



# Use of Neutrosophy to recommend conceptions related to the integral protection of the right to life

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**Abstract.** In this study, we identify the main ways of understanding the right to life from its conceptions in a general way. Specific conceptions about the right to life are identified and analyzed. Neutrosophy is used to recommend the conceptions that have received the greatest reception in the literature and that are not taken into account for the integral protection of the right to life, considering that the right to life is the starting point for other human rights. In particular, the rights inherent to the human being are described; which, by means of this condition, require not only its recognition by the state and all the society but also its preservation and the guarantee of its full existence. On the basis of such statement, the present study analyzes from a basically legal perspective, without leaving aside the philosophical approach, not only its national and international recognition but also the challenges and problems that this problematic faces, given the various analyses that have been carried out on this topic. Analyzes that have been subjected to sociological and ethical studies about the legal interruption of life. For this reason, the objective of the present investigation is to identify the integral protection of the right to life from its very conceptions.

**Keywords:** Neutrosophy, integral protection, right to life, conception of the right to life, abortion, decriminalization

## 1 Introduction

The present investigation is carried out after studies on the origin of life. In general terms it is possible to affirm that national dogmatics has not been concerned with providing and analyzing a definition of the right to life itself. In fact, if any constitutional law manual is revised, it is possible to verify that there is no concrete definition of what the right to life is or what it means. For this reason, an analysis of the origin of life is made from the existence of a human being.

The Constitution of the Republic of Ecuador in its article 45, indicates, verbatim, that girls, boys and adolescents will enjoy the common rights of the human being, in addition to those specific to their age. The State will recognize and guarantee life, including care and protection from the conception, [1] of which it is deduced that the Ecuadorian state guarantees the right to life, considering that there are currently numerous criteria related to the decriminalization of abortion.

In society and despite the shadows of the so-called culture of death, a more lucid consciousness is being developed about the importance of protecting life against the threats of abortion and euthanasia. At the same time, it is noticed that it is not only a matter of religious nature and that it only compels in conscience those who practice a certain religion, as stated by [2].

The aforementioned author thinks that life, as an inviolable value and the protection of it from its conception, is a fundamental matter in the defense of human rights. Reasons which indicate that legislation cannot ignore the reality of the existence of human life in its gestation stage, as science and in particular biology have evidently revealed.

The same author also mentions that there are revolutionary discoveries, such as in vitro fertilization and DNA with the sequencing of the human genome, leaving evidence that from the moment of conception there is a new human life, a new being. So much so that, in modern legal systems, DNA has become the ultimate test to determine the identity of people.

On the other hand, he indicates that regardless of age, and even, in the hypothesis of devastation, that is, when practically there is nothing left of the human being, even after a long time, the true degree of civilization of a nation is measured on how it protects the neediest. That is why the weakest should be protected. Because the criterion is no longer the value of the subject in terms of the affections it arouses in others, or the utility it provides, but the value that results from his mere existence.

For [3] the conception occurs in the mother's womb. She considers that this person is already a human being who has all the rights, except the patrimonial ones, which he acquires after birth. In the *New England Journal of Medicine*, published a review of the medical literature, which indicates that fertilization occurs in the fallopian tube 24 to 48 hours after ovulation. Implantation occurs about seven days after conception, which is consistent with the previous analysis of the medical sciences, pointing out, that life is originated at the moment of conception and that fertilization is considered the process of continuation of the life within the matrix.

The right to life is one of the fundamental rights of the human being. It is among one of the main rights that human beings have. They are supported by international treaties and agreements. The main dilemma is to define from which moment we can consider that a human being has life. It is essential that experts analyze from the perspective of Bioethics and Law the importance that should be given to this particular and main right that is the right to life from its conception [4].

On the other hand, [3] manifests about international treaties and agreements regarding the defense of the right to life as a fundamental right in the Ecuadorian constitutional framework, where the right to life is indicated as a subjective recognition for the first time in article third of the Universal Declaration of Human Rights of 1948, which exposes that every individual has the right to life, liberty and security, because it is considered the most important right of a person and which the rest of the rights depend on. Without this right well protected the other rights wouldn't have a reason to exist.

