the uncertainty of the availability of this solution even if the technology were to be developed, and given the fact that the parents of many of these embryos have completed their childbearing family plans and have chosen not to make their embryos available for adoption, this option does not appear up to the task of promising a good for the embryo proportionate to the harm of continued cryopreservation. After considering each of the five options mentioned above, it seems that *Dignitas Personae*'s lament that there appears to be no just solution to this problem is well-founded.

#### Another Option

There is, though, another option that has not yet been examined. Might it be morally acceptable and the best of a set of problematic options for the parents of these embryos (or, in the case of abandoned embryos, individuals or groups who “adopt” them) to allow them to thaw and die, and then dispose of their remains, all in a manner that reflects their status as human persons and

equal members of the moral community.<sup>17</sup> In 2003 Nicholas Tonti-Filippini offered his support for this possibility, but over the last several years this option has been given very little attention.<sup>18</sup> What might a developed case in favor of it look like? I suggest that the removal of these embryos from cryogenic storage may be acceptable in a manner analogous to removing disproportionately burdensome life-sustaining treatment in other contexts. This suggestion immediately raises two important questions: (1) *Is* cryogenic storage disproportionately burdensome? (2) Is cryogenic storage medical *treatment* or basic *care*?

The question of whether cryogenic storage is disproportionately burdensome is important because if the answer is “no,” then the option being proposed could be ruled out. To remove from a patient in one’s care a treatment that is understood to be both life-sustaining and not disproportionately burdensome would seem to be a choice aimed at the death of the patient. Applied to the dilemma at hand, the thaw-and-let-die option would amount to the choice to kill frozen embryos, hardly a course of action consistent with the belief that these embryos have the same basic inviolability that all human beings enjoy. Commitment to the embryos’ basic moral status as fellow human beings generates the current. Simply violating this commitment is no solution. So, even if cryogenic storage is a type of burdensome, life-sustaining treatment for these embryos, it may not be

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<sup>17</sup> What would allowing these embryos to thaw and die, and then disposing of them “in a manner that reflects their status as human persons and equal members of the moral community” look like? The answer to this question would likely vary from case to case, just as the personal (non-clinical) dimension of such decisions for the dying, and services for the deceased, vary from case to case. One would imagine that what would be done for the embryos in question would roughly track what particular families, communities, faith traditions, etc. do for any member who dies. More to the point is what would not be done to these embryos; they would not be kept frozen until used in research (or no longer usable) and then unceremoniously discarded as medical waste by laboratory personnel.

<sup>18</sup> Nicholas Tonti-Filippini had this to say about these frozen embryos: “[T]he solution I would advocate...is simply that they be thawed in moist conditions (in which hydration and the removal of the anhydrating chemicals can occur), in order that they may be restored to their natural dynamic state, a state more fitting their sacredness as human beings than the state of frozen and anhydrous suspended animation.” Nicholas Tonti-Filippini, “The Embryo Rescue Debate,” *National Catholic Bioethics Quarterly* 3 (2003): 111-37 at 136.



removed unless it is disproportionately burdensome to them. Is it? Answering this question requires a more careful consideration of the burdens and benefits of cryogenic storage.

The benefit that cryopreservation provides to the embryo is not precisely *life* itself since its life is, in a real sense, suspended. There is no living going on. The benefit, it seems, is more one of staving off death and/or preserving the possibility of future living since the embryo would have died were it not frozen, and would die were it now thawed. The harm to the embryo placed in this state is multi-faceted. Its living is suspended, its normal growth and development arrested. It is stored as a product in a laboratory rather than nurtured as offspring in a biological or adoptive mother, and all this while others deliberate about which of a limited number of bleak futures it will face. An important element to keep in mind here is that we are considering those embryos who have been abandoned by their parents or whose parents have made the decision that they will not be introduced into a uterus in an attempt to bring them to term. In light of their current state and grim future, a future of being experimented on or remaining frozen, perhaps for decades, until being disposed of, the claim that the good that cryogenic storage secures for these embryos is *authentically* good for them is somewhat dubious, as is *a fortiori* the claim that this good is proportionate to the harms that continued cryogenic storage entails.

