

Review

## **The Autonomy and Dignity Problem in Cryonics: A Conditionally Self-Resolved Ethical Approach**

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**Abstract:** Cryonics is a controversial practice that involves preserving the body of a person who has been legally declared dead, with the hope that future medical science may be able to restore them to life. This raises important ethical questions about autonomy and human dignity, especially given the uncertainty surrounding its scientific practicability. This paper examines whether common ethical objections to cryonics, particularly those based on autonomy and dignity, are justified or not. The study adopts a qualitative philosophical approach based on conceptual analysis and normative ethical reasoning. It evaluates cryonics through established principles in bioethics, including informed consent, respect for persons, and human dignity. The analysis shows that autonomy is not necessarily undermined in cryonics, since individuals may still make voluntary and informed decisions under conditions of uncertainty. It also shows that dignity is not automatically violated, as dignity can be understood not only in terms of bodily finality, but also as respect for individual values and choices. When cryonics is freely chosen and properly understood as speculative, the main ethical objections lose much of their force. The paper concludes that the autonomy and dignity problem in cryonics is largely self-resolved within a framework condition of informed voluntary choice and respect for persons. While cryonics remains scientifically uncertain, its ethical status depends more on the quality of decision-making than on guaranteed outcomes. This suggests that future ethical discussions should focus on refining consent and understanding long-term implications, rather than rejecting the practice outright.

**Keywords:** Autonomy, Bioethics, Cryonics, Human Dignity, Informed Consent, and Future Technology.

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## 1. Introduction

Cryonics is a process in which the body of a person who has been legally declared dead is preserved at very low temperatures with the hope that future medical science may be able to restore that person to life (Minerva, 2018, p. 2; Ettinger, 1962). In simple terms, cryonics is based on the idea that death does not have to be final if the physical structures of the brain and body can be preserved well enough. Cryonics does not claim that revival is currently possible. Instead, it relies on the belief that future medicine may be more advanced than present medical science. For example, a person diagnosed with a terminal illness such as advanced cancer may choose cryonic preservation instead of burial, hoping that future medical advancements could cure the disease and restore life. The idea of cryonics became popular in the early 1960s through the work of Robert Ettinger (1962). In *The Prospect of Immortality*, Ettinger argues that many people are considered dead only because current medical technology cannot repair their conditions. According to him, if the brain is preserved before it completely decays, there is a possibility, however small, that future technology could reverse the damage. Cryonics, therefore, presents itself as an alternative to burial or cremation, offering a chance of future life instead of certain biological destruction. In this way, cryonics also aligns with the modern medical goal of preserving life and reducing suffering (Beauchamp & Childress, 2019, p. 3).

The objectives of cryonics are modest in theory, even if they appear radical in practice. Cryonics does not promise immortality or guaranteed revival. Its main aim is to preserve biological information, especially in the brain, that may be necessary for personal identity and consciousness. Supporters of cryonics argue that choosing preservation over decay is a rational decision when the only alternative is permanent loss (Bostrom, 2005, pp. 203-205). From this perspective, cryonics is understood as a form of medical optimism, rather than a rejection of death itself. It is also related to broader transhumanist ideas which view death as a technical problem that may be solved by future science (Harris, 2007, pp. 10-12). Despite these claims, cryonics has attracted strong ethical criticism. Many view the practice as unnatural, unrealistic, and even disrespectful to the human body (de Miguel Beriain, 2021, pp. 561-562; Minerva, 2020, p. 334). Others see it as an expression of fear of death or an attempt to escape the limits of human life (Hauskeller, 2020, pp. 232-234; Tirosh-Samuelson, 2021, p. 340). These concerns have led philosophers and bioethicists to question whether cryonics is morally acceptable, and whether it aligns with fundamental human values such as dignity and respect for life (Kass, 2003, pp. 19-20).

Ethical discussions of cryonics often focus on autonomy and human dignity. Autonomy concerns whether individuals are free and informed enough to make decisions about cryonic preservation or not. Since cryonics involves uncertain future outcomes, some critics argue that meaningful consent may be impossible (Kass, 2003, pp. 19-20; Sandel, 2007, pp. 45-47). Dignity, on the other hand, concerns whether preserving a body after death respects or undermines the worth of the human person. Some argue that dignity requires acceptance of mortality. Others claim that dignity includes the freedom to pursue one's deeply held values, even in death (Umeh & Umeh, 2018, p. 30). From a philosophical point of view, cryonics raises deep questions about what it means to die, what it means to be a person, and how far human choices should extend. These questions are not only technical or scientific, but they also touch long-standing debates in moral philosophy about autonomy, identity, and the value of human life. According to Minerva (2018, p. 5), cryonics forces ethics to engage seriously with future-oriented decisions that challenge traditional moral assumptions.