Based on the aforementioned and the studies of , five conceptions about the right to life are identified:

- 1) Sustains that the right to life consists of the right to live, to stay alive.
- 2) Suggests that the right to life consists of the right to live well, or to live with dignity.
- 3) Proposes to understand that the right to life consists of the right to receive everything that is minimally necessary not to die immediately.
- 4) Proposes to understand the right to life simply as the right not to be killed.
- 5) Support the idea that this right consists in not being arbitrarily killed.

The right to life consists of the right not to be arbitrarily killed. In particular, conception number 5 is based on the fact that the object of the right to life is not life as a phenomenal reality, but behavior of third parties, arbitrarily killing another. Consequently with the aforementioned, we distinguish the right to life from life itself, defined by [5] as a distinction that is not frequent in legal literature and is, in particular, the one that assumes that the right to life has a life as a phenomenal reality as its object, except for one case.

That's why [6] states that there are several reasons to accept the distinction between the right to life and life itself and understand that the object of the right to life is not life. This author expresses that in order to determine the object of the right to life we must start from:

- ✓ A general consideration of the right to life as it was referred by [7] emphasizes that fundamental rights include rights to something, freedoms, and competences. The object of a *right to something* cannot be a conduct of its owner or a thing or entity. If the object of the right was the behavior of the owner, there would be no legal relationship but a solipsistic figure, in addition, a right would be confused with freedom. A right to something implies a legal relationship with other subjects. What cannot be the object of a right a thing or entity, because the right would be structured as a dyadic relationship between the owner and the thing. Dyadic relationships - like solipsism - have no legal relevance because they do not regulate the conduct of third parties.
- ✓ A second reason to rule out that the object of the right to life may be life, is when there is evidence that someone can lose their life as a phenomenal reality (or biological support, as some authors call it), without violating his right to life. In effect, a person can die without being killed arbitrarily, for example, in the case of an incurable disease. The opposite assumes that all deaths occur due to homicide.
- ✓ And as a third reason, we have the development of comparative constitutional jurisprudence on the right to life. Foreign Constitutional Courts have dealt with the right to life especially resolving requirements in relation to laws that penalized or decriminalized abortion.

Other reasons in favor of the conception of the right to life and that claim that the right to life consists of the right to live, to stay alive or to continue living are explained in the conceptions about the right to life studied by [6].

The first conception sustains that the right to life consists of the right to live, to stay alive or to continue living. Points out that several authors in the literature make statements that allow us to think that they support to this conception:

- ✓ That every human being has the essential right to preserve his life ... (...). Life, being the primary gift

that God has given to man, and being the source of its other attributes, is protected by constitutional and legal institutionality.

Authors such as [7] allude to the right to life and warn us that the right to life is the most important right, because it is the assumption, basis and purpose of all other rights, without exception. To lose your life is to be deprived of all the rights that only having it makes it possible to enjoy.

Further on, the aforementioned author affirms that this statement refers to the person who is in the womb. A person who has the right to live. What makes it possible to infer that the right to life means the right to live, and a right to life means the right to be alive.

On the other hand [7] shares the same position, the right to life and the physical integrity of the person are the fundamental rights par excellence. Fundament that makes us keep in mind that it is not just about one of the many rights that are found in various declarations, letters and lists, but that it constitutes a kind of *germ* right, beginning of all others and, therefore, especially relevant and essential. In fact, says the abovementioned author that, life has the particularity of being not only an attribute of the human being but confused with himself.

In the second conception, it is suggested that the right to life should be considered as the right to live well, or live with dignity. This conception is related to the first one. Authors like point out that the right to life not only consists of the right to live but also to live well, to live with dignity. The right to life includes progress in the biological sciences and medical technology, in order to save the existence of those who suffer from diseases that endanger it or to provide a dignified extension of their experience.