In §63 of his 1995 encyclical *Evangelium Vitae* Pope John Paul II affirmed the position laid out eight years earlier in the instruction *Donum Vitae* that

one must uphold as licit procedures carried out on the human embryo which respect the life and integrity of the embryo and do not involve disproportionate risks for it, but rather are directed to its healing, the improvement of its condition of health, or its individual survival.<sup>19</sup>

Here one may find more reasons to reject the continued cryopreservation of the embryos in question. Before considering these reasons, though, it should be noted that William Saunders believes *Donum Vitae* does not support but instead appears to rule out the thawing option under consideration. He cites the instruction's teaching that it is "not in conformity with the moral law

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<sup>19</sup> *Donum vitae* §3.

deliberately to expose to death human embryos obtained *in vitro*.<sup>20</sup> This statement, Saunders writes, “would seem to preclude the course often preferred by those who oppose embryo adoption – them, baptize them, and permit them to die.”<sup>21</sup> Jason Eberl agrees.<sup>22</sup> Yet the context of the excerpt to which Saunders calls our attention leaves room to doubt his conclusion. Saunders draws the excerpt from *Donum Vitae* §5, where the focal question is: “How is one morally to evaluate the use for research purposes of embryos obtained by fertilization *in vitro*?” The paragraph in which the cited text is located begins with the following: “Methods of observation or experimentation which damage or impose grave and disproportionate risks upon embryos obtained *in vitro* are morally illicit.” The focus there, as Saunders and Eberl acknowledge, is on embryo destructive research. The option under consideration here is clearly not that. Furthermore, if cryogenic storage does indeed impose “grave and disproportionate risks upon embryos obtained *in vitro*,” then to maintain that *Donum Vitae* rules out the option under consideration is to interpret that document, implausibly, as prohibiting imposing such burdens on embryos *in vitro* but requiring the perpetuation of such burdens “in cryo.”

Given the burdens associated with their storage, and given their fate in light of their parents’ plans neither to bring them to term nor to offer them for adoption, is it not the case that continuing their cryopreservation would be, in the language of *Donum Vitae* §3, directed neither to their healing nor to the improvement of their condition? While it is true that keeping these embryos in their frozen state is directed at their survival, it is clearly not a goal pursued for the sake of their own well-being. Indeed, at least for the embryos in question, cryopreservation seems better described as aimed at preventing the loss of their usefulness rather than at supporting their own proper good. In a real sense they are treated no differently than apples in cold storage, kept from spoiling not for their own benefit but for the good of those who would consume them.

In a 1983 discourse to the World Medical Association, John Paul II offered what *Donum Vitae* later identified as the “criteria” for determining the legitimacy of procedures carried out on human embryos:

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<sup>20</sup> *Donum vitae* §5.

<sup>21</sup> Saunders (2004), p. 76.

<sup>22</sup> Jason Eberl, “What *Dignitas Personae* Does Not Say,” *National Catholic Bioethics Quarterly* 10 (2010): 89-110 at 93.

A strictly therapeutic intervention whose explicit objective is the healing of various maladies...will, in principle, be considered desirable provided it is directed to the true promotion of the personal well-being of the individual without doing harm to his integrity or worsening his conditions of life.<sup>23</sup>

With these criteria in mind, one may reasonably question whether cryogenic storage is therapeutic for these embryos. As Loretta Kopelman explains rather succinctly, “part of the meaning of a therapy is that it is intended to benefit someone.”<sup>24</sup> To call *therapy* the maintenance of one human being’s life – or, more aptly, the mere prevention of their death – in order that they may serve others’ well-being or because one is unwilling to allow them to live or to die, stretches the meaning of the term and puts it at odds with the longstanding and widely accepted principle that human beings are always to be treated as ends in themselves. If one assumes that all authentic therapy will be consistent with this moral principle, then one has grounds to conclude that cryogenic storage of these embryos is not therapeutic. This procedure neither promotes nor is directed at promoting the integral well-being of these embryos, and it arguably worsens their condition of life. Given all that has been said, is it not the case that cryogenic storage offers only burdens to these embryos and, as such, is disproportionately burdensome to them?