The introduction of cryonics also challenges social and cultural understandings of death, especially in communal societies where death is not only a private event, but also a collective process (Dawson, 2009, pp. 122-124). This work, therefore, examines the ethical problems associated with cryonics, with specific focus on autonomy and dignity. It uses a qualitative philosophical approach to examine these problems. The aim is not to defend cryonics uncritically, but to assess whether common ethical objections, especially those based on autonomy and dignity, are philosophically convincing. By doing so, the paper seeks to contribute a more balanced understanding of cryonics within contemporary philosophy.

## **2. The Ethics of Cryonics**

Examining the ethics of cryonics is complex because the practice does not fit neatly into existing moral categories. Cryonics is neither an ordinary medical treatment, since it does not aim at immediate recovery, nor is it simply a private ritual like burial or cremation. It stands between medicine, personal choice, and long-term speculation about future science (Minerva, 2018, p. 3; Bostrom, 2005, pp. 203-204). This uncertain position is the source of many ethical concerns.

One of the central ethical questions surrounding cryonics is whether it is reasonable to offer or choose a practice whose benefits are uncertain (Minerva, 2018, p. 4; Harris, 2007, pp. 11-12). Critics such as Kass (2003, pp. 19-20) argue that cryonics may create

false hope, especially for individuals who fear death or feel dissatisfied with present life. For instance, an elderly individual who is deeply afraid of death may invest heavily in cryonics believing revival is likely, rather than merely possible, which raises concerns about unrealistic expectations. From this perspective, cryonics may be ethically questionable if it relies on emotional vulnerability or misunderstanding of probability. However, uncertainty alone does not make a practice unethical. Many accepted medical decisions, such as experimental treatments or palliative care choices, involve unknown outcomes. For example, a patient with a rare disease may agree to an experimental treatment with very low chances of success, yet the decision is still considered ethically acceptable. What matters ethically is whether individuals are clearly informed about the uncertainty and still choose to proceed (Beauchamp & Childress, 2019, p. 7).

Another ethical concern relates to honesty and transparency. Cryonics organizations have a moral responsibility to explain clearly that revival is not guaranteed and that future success depends on scientific developments that may never occur. When this information is openly provided, the ethical problem of deception is reduced. Minerva (2018, p. 6) argues that cryonics can be ethically acceptable if it is presented as a rational gamble, rather than a promise of future life.

Resource allocation is also often raised as an ethical issue. Cryonics is expensive and accessible mainly to the wealthy (Schellekens & van den Hoven, 2021, p. 791; Minerva, 2020, p. 335). For example, a wealthy individual may choose to spend a large portion of their resources on cryonic preservation, rather than donating to healthcare or education, which some may view as morally questionable. Some critics argue that this is ethically wrong when there are urgent social needs such as poverty reduction and healthcare access. While this concern is important, it is not unique to cryonics. Individuals are generally allowed to use their resources for personal projects, even when others may see them as unnecessary. Ethically, the question is not only whether cryonics is the best use of resources, but whether individuals have the moral right to use their resources in this way or not (Sandel, 2007, pp. 46–47).

There is also an ethical debate about whether cryonics represents an unhealthy attitude toward death. For instance, one person may accept death and choose burial, while another may reject finality and choose cryonics. Some philosophers argue that accepting mortality is essential to a meaningful human life, and that attempts to avoid death may undermine this acceptance (Kass, 2003, pp. 21-22). From this view, cryonics may appear as

a denial of the natural limits of human existence. However, this argument assumes that there is only one morally correct way to relate to death. Others argue that different attitudes toward death can coexist ethically, and that choosing cryonics may reflect hope, curiosity, or a desire for continuity rather than denial (Harris, 2007, pp. 13–14).

Supporters of cryonics emphasize that the practice does not harm others. Cryonics is a voluntary decision that affects primarily the individual who chooses it. If no one is coerced or deceived, it is difficult to justify strong moral condemnation of the practice (Bostrom, 2005, p. 205). Ethical evaluation in this case should focus on respect for persons, rather than conformity to traditional expectations. From a broader perspective, cryonics also challenges ethics to take future-oriented decisions seriously. Most ethical theories were developed in contexts where future outcomes were relatively predictable. Cryonics forces ethical reflection to consider decisions made for possible future conditions that do not yet exist (Minerva, 2018, p. 5).

In summary, the ethics of cryonics cannot be reduced to simple claims of right or wrong. While the practice raises concerns about uncertainty, resources, and attitudes toward death, these concerns do not automatically make it unethical. When evaluated using principles such as informed consent, respect for autonomy, and non-harm, cryonics can be seen as morally permissible under certain conditions.