Specifically, [8] refers that this second conception of living well, is something different for a religious person, for a liberal, for a utilitarian, for a hedonist. The aforementioned author sustains that the right to life consists in the right to live well. But this right may be unreachable for many people and for that reason this conception is rejected for all experts on the subject.

The third conception about the right to life is about the one according to which the right to life includes having the right to be given what we minimally need so that life may continue. [3] Refers that, if a person is fainting from hunger and therefore needs food, their right to life includes the right to receive food. If that person is about to freeze and the way to avoid it is to allow him to enter in my house, then his right to life includes the right to enter my home. Conception similar to that of the person having the right to live and continue living, but not identical, because the conception that is now explained does not imply immortality. Which is the reason why this conception is rejected.

According to [9], the way of understanding the right to life allows us to think of innumerable situations in which someone would have a right to receive something if this would save his life and, correlatively, would place other people in countless situations of having obligations in front of third parties. This happens because this perspective founds the right to life in the causality of life conservation.

A fourth conception states that the right to life consists of the right not to be killed. In the national doctrine, they do not notice that this position is subscribed, and in particular when it is explained what is the right to life. However, the situation changes when they refer to the situation of the *nasciturus*. It is held in different doctrines, that the *nasciturus* is personal in that sense. [10] Refers that you have the right to life if it is protected by the constitution of each country. Consequently, the above mentioned means that the right to life of the *nasciturus* is understood as absolutely never killing.

The notion of the right to life is analyzed by [9], this author emphasizes that this position is more restricted than the previous one. It doesn't generate positive obligations of life conservation for millions of people; it only imposes the negative obligation not to kill. In this sense, this fourth conception approaches the strictest conception presented since the beginning of the analysis related to - not to kill arbitrarily - but it differs from it because it does not include the clause of arbitrariness.

According to this fourth conception, the obligation that falls on third parties is simply not to kill. Therefore, it is not acceptable to subscribe to a conception of the right to life of an absolute nature, for anyone, even including the *nasciturus*.

Reviewed and analyzed the four conceptions about the right to life having arguments to discard them. It is sustained that the right to life consists simply of the right not to be arbitrarily killed. [10] Refers that this way of understanding the right to life avoids confusion, as happens with most of the doctrines that correspond to the right to life, in particular, the doctrine related to the right to health or the right to physical integrity.

Specifically for the right to health, it is difficult, since this doctrine does not have this right, given the dogmatic lucubrations referred to it in legal literature. On the other hand, reference is made to the right to physical and mental integrity. In this sense, it is necessary to infringe that the right to physical or mental integrity is violated concerning the right to life. In summary, it is expressed that right to life means:

- a. Negative primary obligation not to arbitrarily kill another.
- b. Secondary positive obligations necessary to prevent arbitrarily killing another.
  - ✓ These obligations are numerous and must be determined through the provision of a Penal Code that

impose sanctions for homicide, having Prosecutors to accuse and courts to punish lawbreakers; have prisons; have police to do preventive work, and some other actions related to the causes or conditions that lead someone to kill another.

- c. Eventually, positive obligations designed to satisfy – comply with the right, which should be determined.

## 2 Materials and methods

The investigation was carried out applying the inductive method, which allowed defining, mainly because the concept of life is determined in an individual way; its biological and religious evolution, considerations of what defines human rights. Deductive analysis from the general point of view on what is defined as the right to life. Logical historical method because the origin of the right to life has been determined from some historical points of religious and biological evolution, especially since in present times there are life protecting currents and life suspensive currents.

Through the use of scientific methods, systematic and methodical procedures were obtained in order to determine the feasibility of developing a proactive and critical analysis of the defense and protection of life from its conception as disposed by the Constitution. In addition, the analytical method was used to carry out a detailed analysis and a thorough constitutional study regarding the rights of life.

Neutrosophy is used to recommend conceptions related to the integral protection of the Law and to pay attention to the most impactful conceptions to achieve a social balance regarding the right to life. Neutrosophy is a new branch of philosophy which studies the origin, nature and scope of neutralities, as well as their interactions with different ideational spectra, created by Professor Florentin Smarandache [11]. His fundamental theory affirms that every idea tends to be neutralized, diminished, and balanced by ideas as an equilibrium state.