By answering the first question from above, namely, whether cryogenic storage is disproportionately burdensome to some embryos, we have come far in answering the second question, whether cryogenic storage is medical treatment or basic care. This question is important because if cryogenic storage is simply a form of basic care, and if basic care may never be abandoned, then allowing these embryos to thaw would be ruled out. Now there are those who do not find the differences between *treatment* and *care* sufficient to ground the moral judgment that the former is optional if the burdens are disproportionate to the benefits, while the latter is always obligatory. Still, those who believe that basic care – including, for example, artificial nutrition and hydration for patients in a persistent vegetative state – is always obligatory need not, given this commitment, reject out of hand the proposal offered here since it is doubtful that cryogenic storage is, for these embryos, a form of basic care.

Like therapy, authentic care seeks the well-being of the one cared for. As

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<sup>23</sup> *Donum Vitae* §3.

<sup>24</sup> Loretta Kopelman, “Conceptual and Moral Disputes about Futile and Useful Treatments,” *Journal of Medicine and Philosophy* 20 (1995): 109-21 at 111.

Christopher Tollefsen puts it,

Continued care of patients in PVS is a form of fidelity and solidarity to them; it says, “I continue to care about you as a person.” And that fidelity and solidarity is, like the preservation of their life, a genuine benefit to the patient, even when it is not experienced as such.<sup>25</sup>

There are those who would question Tollefsen’s judgment that the mere preservation of life is a genuine benefit to the PVS patient. That disagreement raises the basic moral question of whether biological life is an intrinsic or an instrumental good. Yet, on whichever side of this debate one places oneself, one will find reason to accept the proposal at hand. If one’s biological life is only instrumentally good, that is, valuable only because it allows one to experience other goods, then the current state and likely fate of these embryos would mean that their lives are without value (or are, at best, only *possibly* valuable in the sense that it is not impossible that any one of them could be gestated and brought to term). Such a lack of instrumental value to their lives would seem to make the proposal under consideration unproblematic. If, on the other hand, biological life is intrinsically valuable, that is, good in-itself and independently of whatever other goods that it allows one to enjoy, then it may be the case that they are to be maintained in this frozen state out of respect for that good. This reasoning, though, errs by considering cryogenic storage to be life-sustaining. Unlike the provision of nutrition and hydration to PVS patients, freezing these embryos merely holds them in abeyance – not living yet not dead. There is no question of supporting the finality proper to the organism as a whole or to any of its systems because there is no biological activity going on. Indeed, cryopreservation is directed at *suspending* the embryos’ participation in the good that is life. Neither treatment nor care, freezing these embryos, and keeping them frozen, is not intended to address any pathologies that they may suffer, nor is it intended to support or restore any of their natural biological processes, nor is it chosen to ease any suffering they may be experiencing. Rather, the mere preservation of these embryos for future use or disposal – not their authentic good, biological or otherwise – is the goal. Upon reflection, it seems that care, in the most morally significant sense, has nothing

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<sup>25</sup> Christopher Tollefsen, “Duty and Disability,” *Public Discourse* (December 4, 2009), available at: <http://www.thepublicdiscourse.com/2009/12/1046>, accessed January 5, 2010..

to do with this procedure as it is applied to these embryos. Given the purpose of cryogenic storage, the burden that it generates, and the dearth of benefits it provides for those upon whom it is visited, calling it authentic *care* would seem to reduce to mere assertion.

There are other reasons that may count in favor of thawing these embryos, allowing them to die, and treating their remains in a manner consistent with their full, basic moral status. This proposal would spare these embryos from more likely (and morally objectionable) fates, namely, options (1), (2), and (3). It also avoids the putatively morally objectionable option (4), yet leaves room for it given the likely scale of that option.<sup>26</sup> Furthermore, when considering the stated intentions of the small number of parents with leftover embryos who considered reproductive donation a very likely option, one should keep in mind the following results from a study of parental intentions regarding these embryos:

Findings from studies conducted pre-treatment of patients' attitudes to embryo outcomes indicate that many favor the option of donating embryos [to another couple for adoption]. It has been reported that 39% ((Laruelle and Englert, 1995), 28.5% (Bangsoll et al., 2004) and 22.1% (Lornage et al., 1995) of patients respectively favored donation to another couple. However, data that are based on intentions and not actual decisions are not predictive. A variety of clinic database audits shows that consistently lower numbers of patients finally elect to donate them and indeed the great majority choose to discard them.<sup>27</sup>

Since the likelihood is low that many of the embryos in question would even be candidates for this kind of rescue, one need not choose between accepting the option being explored in this paper and supporting a program of embryo adoption.