### **3. The Autonomy and Dignity Problem in Cryonics**

The ethical debate on cryonics often returns to two closely related ideas: autonomy and human dignity. These concepts are frequently used either to defend or to criticize the practice. However, when examined carefully, both autonomy and dignity present challenges that are not always clearly resolved in discussions of cryonics.

Autonomy in ethics generally refers to a person's ability to make decisions for themselves, based on understanding, reflection, and freedom from coercion (Varelius, 2021, p. 146; Buss & Westlund, 2022). In medical ethics, respect for autonomy is considered a basic moral requirement (Beauchamp & Childress, 2019, p. 9). Supporters of cryonics argue that if individuals are informed about the uncertainty involved and still choose cryonic preservation, their decision should be respected in the same way as other personal medical or end-of-life decisions. The difficulty, however, lies in the level of uncertainty involved in cryonics. Unlike conventional medical treatments, cryonics does not offer any proven chance of success. For example, a person may sign up for cryonics knowing fully that revival is uncertain, yet still preferring preservation over permanent death. Critics

argue that because the future outcome is unknown, consent to cryonics cannot be fully informed. From this perspective, autonomy is weakened because individuals are making decisions about a future they cannot clearly evaluate. This raises an important philosophical question: how much uncertainty can autonomy tolerate before it loses its moral force?

Some philosophers respond that autonomy does not require certainty, but reasonable understanding (Varelius, 2021, p. 148; Steel, 2022, p. 4). Many human decisions, such as choosing a career, entering marriage, or undergoing experimental medical treatment, are made under conditions of uncertainty. As long as individuals understand that cryonics is speculative and choose it freely, their autonomy may still be meaningful (Dworkin, 1988, p. 112). Cryonics, in this sense, represents an extension of ordinary risk-taking into the context of death.

The dignity problem in cryonics is often presented as more serious. Human dignity is commonly associated with respect for the human body, the acceptance of mortality, and the idea that persons should not be treated merely as objects (Rendtorff, 2020, p. 17; Sulmasy, 2021, p. 344). Critics argue that freezing a human body after death reduces it to a biological object stored for possible future use, thereby undermining dignity (Kass, 2003, p. 20). For example, the image of a human body stored indefinitely in a frozen container may appear to treat the body as an object rather than a person. From this view, dignity requires allowing death to bring human life to a natural conclusion. However, this understanding of dignity is not universally accepted. If an individual clearly states before death that cryonic preservation reflects their deepest values and hopes, preserving their body in this way may be seen as respecting their dignity. Dignity can also be understood as respect for a person's values and life plans. Umeh and Umeh (2018, p. 30) argue that dignity is not violated when individuals make informed choices about their bodies that reflect deeply held beliefs. If a person believes that cryonics offers a meaningful possibility of future life, choosing it may be an expression of dignity, rather than a violation of it.

Another important aspect of the dignity debate is whether cryonics affects the dignity of others. Ethical violations of dignity usually involve harm, disrespect, or degradation imposed on another person. Cryonics, however, is primarily a self-regarding choice. The decision to undergo cryonic preservation does not force others to participate or accept the practice as at today. Bostrom (2005, p. 205) suggests that many objections to cryonics reflect emotional discomfort, rather than clear moral harm. From a broader ethical perspective, it is difficult to justify restricting a voluntary practice that does not cause direct

harm to others. Ethical pluralism allows different individuals to hold different views about death and the value of future life.

Cryonics also raises cultural tensions. In many African societies, including Nigeria, death is understood not only as a biological event but also as a communal and spiritual transition (Metz, 2020, p. 451; Chimakonam & Ogbonnaya, 2021, p. 6). From this perspective, cryonics may appear to challenge communal expectations surrounding death. However, this does not necessarily mean it is undignified. Rather, it highlights tension between individual autonomy and communal values.

The autonomy and dignity problem arises from differing interpretations of what it means to choose freely and what it means to respect human worth. Autonomy is challenged by uncertainty, while dignity is challenged by unconventional treatment of the body. Yet, neither challenge is decisive when autonomy is understood as informed voluntary choice and dignity as respect for persons.

#### **4. Our Position: Autonomy, Dignity, And Conditional Ethical Self-Resolution**

Our position in this paper is that the ethical problem of autonomy and dignity in cryonics is, to a large extent, conditionally self-resolved by the nature of the practice itself. This position is grounded in ethical philosophy, particularly in respect-for-persons ethics and liberal moral theory, which emphasize voluntary choice, moral agency, and the absence of harm to others (Quong, 2020; Gaus, 2011).