The term "neutrosophic" was proposed because it etymologically comes from "neutrosophy", which means knowledge of the neutral thought, and this third neutral represents the main distinction. That is, the unknown neutral indeterminate part (in addition to the "truth" "membership" and "falsehood", components of "non-membership" that appear in fuzzy logic sets). Neutrosophic Logic is a generalization of Zadeh's fuzzy logic [12], and especially of Atanassov's intuitive fuzzy logic [12] and other logics.

In this paper, a recommendation model is used, which is useful to recommend the conceptions related to the right to life having the highest incidence on individuals from the legal point of view. The recommendation model to develop is based on the information gathered by these models and the algorithms used to generate the recommendations, in this sense, we distinguish the techniques referred by [10, 12]. Knowledge-based recommendation models make suggestions by inferring about the needs of experts (preferably jurists according to [19, 20]). The knowledge-based approach stands out in the sense that they use knowledge about how the object of study, in particular, can meet the required needs, and therefore has the ability to figure out how can they meet the user needs, and therefore has the ability to think about the relationship between a need and the possible recommendation that will be displayed.

This type of model is based on the construction of user profiles as a knowledge structure that supports inference, which can be enriched with the use of expressions that use natural language [13]. The workflow for our case study is based on Cordon's proposal [9, 12] for knowledge-based recommendation systems allowing the representation of linguistic terms and indetermination by means of single valued neutrosophic sets (SVN), [14].

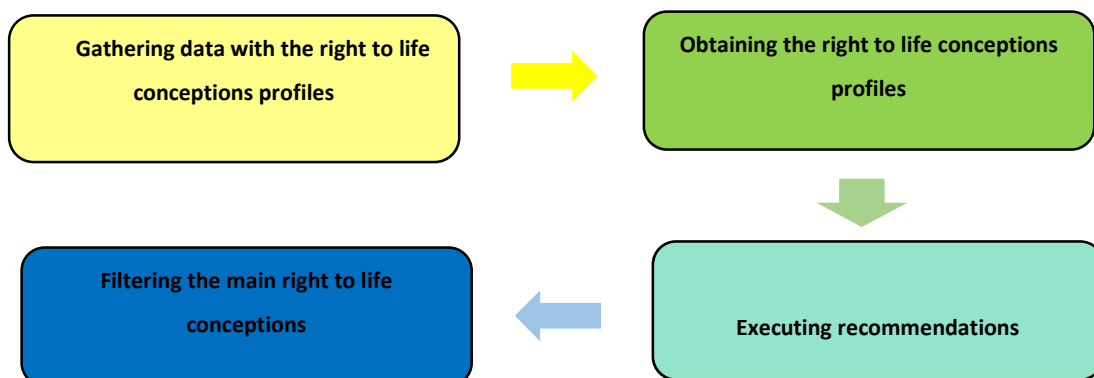


Figure 1: Proposed model.

The detailed description of each activity and the mathematical model supporting the proposal is presented below:

### 1. Gathering data with the right to life conceptions profiles

Each one of the conceptions is described by a set of characteristics that will conform the right to life conceptions profiles.

$$C = \{c_1, \dots, \dots, c_l\} \tag{1}$$

To obtain conceptions database, the right to life conceptions profile is obtained through single valued neutrosophic numbers (SVN) [24, 25].

Let  $A^* = (A_1^*, A_2^*, \dots, A_n^*)$  be a vector of SVN numbers such that  $A_j^* = (a_j^*, b_j^*, c_j^*)$   $j = (1, 2, \dots, n)$  and  $B_i = (B_{i1}, B_{i2}, \dots, B_{im})$  ( $i = 1, 2, \dots, m$ ) are  $m$  vectors of  $n$  SVN numbers such that  $B_{ij} = (a_{ij}, b_{ij}, c_{ij})$  ( $i = 1, 2, \dots, m$ ), ( $j = 1, 2, \dots, n$ ), then the Euclidean distance is defined as the  $B_i$  and  $A^*$  results [24]:

$$d_i = \left( \frac{1}{3} \sum_{j=1}^n \left\{ (|a_{ij} - a_j^*|)^2 + (|b_{ij} - b_j^*|)^2 + (|c_{ij} - c_j^*|)^2 \right\} \right)^{\frac{1}{2}} \tag{2}$$

$(i = 1, 2, \dots, m)$

After obtaining the Euclidean distance, a measure of similarity is defined as referred by [14].