More than twenty-five years ago, David Ozar offered the following in his

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<sup>26</sup> As noted earlier, many parents have indicated a much stronger resistance to embryo adoption than to donation for research. It has been mentioned that a recent survey of individuals who currently have embryos in frozen storage revealed that "of those certain they did not want a baby, 41% considered research donation very likely" while only 18% considering it very unlikely. In contrast, only 16% considered reproductive donation very likely, while 53% considered it very unlikely. (Lyerly et al. 2010, p. 502).

<sup>27</sup> Sheryl de Lacey, "Parent Identity and 'Virtual' Children: Why Patients Discard rather than Donate Unused Embryos," *Human Reproduction* 20 (2005): 1661-69 at 1661, emphasis added.

case against thawing unused frozen embryos:

[I]f hospital laboratory teams, parents, or other responsible parties routinely followed a policy of simply disposing of unused frozen embryos, such a policy, if widely known, could have a negative impact on the ways in which we as individuals and as a community value and deal with human life generally, especially in other members of our species whose lives are in some way compromised.<sup>28</sup>

In the time since Ozar offered this caution the in vitro production and banking of human embryos has become routine, often without careful consideration of the fate and interests of those set aside.<sup>29</sup> The harm that Ozar feared is perhaps upon us, and while the routine disposal of leftover embryos is surely difficult to square with calls for solidarity with the marginalized among us, so too is the banking of these embryos for indefinitely long periods of time, after which they will most likely be discarded or experimented upon. The proposal being offered here, if practiced and publicized, would perhaps witness against the abuse and moral marginalization of embryonic human beings that characterizes much of contemporary culture, possibly provoking some deeper reflection in prospective parents who contemplate engaging in a practice that by design yields stored, “excess” human beings.

### Challenges

One might object to the proposal offered here on the grounds that it is not different in any morally significant way than the thawing and disposing of embryos that currently occurs. Thus, if the current deplorable system is wrong, then so is this proposal. Likewise, if this proposal is morally acceptable, then so is the current system. In light of this moral equivalence, the resources that would be consumed by seeking to implement this proposal should be invested elsewhere. In reply, I would point out that there are at least a few morally

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<sup>28</sup> David Ozar, “The Case against Thawing Unused Frozen Embryos,” *Hastings Center Report* 15/4 (1985): 7-12 at 10.

<sup>29</sup> Lyerly et al. found that “[m]any fertility patients will face a difficult and unexpected conundrum regarding embryo disposition. The options they face are either unacceptable to them, or other options that would be acceptable are not available. Too often the result is delayed decision making, the accumulation of excess embryos, and burdens for patients and providers alike.... Our study clearly reveals that individuals with cryopreserved embryos express considerable – and previously unexplored – concerns about the fate of their embryos.” (Lyerly et al. 2010, p. 508; emphasis added.)

significant differences between the current practice of embryo disposal and what is proposed here. The difference that is most morally significant and, I submit, sufficient to separate this proposal from current standard practice is that under this proposal the embryos are removed from cryogenic storage in order to relieve *them* of disproportionate burdens and risks. The choice is one that seeks to serve *their* good as best one can given the circumstances. Under current practice, embryos are typically thawed and discarded not in the name of their well-being but because they are either no longer usable by researchers or no longer wanted by their parents. The contrast between these two approaches with respect to the embryos is stark and confirmed by a recent study of 175 fertility clinics that practice embryo disposal. That study found only four of the clinics insisting that the parent(s) be present at the disposal, while twenty-five clinics insisted that the parent(s) not be present. Furthermore, only seven of the 175 clinics performed a ceremony upon disposal.<sup>30</sup> Indeed, what is being proposed here is quite different than the standard dehumanizing disposal of these most vulnerable human beings.

