

# Narratives of Hope—The Temporal Dimension in the Ontological Manipulation of the Human Embryo <sup>†</sup>

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**Abstract:** The in vitro human embryo is a liminal being towards which the beneficiaries of assisted reproductive technology (ART) can ascribe different moral statuses. Moreover, this ontological manipulation can be combined with a temporal dimension. Namely, a set of narratives of hope can be identified, in terms of how patients project the future considering the accomplishment of the parental project. In turn, these narratives of hope will have repercussions at the ontological level, i.e., on the meaning-making processes around the human embryos created during ART treatments. A Portuguese research project provides empirical data (from semi-directive interviews) to map these plural conceptualizations of human embryos.

**Keywords:** human embryo; moral status; meaning-making processes; ontological manipulation; narratives of hope

## 1. Introduction

The in vitro human embryo constitutes a liminal entity that gives rise to plural conceptualizations [1]. Namely, it is characterized by an ambiguity of its moral status, oscillating between different states—with the boundaries among these states being also fluctuant and difficult to define [2].

Within this ontological manipulation [3], the discourses of ART beneficiaries show that the way embryos are perceived oscillates throughout the therapeutic path [4]. In fact, these conceptualizations range from a *functional* understanding of this being, as a *tool/means* in service of a plan of action (for achieving pregnancy) to an appropriation according to general equivalence classes/categories [3]. That is, the case of classifications such as *valuable biological material, genetic heritage, offspring, potential child, a gift* for other couples or to science, etc. [5].

Moreover, this apprehension in generality gives place to a gradual *rise in singularity* [3]: a progressive emotional attachment to the embryo as a singular entity—giving it an irreplaceable character. This singularization of the embryo, as a *child*, manifests in particular emotional ambiances—such as love towards it and grief in case of loss, but also through symbolic gestures like giving a name [3]. And in case of embryo loss, that same name is not given to another embryo—thus expressing that irreplaceable character, different from an understanding in generality.

However, the ontological manipulation of the human embryo presents further complexity. Namely, it is also necessary to consider that the moral statuses do not only vary between different beneficiaries [5]. The meaning-making processes can also change along the therapeutic trajectory of each beneficiary. Modifications in the way ontological manipulation develops—such as the stages of treatment at which the emotional attachment begins—may occur during the therapeutic trajectory of an individual patient.



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Concerning these ontological fluctuations, an element of patients' experience emerges, attached to the uncertainty [6] of a clinical treatment's outcome: *hope* regarding the achievement of the therapeutic goal. Indeed, hope is a vector of ontological manipulation regarding different aspects of the clinical trajectory [7]. In the concrete case of ART treatments, it can shape the meanings built around the embryo, triggering fluctuations in the ontological markers that determine the transitions between statuses assigned to that entity [3].

*Hope* can be characterized as a lens that guides the actor's perspective towards a particular phenomenon situated in the future. Namely, it involves a relationship between *knowledge*—which provides a certain degree of predictability about the outcome of a plan of action (such as a clinical protocol)—and *uncertainty*—about the accomplishment of the plan's goal [8,9].

Moreover, hope is multidimensional, depending on the greater or lesser degree of tangibility of the objective projected into the future. Namely, what emerges from patients' discourses is that *hope* can oscillate within a *continuum* between *hope as expectation* and *hope as desire* [7,9]. *Hope as expectation* means hope as anticipating what is likely and concrete in the future (in this case, achieving pregnancy)—supported, for example, by biomedical information or past experiences. *Hope as desire* constitutes a focus on a more remote/generic possibility—therefore, a *looser* relationship with the objective that guides the therapeutic plan.

In turn, these plural ways of operationalizing hope will have repercussions on an ontological level, particularly in terms of oscillations in the moral status attributed to the human embryo. It is this dynamic between the two dimensions—how narratives of hope performed by ART beneficiaries are a driving force of the ontological manipulation of the embryo—that we seek to develop in a preliminary exploration.

## 2. Methods

The data presented in this text was collected from a research project conducted in Portugal from 2017 to 2022. The project is named *ETHICHO—Ethico-ontological Choreographies: Forms of objectification and evaluation of the human embryo in vitro in the context of Assisted Reproductive Technologies and Scientific Research*. The project relies on a mixed methods approach, encompassing an online questionnaire and semi-directive interviews. However, considering its objectives, the explorative analysis developed in this text rests only on data from the latter technique.

For a brief methodological description, 69 semi-directive interviews were conducted with ART beneficiaries/patients between September 2019 and January 2021. Potential interviewees were contacted through non-probabilistic convenience and snowball sampling, relying predominantly on social networks, along with the support of Portuguese associations for people with infertility. One fundamental methodological criterion for selecting potential respondents was outlined: to have undergone at least one cycle of *second-line treatment*, i.e., a treatment cycle involving the creation of in vitro embryos: In vitro Fertilization (IVF) or Intracytoplasmic Injection technique (ICSI).