To the extent that the alternative  $A_i$  is closer to the right to life conceptions profile ( $s_i$ ) the greater the similarity, which allows establishing an order between alternatives according to [13]. The right to life conceptions profile can be obtained directly from the experts, for which equation 3 is used.

$$F_{aj} = \{v_1^j, \dots, v_k^j, \dots, v_l^j\}, j=1, \dots, n \tag{3}$$

The assessments of the characteristics of the right to life main conceptions,  $a_j$ , will be expressed using the linguistic scale  $S$ ,  $v_k^j \in S$  where  $S = \{s_1, \dots, s_g\}$  corresponding to the second set of linguistic terms defined to evaluate the characteristics  $c_k$  using the SVN numbers. For this, the linguistic terms to be used are defined once the set of conceptions related to the right to life have been described and are represented according to expression 4.

$$A = \{a_1, \dots, a_j, \dots, a_n\} \tag{4}$$

The set of conceptions related to the right to life is stored in a previously created Database.

**2. Obtaining the right to life conceptions profiles**

In this stage the right to life main conceptions are obtained and stored in a profile as shown in expression 5.

$$P_e = \{P_1^e, \dots, P_q^e, \dots, P_l^e\} \tag{5}$$

This profile will consist of a set of attributes that are represented by expression 6 for its interpretation.

$$C_e = \{c_1^e, \dots, c_k^e, \dots, c_l^e\} \tag{6}$$

Where:  $c_k^e \in S$

The profile related to the right to life main conceptions is obtained through the so-called conversational approach or through examples which can be adapted according to what is referred by [12].

**3. Filtering the main right to life conceptions**

In this point, the main right to life conceptions are filtered in order to find which are the most appropriate. To do this, the similarity between the profiles of each conception related to the right to life is calculated,  $P_e$  and each studied conception  $a_j$  registered in the database. For the calculation of the total similarity, expression 7 is used.

$$s_i = \left( 1 - \frac{1}{3} \sum_{j=1}^n \left\{ (|a_{ij} - a_j^*|)^2 + (|b_{ij} - b_j^*|)^2 + (|c_{ij} - c_j^*|)^2 \right\} \right)^{\frac{1}{2}} \tag{7}$$

The function  $S$  calculates the similarity between the values of the attributes of the profile of each conception

related to the right to life and that of each conception analyzed in this study,  $aj[15]$ .

#### 4. Run recommendations

Once calculated the similarity between the profile of each conception related to the right to life and each conception analyzed in this study, they are sorted according to the similarity obtained. They are represented according to the similarity vector denoted by expression 8.

$$S = (s_1, \dots, s_n) \quad (8)$$

The conceptions to be treated will be those that best meet the needs of the profile of the right to life conceptions. That is, those having greater similarity with the conceptions of the right to more general life.

#### 4 Results

Two well-defined trends existing at a global, regional and national level are demonstrated. One related to the legalization of the interruption of life and the other related to the defense of life from its conception, birth, and growth of children. It is highlighted in the study that both trends are analyzed at the global, regional and national levels. They show results that contribute to the projects that have been presented in Ecuador on the decriminalization of abortion, after the entry into force of the Constitution of the Republic of Ecuador in 2008, where article 45 refers to the guarantee of life, its care and integral protection from its very conception.

On the other hand, by making use of Neutrosophy to recommend conceptions related to the integral protection of the law and to address these conceptions in order to achieve social equilibrium relative to the right to life. Using the model proposed in figure 1, the characteristics of the main conceptions of the right to life are obtained through expression 4,  $A = \{a_1, a_2, a_3, a_4, a_5\}$ . These characteristics are described by the set of attributes  $C = \{c_1, c_2, c_3, c_4, c_5\}$ .