Rather than objecting that this proposal is too similar to current disposal practices, some may complain that this proposal is too dissimilar to end-of-life cases to be plausible. Here, one may argue that removing these embryos from storage is not sufficiently analogous to removing disproportionately burdensome life-sustaining treatment from dying patients because the embryos in question are simply not dying.<sup>31</sup> The force of this objection, though, depends upon limiting to terminal, end-of-life cases the principle that disproportionately burdensome options are non-obligatory.<sup>32</sup> But why would this principle be limited to just those cases? Surely an individual's terminal condition may make the burdens generated by a particular treatment disproportionate to the benefits it promises, and in that sense the patient's terminal condition is morally decisive.<sup>33</sup> When applied to such a terminal case, this principle allows one who

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<sup>30</sup> Gurmankin et al. (2003), p. 4.

<sup>31</sup> One considering this objection should note, however, that while the embryos are not suffering from a terminal condition, cryogenic storage is, in a real sense, keeping them from dying.

<sup>32</sup> The other core principle in play is the prohibition against intending evil/harm. The question of whether this proposal violates this principle will be taken up below.

<sup>33</sup> Compare a terminal, comatose patient on a respirator to a non-terminal, comatose patient on a respirator who is expected to recover. Other things being equal, the burden of the respirator may be disproportionate for the former patient but not for

grasps it to see that to choose to forgo the disproportionately burdensome but life-sustaining treatment is not to choose to kill. Pope John Paul II reasoned in this way in *Evangelium Vitae* when he carefully distinguished euthanasia from a terminal patient's decision to forgo

medical procedures which no longer correspond to the real situation of the patient either because they are now disproportionate to any expected result or because they impose an excessive burden on the patient or his family.<sup>34</sup>

While the cases under consideration in this section of the encyclical are terminal cases, the focus of the moral assessment is the proportion between the benefits and the burdens that the treatment in question promises to the patient in question. It is surely reasonable to apply to terminal cases the principle that disproportionately burdensome treatments are non-obligatory. But again, one may reasonably ask why the application of this principle should be restricted to terminal cases. A patient's terminal condition may significantly affect the assessment of the benefits and burdens that a particular treatment offers, yet it seems unwarranted to insist that the patient first reach this condition before applying the principle that disproportionately burdensome treatments are optional.<sup>35</sup> Indeed, the case that disproportionately burdensome options are

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the latter.

<sup>34</sup> *Evangelium Vitae* §65.

<sup>35</sup> Kevin O'Rourke finds such a restriction inconsistent with the moral approach leading to, and contained in, *Evangelium Vitae*. He writes: "Another misleading attitude maintains that life support can be withdrawn only if death is 'imminent and inevitable.' This phrase is used in the encyclical *Evangelium Vitae* §65, and is also stated in an unofficial Vatican document seeking to summarize church teaching on medical ethics. Of course, if death is imminent and inevitable, this diagnosis can be factored in to the decision-making process.... But the statement about 'imminent and inevitable' death in the encyclical does not indicate that life support can be withdrawn *only* if death is imminent and inevitable. The encyclical quotes the *Declaration on Euthanasia* as the source of its teaching. As we have seen, this document envisions life support being removed even if death is not imminent and inevitable. Unfortunately, some people purporting to speak for the Church have recently focused upon this phrase and maintain that any removal of comfort care or life support that results in death is euthanasia, unless death is imminent and inevitable. This is contrary to five hundred years of theological analysis." Kevin O'Rourke, "The Catholic Theological Tradition on Forgoing Life Support," *National Catholic Bioethics Quarterly* 5 (2005): 537-53 at 550.



non-obligatory (that is, that the choice to forgo them can be reasonable), is conceptually prior to, and the basis for, the case that removal of life-sustaining treatment in some particular end-of-life case should not be considered euthanasia. One would think that the principle in question, qua principle, would invite rather than forbid its application to other types of cases where disproportionate burdens are in play, including the case of cryopreserved human embryos.