All interviews were recorded and fully transcribed, and the qualitative analysis was carried out with the technical support of the software MaxQDA (2018 version). All study participants provided written or verbal informed consent prior to data collection. Ethical approval was obtained from the host institution of the research project before data collection began. In addition, respondents were given pseudonyms to ensure anonymity.

## 3. Results

Concerning the temporal dimension of analysis, a set of narratives of hope can be identified in beneficiaries' discourses, with patients describing changes in the format of hope from the beginning of treatment and throughout the therapeutic process. These variations in the management of hope can take different forms:

(a) *Oscillations between concrete and vague plans.* In the face of uncertainties and failures throughout the clinical trajectory, a coping mechanism in the present emerges: a (partial) subtraction of the future, in terms of a detachment from *hope as expectancy* to *hope as a desire*;

(b) *Tensions/ambivalences between projecting and dimming the future.* Namely, patients' discourses can show situations of tension/ambivalence between the suspension (with different degrees) of hope as expectation (about the accomplishment of the parental project) in favour of hope as desire, but in which moments of focusing on a concrete future emerge (e.g., fantasizing with elements of the parental project);

(c) *Combinations of expectation and desire.* Patients can also manifest *narratives of hope* in the form of building expectations on short-term stages (such as, for example, obtaining viable embryos), while, at the same time, maintaining a focus on the fulfilment of the parental project in more general forms (thus, as a desire).

In turn, these narratives of hope will have repercussions at an ontological level—i.e., on the meaning-making processes around the human embryos generated during the ART treatments. To illustrate this temporal and ontological dynamic, an excerpt from an interviewed couple is presented.

At the time of the interview, two treatment cycles characterize their clinical path. The couple's discourse illustrates how the failure to achieve pregnancy in this first cycle led to a reconfiguration in the format of engagement in the treatment (and with the embryos) in the second treatment cycle. Namely, a deferment in the process of emotional bonding takes place:

Denise: “[. . .] we were already warned, we tried not to emotionally bond with them, because if it was already painful the first time, this time there was an emotional barrier. [. . .] I tried not to create too much affection in the first few months because I was always thinking “Oh, oh, oh, I’m going to lose the baby”, “Oh, oh, oh, this is going to be really bad”. So, I tried to abstract myself a little bit, because I already knew the pain. I tried to think “This is not happening”. I mean, I did all the mandatory medical treatment, but my emotional part was always very contained there, until that ultrasound”.

Leonard: “Indeed, the image, the image is very strong. It precedes the contact itself, when you begin to feel moving and the first connection.

Firstly, concerning the temporal dimension, the couple's discourse highlights how the loss of pregnancy in the first cycle is a determinant factor in the change in how engagement in the new treatment cycle takes place. As the female interviewee describes, the involvement in the therapeutic trajectory remains (“I did all the mandatory medical care”). However, there is a change in terms of how hope is operationalized. The narrative of hope associated with the engagement in a therapeutic plan suffers a partial suspension, being managed in the direction of a desire—that is, as a more general form of hope.

Thus, if expectation encompasses a vulnerability for the one who produces/supports this format of hope—considering the emotional impact in case the objective fails—the (partial) suppression of the future (in the form of expectation) becomes a coping mechanism for the couple (“I already knew the pain”, “I tried to abstract myself a little bit”). Thus, there is a change in how the female interviewee projects herself into the future concerning the goal of the treatment (i.e., obtaining a full-term pregnancy).

On the other hand, this operationalization of hope also leads to reconfigurations at the ontological level. Namely, the beginning of the process of singularization of the embryo, associated with the gradual construction of an emotional bond, is relegated to a later stage in the trajectory. Specifically, it is the echogram image that stands out as a moment of oscillation in the meaning assigned—instead of the *blastocyst* stage (i.e., the last stage of the development of an embryo in vitro) in the previous treatment cycle. As described, there was an attempt to “not connect emotionally” with this being, in contrast to the first treatment cycle. Thus, at the ontological level, there is a transfer of the oscillations in the meanings attributed to the embryo—in particular, the beginning of the process of singularization—to a subsequent moment of the therapeutic trajectory.

#### 4. Discussion and Conclusions

The different stages of the therapeutic trajectory of ART beneficiaries, which may affect their *hope* regarding the outcome of the treatment, are likely to consubstantiate moments of reconfiguration of the meanings attributed to the embryos and the attached emotional ambiances [1]. These modes of (re)configuration in the meaning-making processes favour; thus, a double pluralism in the ontological constructions around this entity, according to the vicissitudes and circumstances associated with the therapeutic trajectory of patients resorting to ART. In particular, the ontological markers [3] that punctuate the clinical path of the interviewees can, thus, metamorphose according to different moments of success, failure, setbacks and restarts that characterize the therapeutic trajectory [6].

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