The set of attributes will be assessed through the linguistic scale shown in Table 1. These assessments are stored in a database in order to recommend which are the conceptions to be considered for the integral protection of the right to life.

Linguistic term	SVN numbers
Extremely good (EG)	(1,0,0)
Very very good (VVG)	(0.9, 0.1, 0.1)
Very good (VG)	(0.8,0.15,0.20)
Good (G)	(0.70,0.25,0.30)
Moderately good (MDG)	(0.60,0.35,0.40)
Medium (M)	(0.50,0.50,0.50)
Moderately bad (MDB)	(0.40,0.65,0.60)
Bad (B)	(0.30,0.75,0.70)
Very bad (VB)	(0.20,0.85,0.80)
Very very bad (VVB)	(0.10,0.90,0.90)
Extremely bad (EB)	(0,1,1)

**Table 1:** Linguistic terms used [24].

Expression 9 shows the recommendations given the information related to the 5 conceptions studied in this paper and according to the linguistic terms shown in table 1.

$$Pe = \{VVG, VG, MDG, VVB, EG\} \quad (9)$$

Based on expression 9, conception 1 related to the sustainability of the right to life comprising the right to live, to stay alive, obtained a value of very very good (VVG). Conception 2, which suggests the right to life and consists of the right to live well, or live with dignity, gets very good values (VG). For conception 3, related to the proposal to understand that the right to life consists of the right to receive everything that is minimally necessary not to die

immediately, obtained moderately good values (MDG). On the other hand, conception 4 related to the understanding of the right to life only as the right not to be killed, obtains a very very good value (VVG). And finally, conception 5, which is the most relevant and is associated to the right not to be arbitrarily killed, specifically as for the way of conceiving the right to life, obtained an extremely good value (EG).

Results obtained in the recommendations sustain that, out of the five conceptions, number 1, 2, 4 and 5 have had reception in the literature, especially conception 5, the one related to the way of conceiving the right to life.

Once the recommendations were obtained, we calculated the similarity between the conceptions of the right to the life in a general way and the conceptions of the obtained profile related to the right to life, specifically of the five conceptions studied. Results are shown in table 2.

a1	a2	a3	a4	a5
0.84	0.80	0.52	0.90	0.95

**Table 2:** Similarity between the right to life conceptions and the conceptions of the obtained profile related to the right to life.

Based on the results we obtained, recommended conceptions are those closest to the profile related to the right to life. A way of sorting of the conceptions according to the comparison would be {a5, a4, a1, a2}.

In case of a recommendation for the profiles related to the right to life, it is recommended for our case study to address the two closest profiles. This would be recommendations a4 and a5, consistent with the concept of the right to life simply as the right not to be killed, and the right to not be arbitrarily killed, specifically with regard to the way of conceiving the right to life.

According to profiles, it is worth highlighting that in Ecuador there are laws, regulations of prevention and reproductive sexual health put into effect as a public policy that is legally analyzed. Based on the above declared, it can be said that the state has implemented ways of reaching adolescents to achieve a true social and moral conscience to protect their sexual modesty. It is an interesting fact that in Ecuador, humans are aware they have affective relationships with their children, they love the family and the environment.

## Conclusion

In the study carried out, the main ways of understanding the right to life have been identified from its conceptions. For that purpose, specific conceptions about the right to life have been identified and analyzed, using Neutrosophy to recommend the conceptions having the best reception in the literature while being not considered for the integral protection of the right to life.

We also presented a recommendation model of the most followed conceptions related to the understanding of the right to life in Ecuador. The model follows a knowledge-based approach, specifically based on the use of SVN numbers to express linguistic terms.

We made analysis from a legal perspective, without leaving aside the philosophical point of view, about the recognition of the challenges and problems faced by the problematic previously analyzed at national and international level, whose analysis has been subjected to sociological and ethics studies about the legal interruption of life.

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