In addition to being unwarranted, restricting this principle to terminal cases is implausible. Many non-terminal individuals must decide whether to endure treatments with burdensome side-effects. In such situations, what more reasonable approach are they to take than assessing the proportion between the benefits and the burdens? Russell Smith explains that this approach, traditionally applied to the assessment of end-of-life treatment options and offered here in an assessment of the choice to continue the cryopreservation of human embryos, is to be applied

throughout the entire range of treatment options: in areas of non-life-threatening, chronic and terminal conditions. An example of its application in a non-life-threatening situation is the choice one makes about dental procedures. For some, tooth extraction is preferable to root canal, for others the opposite is true.<sup>36</sup>

Offering in a different context reasoning which has relevance here, Joseph Boyle explains that

If a treatment promises no benefit whatsoever, then the actions constituting the treatment cannot be undertaken for the goods, such as health, that medicine ordinarily serves.... [G]iven that such actions are wrong because they serve no real human good, it is impossible to justify any harmful side effects of such actions.... Now it certainly appears that what is true of futility when the likelihood of benefit is thought to be literally nonexistent is also true of futility defined in terms of very low likelihood of benefit.<sup>37</sup>

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<sup>36</sup> Russell Smith, "Ordinary versus Extraordinary Means" in *Ethical Principles in Catholic Health Care*, ed. Edward Furton (Boston MA: National Catholic Bioethics Center, 1999), pp. 89-92 at p. 91.

<sup>37</sup> Joseph Boyle, "Limiting Access to Health Care: A Traditional Roman Catholic Analysis" in *Allocating Scarce Medical Resources: Roman Catholic Perspectives*, ed. H. Tristram Engelhardt and Mark Cherry (Washington, D.C.: Georgetown Univ. Press, 2002), pp. 77-94 at p. 85.

To restrict the kind reasoning traditionally offered for end-of-life cases to those cases alone would seem to commit one to the position that a non-terminal patient may be obligated to endure procedures which promise burdens that are disproportionate to any expected benefit. How would one defend such a restriction in the face of such a counterintuitive result?<sup>38</sup>

Tadeusz Pacholczyk suggests a related objection to the claim that removing the embryos in question from storage is analogous to removing disproportionately burdensome life-sustaining treatment from a dying patient. He writes:

Are the parallels between an end-of-life case and the case of a frozen embryo really morally instructive? In this case...there does seem to be the implication that by removing the embryo from its frozen orphanage, our very act is the direct and primary cause of death. The embryos achieve their demise through human agency. It might reasonably be argued that we should therefore not thaw them but maintain them in a frozen state.<sup>39</sup>

In response, one may question whether the direct cause of death here would be the removal from storage since many frozen embryos survive the thawing process and resume their vital activities.<sup>40</sup> It is true in a sense that the embryos that are allowed to thaw and die would “achieve their demise through human agency” since human agents would be responsible for their removal from cryogenic storage. But is that fact sufficient to rule out this choice? Patients who predictably die upon the removal of life support may also be said, in this same sense, to have achieved their demise through human agency. Had human agents not removed the support, the patient would have continued to live. Yet this fact alone does not provide sufficient grounds to rule out the choice to

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<sup>38</sup> In a recent article addressing this important question, Kevin O’Rourke reports that “the scholars and Church leaders” who participated in a 1997 symposium on *Evangelium Vitae* “agreed that, while life support may be withdrawn if death is imminent and inevitable, Catholic tradition had never required that one wait until death is imminent and unavoidable before removing life support.” (O’Rourke 2008, p. 664).

<sup>39</sup> Pacholczyk (2004), p. 99.

<sup>40</sup> See David Edgar et al., “The Developmental Potential of Cryopreserved Human Embryos,” *Molecular and Cellular Endocrinology* 109 (2000): 69-72. Since the “re-animation” of frozen embryos requires more than simple thawing, let it be stipulated here that the embryos in question would be given that re-animating treatment. One study found 7 fertility clinics that cultured the to-be-discarded embryos until development ceased, and only then disposed of them. (Gurmanekin et al. 2003, p. 4).

remove life-sustaining treatment in those cases. The questions that are morally crucial in those cases (and, I suggest, in the case of removing certain embryos from storage), are (1) Is the patient's death intended? and (2) Is the good of relieving the burdens entailed by the treatment proportionate to the unintended harm that is expected to result from its removal? To choose to remove a life-sustaining but disproportionately burdensome treatment is morally acceptable provided that the first question is answered in the negative and the second in the affirmative. Removing life-sustaining treatment in end-of-life cases will be morally acceptable if the choice can be accurately described as a choice to relieve the patient of the disproportionate burdens associated with the treatment, while not intending their death. There does not seem to be sufficient reason to reject the possibility that a choice to remove some embryos from cryogenic storage could also genuinely fit that description.<sup>41</sup>