First, the issue of autonomy in cryonics is largely addressed by the fact that participation in cryonics is voluntary. Individuals who choose cryonic preservation are not coerced, and in most cases, they actively decide after reflection. Even though the future outcome of cryonics is uncertain, uncertainty alone does not cancel autonomy. Human beings regularly make important life decisions under conditions of limited knowledge. What is ethically important is that individuals understand the uncertainty involved and still choose cryonics as their preferred option. From an ethical standpoint, autonomy does not require perfect information, but sufficient understanding to make a reflective choice (Dworkin, 1988, p. 112). Cryonics organizations typically inform participants that revival is speculative and not guaranteed. When this information is accepted, the decision to undergo cryonics can be regarded as an expression of personal agency, rather than confusion or deception. In this sense, the autonomy problem is reduced because individuals knowingly accept the risks and uncertainties.

Second, the dignity concern is also less serious than critics often suggest. Human dignity is frequently used to argue against cryonics, but the concept is often interpreted in different ways. If dignity is understood as respect for the inherent worth of persons, then respecting a person's deeply held choices about their body and future can itself be an expression of dignity. Preventing individuals from choosing cryonics on dignity grounds may instead undermine their moral agency. Importantly, cryonics does not involve the degradation or humiliation of the person. The preserved individual is treated with care and respect, rather than abuse or neglect. Umeh and Umeh (2018, p. 30) argue that dignity is not violated when individuals make informed decisions that align with their understanding of a meaningful life. In this sense, cryonics can be seen as consistent with dignity, rather than opposed to it.

Another key point in support of conditional ethical self-resolution is that cryonics does not undermine the dignity of others. One person's decision to undergo cryonics does not force others to accept the practice or change their own beliefs about death. Ethical violations of dignity usually involve coercion, harm, or treating others merely as means. Cryonics does not do this. Bostrom (2005, p. 205) argues that many objections to cryonics are based more on emotional discomfort than on clear moral harm. From a broader ethical perspective, it is difficult to justify restricting a voluntary practice that does not harm others.

Finally, the conditional ethical self-resolution of the autonomy and dignity problem lies in the alignment between choice and consequence. Those who choose cryonics accept responsibility for their decision and its uncertainties. They do not claim moral entitlement to success, but only the right for their choice to be respected. From this perspective, the autonomy and dignity concerns are largely resolved within the practice itself when understood as voluntary, informed, and non-coercive.

## **5. Conclusion**

This paper has examined the ethical problems of autonomy and dignity in cryonics. Cryonics is a controversial practice because it involves preserving legally dead bodies with the hope of future revival. The practice challenges traditional ideas about death, the body, and the meaning of human life. Since cryonics is still speculative, many people argue that it is unethical. They claim that it undermines dignity or that it is not a genuinely autonomous choice. However, a careful philosophical analysis shows that these objections are not decisive.

The autonomy problem in cryonics is often based on the idea that people cannot truly consent to something when the outcome is unknown. While this is a valid concern, it does not fully undermine autonomy. Many important human decisions are made under uncertainty. If individuals understand the speculative nature of cryonics and still choose it freely, their decision can be considered autonomous. The key requirement is informed and voluntary choice (Dworkin, 1988, p. 112; Beauchamp & Childress, 2019, p. 9).

The dignity problem is also complex. Critics argue that cryonics reduces the human body to an object and, therefore, violates dignity (Kass, 2003, p. 20). However, dignity is not only about biological finality or cultural expectations. It can also be understood as respect for a person's values and choices. When a person chooses cryonics, they may be expressing their hopes and self-understanding, and this can be seen as consistent with dignity, rather than opposed to it (Umeh & Umeh, 2018, p. 30).

The position defended in this paper is that the autonomy and dignity problem in cryonics is largely self-resolved. Since cryonics is a voluntary practice, it does not force individuals into unwanted choices. Those who choose it do so after reflection and with awareness of uncertainty, and the practice does not harm or degrade others. Therefore, autonomy and dignity concerns are not sufficient to reject cryonics as unethical (Bostrom, 2005, p. 205; Dawson, 2009, p. 122). It is important to clarify that this analysis remain deliberately focused on the ethical questions of autonomy and human dignity as they arise at the level of decision-making under uncertainty, rather than extending into broader metaphysical debates about personal identity over time or the institutional and technological governance of future preservation systems. Within this defined scope, the paper has shown that the central objections to cryonics can be substantially addressed through frameworks of informed consent and dignity as respect for persons, while questions of identity continuity, embodiment, and infrastructural dependence remain open and productive directions for future research.

Finally, cryonics should be seen as a reminder that ethics must adapt to new technologies. Practices such as organ transplantation and life-support systems were once controversial, but are now widely accepted, suggesting that cryonics may also become more ethically accepted over time. Instead of rejecting cryonics outright, it is better to evaluate it carefully and respectfully using clear ethical principles. In this way, cryonics can be understood as a personal choice that may be morally acceptable if it is informed, voluntary, and respectful of human dignity (Minerva, 2018, p. 5; Sandel, 2007, pp. 46-47).

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