This proposal may yet be vulnerable to a more practical criticism. One may point out that even if embryo adoption as called for in option (4) is morally flawed, it nevertheless will continue to be practiced and may even become commonplace. This being so, there is perhaps good reason to believe that any embryo that was allowed to thaw and die according to this proposal would instead have been brought to term (sooner or later) by its biological or adoptive mother. Following this proposal, then, would knowingly permit the death of some who would have otherwise lived. Peter Ryan calls for public policy that would make this objection to the thawing option even more forceful. He writes:

Because the women who chose to have their children brought into existence outside their wombs and frozen bear, or at least share, primary responsibility, and because these women are the embryos' genetic mothers, they should be required by law to have them transferred into their wombs if that is possible and medically appropriate. Obviously, the effectiveness of such a law would presuppose that abortion be prohibited by law....[I]n some cases there will be too many embryos for all of them to be transferred safely into their mothers' wombs. What then should the government do? It should find women who are willing and able to have the embryos transferred into their wombs for gestation.<sup>42</sup>

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<sup>41</sup> One can easily imagine cases where claims that foreseen harm was unintended stretch credulity ("I intended to remove the patient's beating heart in order to sell it, but I didn't mean to end their life."), but if all cases of removing embryos from cryogenic storage are to be counted among those cases, should not all cases of removing life-sustaining treatment from terminal patients also be included?

<sup>42</sup> Peter Ryan, S.J., "Our Moral Obligation to the Abandoned Embryo" in *Human*

With this proposal in mind, Ryan explicitly rejects the thawing option:

Our task is not to assume that government officials and others will not fulfill their responsibilities and to recommend that they do something else instead. We should not, on the basis of a prediction that those responsible will not arrange for these embryos to be gestated and adopted, urge them instead to unfreeze them and allow them to die. Rather, we should clarify the true responsibility of the relevant moral agents and urge them to fulfill it.<sup>43</sup>

Ryan is surely right in maintaining that the moral responsibility for the wellbeing of these embryos begins with their biological parents and extends to the community at large. Nevertheless (and setting aside the question of whether embryo adoption is a morally licit alternative) is it not the case that what he advocates here is implausible social policy that, even if adopted, would not be of a scale sufficient to make it the more likely fate of the embryos in question? Given the scope of the problem, that is, the multiple thousands of cryopreserved embryos whose parents plan neither to gestate them themselves nor to offer them for adoption, and given the unlikelihood of the passage and enforcement of the sorts of laws that Ryan suggests, what he advocates may be too unlikely to undermine the claim that the burdens generated by cryogenic storage is, for the embryos in question, disproportionate to the expected outcome. It is no mere assumption but a reasonable judgment given contemporary culture that legally coerced implantation of re-animated embryos is extraordinarily unlikely to happen. Nor is it a mere assumption that it is unlikely that we will see tens of thousands of adoptive mothers stepping forward to offer these embryos the nurturing that they deserve. Indeed, the expectation that such steps will be taken by the very same culture whose multiple, repeated errors in moral judgment has led to the deplorable situation that we are now facing seems more hopeful than warranted.

Furthermore, there is good reason to doubt that many of these stored embryos will ever be put up for adoption or allowed to gestate in an artificial uterus, even if those options are available on a sufficiently large scale.<sup>44</sup> We

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*Embryo Adoption: Biotechnology, Marriage, and the Right to Life*, ed. Thomas Berg and Edward Furton (Philadelphia PA: National Catholic Bioethics Center, 2009), pp. 297-325 at p. 323.

<sup>43</sup> Ryan, p. 323.

<sup>44</sup> Even if these options were available on a large enough scale, there is strong

have already noted how few of the parents of these frozen embryos would consent to donation for adoption. What is to be further noted in this regard is that this reluctance persists even in the face of moral qualms regarding their other options (namely, destruction) and, what will surely be surprising to many, seems to be grounded in concerns about the welfare of their offspring.<sup>45</sup> It seems, then, that even if embryo adoption were enthusiastically pursued by a large number of prospective parents, and even if artificial uteruses were widely available to those who would need one, still many of these leftover embryos would remain in storage until they are at last discarded, unavailable to those who would rescue them.<sup>46</sup>

### Conclusion

It may be that the case offered here has made the point but in an unhelpful way. That is, the arguments and analysis presented may establish that it would be acceptable to remove *some* embryos from cryogenic storage, but only those that fit a certain profile (i.e., those that will certainly, or most likely, be used in research or discarded rather than adopted). Yet precisely which of the

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reason to doubt that these options would ever be chosen on a sufficiently large scale given the “leftover” status of these frozen embryos and the costs – financial and otherwise – associated with embryo adoption, gestation, etc. Furthermore, given that artificial wombs will not soon (if ever) be available to those adoptive parents (and currently frozen embryos) who would require them to carry out an adoption-rescue, it seems rather far-fetched to consider options 4 and 5 as plausible alternatives to what is being proposed in this paper.

<sup>45</sup> Lyerly et al. report that “[c]onsistent with previous studies, few patients in this study were very likely to choose the option of reproductive donation, despite federal funding in support of reproductive donation programs and avoidance of the perceived moral pitfalls associated with embryo destruction.” They also found that “concern about or responsibility for the health or welfare of the embryo or child it could become...was negatively associated with reproductive donation and positively associated with options not resulting in a child, including thawing and discarding and freezing embryos indefinitely.” (Lyerly et al. 2010, p. 507).

<sup>46</sup> I am grateful to a reviewer of this article for noting that it is possible, too, that the jurisdiction in which the embryos are located has limited (or could limit) the amount of time that they may be stored before having to be disposed of. Such restrictions on storage time would also function as restrictions on the time frame for a possible embryo rescue, further undermining the plausibility of options 4 and 5. See, for example, Brinsden et al., “Frozen embryos: decision time in the UK,” *Human Reproduction* 10 (1995): 3083-84.

hundreds of thousands of stored embryos fit this profile may be too difficult to determine. Furthermore, the parents of some of the embryos that currently fit the profile may change their minds and try to bring them to term or put them up for adoption, and artificial uteruses may someday significantly expand the pool of adoptive parents. These possibilities, even if morally problematic in themselves, leave us in a situation where continuing cryogenic storage may be the most morally preferable option for now.<sup>47</sup> Yet, what if one can identify a subset of these embryos for whom adoption can be ruled out? Consider the embryos that have been, or will be, designated for research,<sup>48</sup> or those whose parents have made them unavailable for adoption and now cannot be found or have since died, or those that are unappealing to adoptive couples because of their quality or length of storage. If embryos in these categories can be identified, then given the low likelihood of their being rescued from this lamentable and vulnerable state, and given the disproportion between the burdens and benefits associated with cryogenic storage (including the likelihood that they will be discarded as medical waste either before or after being experimented upon), it may indeed be permissible to allow them to thaw, re-animate, and die, and to dispose of their remains all in a manner that reflects their status as equal members of the moral community. My aim here has been to discuss whether this option, whatever practical challenges it may pose, is one that should be given serious thought. I believe the foregoing has made the case that it is. Considering the significant burdens and the dearth of benefits that cryogenic storage generates for at least this subset of excess embryos, how can it be the case that keeping them in this state is a better way to respect and protect their well-being than allowing them to thaw and die in the manner proposed here?

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<sup>47</sup> E. Christian Brugger reports that between 11% and 25% of the estimated 10 million couples in the United States suffering from infertility consider adoption, and that approximately 200,000 couples seek to adopt each year. E. Christian Brugger, "‘Other Selves’: Moral and Legal Proposals regarding the Personhood of Cryopreserved Human Embryos," *Theoretical Medicine and Bioethics* 30 (2009): 105-29 at 126. How many of these couples would be willing to adopt and gestate a cryopreserved embryo is unknown, but the likelihood that some would follow the footsteps of those who have already done so raises an interesting question for those who find such adoption to be morally illicit: Should adoptive mothers who would accept these embryos into their bodies, bring them to term, and care for them as their own, be dissuaded from doing so, especially given the fate of these embryos otherwise?

<sup>48</sup> A 2003 study puts this number at 11,000. Hoffman, et al., 1068.