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# The Influence of Religious Beliefs on the Establishment of Criteria for Human Death in the Context of Transplantology Considerations. A Comparative Study: United Arab Emirates, Saudi Arabia, and Poland

## Introduction

Considerations of death have accompanied mankind for centuries. Different ideas about the end of human existence lead to questions that have not always been answered. Some of them concerned establishing permanent and irreversible criteria of death, others focused on eternal life.

With the passage of time and the development of technology, divergent opinions about the end of human existence have appeared more and more often. As a consequence, the medical and religious understanding of the subject have started to differ from one another. Science representatives believe that death is a dissociated process, which means that “[dying] of individual cells and tissues occurs at different times”.<sup>1</sup> In other

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<sup>1</sup> Joanna Dudzińska, Beata Dobrowolska, “Zagadnienie śmierci pnia mózgu i transplantacji w świetle nauczania Kościoła Katolickiego”, *Pielęgniarstwo XXI wieku* 1, 54 (2016): 55.

words, the functions of some systems and organs may persist despite the death of other organs of the human body. In contrast to the medical concept of death, its theological significance is presented. A theocentric approach to death differs from its empirical concept in that it is experimentally impossible to grasp, so according to the followers of monotheistic religions, and especially (Orthodox Judaism and Islam) the current definition of cerebral death adopted by the medical community is not consistent with the idea of eschatology.<sup>2</sup>

The recognition of two mutually exclusive definitions of death allows for formulating the following hypotheses:

1. If the majority of citizens of a given country declares belonging to a given religious denomination, this means that the belief in God plays an important role in shaping their views, amongst others, on the subject of death.
2. Lack of consistency between the religious and the medical perception of death causes polarisation in the dispute and consequently leads to restrictions on the removal of organs from persons dying of cerebral death. In this article, I intend to explain why religious beliefs have a great influence on the establishment of criteria for the death of a human being.

In order to perform this task, I will first refer to the understanding of death and eternal life in accordance with the assumptions of selected monotheistic religions (Islam and Catholicism), and then, I will present the results of the last 9 years long research published by IRODaT (International Registry in Organ Donation and Transplantation) and Poltransplant on the number of organ transplants carried out, with the use of organs coming from living donors (*ex vivo*) and deceased donors (*ex mortuo*).

The decision to compare the results of the research on transplantation in the United Arab Emirates, Saudi Arabia and Poland was made because in these countries religion has a significant impact on the views of inhabitants, and a high rate of religiousness of citizens together with a similar image of eschatology makes such a comparison possible.<sup>3</sup>

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<sup>2</sup> Maria Nowacka, *Etyka a transplantacje* (PWN: Warszawa, 2003), 19. See Laura Sullivan, "What does a definition of death do?", *Diametros* 55 (2018): 63–67.

<sup>3</sup> Mustafa Switat, "Zróżnicowanie etniczno-religijne ludności a modernizacja społeczno-gospodarcza w krajach Zatoki Perskiej", *Krakowskie Studia Międzynarodowe* 1 (2011): 69–88.

## Religious Views on Death – the Position of Islam

In Islam, as in other monotheistic religions, it is accepted that God is the Creator of the world and the Lord of all existence. The man who was created based on his image received reason, free will and feelings. With the help of the three cognitive powers, it is possible for humans to make individual decisions and, with this ability, also to bear responsibility for their own moral choices.

According to Muslims, a man, although a good and free being, is also prone to making mistakes. In order to avoid bad decisions, it is advisable to live in accordance with God's will. The rules of conduct are enshrined in the Quran, Sunny and Hadith and accepting them can remove the grace of forgiveness and the gift of eternal life.

Belief in the resurrection of man is the theological foundation of this religion. Temporal life is understood as a transitional stage, the time in which one can become convinced of the strength of his own will and faith; therefore, a man who deliberately rejects the temptations of the mundane world and chooses obedience to God will receive His mercy and forgiveness.

According to the contents of the Holy Book – the Quran, the nature of man until death is a psychophysical unity that connects the soul with the body. It is only at the moment of death that God takes the soul.<sup>4</sup> For Muslims, the end of existence is the "border experience" because the time of trying and choosing between good and evil has just ended. From now on, the soul will be "Being in Space" – from the Arabic language "barzah" until the day of the resurrection, that is, until all souls are joined with new, immortal bodies, destined for eternal life.<sup>5</sup> The end of this journey will take place only on God's Judgment Day. Then, for good deeds, you will be able to collect the prize, staying in the garden of Eden, and for punishment – from the Arabic language "Gehenne", which is eternal damnation.<sup>6</sup>

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<sup>4</sup> "The Holy Quran. Mohsin Khan-English Translation of the Holy Quran", access 17.04.2020, <http://www.quranexplorer.com/Quran/>.

<sup>5</sup> Tomasz Stefaniuk, Karolina Domańska, "Rozumienie życia doczesnego i śmierci w źródłach islamskich – Koranie i Hadisach", *Kultura i Wartości* 2 (2013): 131.

<sup>6</sup> *Ibidem*, 130.

## Socio-Cultural Remarks about Transplantation in a Muslim Society

Since 1968, since the announcement of the new definition of death by the Ad Hoc Harvard Medical School Committee, the world debate on it has begun.<sup>7</sup> It was debated whether the death of the brain is a permanent and irreversible criterion that definitely makes us decide about the death of a patient, or it is not, and certain allegations can be made against it.

In Arab countries, the discussion on this subject has been continued until today. According to orthodox religious environments such as the Association of Muslim Brothers and the Egyptian Medical Association, "organ donation is a desecration of the corpse",<sup>8</sup> so a doctor who performs this is considered as lacking dignity in that serious time of human death and also strictly benefit-oriented, i.e. increasing the supply of organs.

In the background of deliberations around death, there are several, important ethical problems that, according to Muslim believers, are an issue to consider. First of these is the previously mentioned cerebral definition of death, whether its introduction does not violate religious standards in Muslim countries. The second issue is the presence of utilitarian values that have emerged along with the dissemination of new forms of therapy such as transplantation which, according to Muslims, is a threat to the preservation of permanent and unchanging views among the believers of this religion.

The third problem is professional values. According to Orthodox followers of Islam, the ethos of medical workers who are Muslims should be in line with their religious beliefs.

In order to answer the first question, it is worth noting that the issue of establishing permanent and irreversible criteria of human death has engaged Muslim physicians and ethicists in the discussion for many years. In the article entitled *Brain-Dead Patients are not Cadavers: The Need for Revise the Definition of Death in Muslim Communities*, Mohamed Y. Rady and Joseph L. Verheijde present the following views: "In the article, we summarize contemporary scientific evidence proving that the

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<sup>7</sup> Robert M. Veatch, "Would a Reasonable Person Now Accept the 1968 Harvard Brain Death Report? A Short History of Brain Death", *The Hasting Center Report* 48 (2018): 6–9.

<sup>8</sup> Sylwia Chmiel, "Społeczne i kulturowe bariery martwego dawstwa narządów w opinii koordynatorów transplantacyjnych, Białystok", access 17.04.2020, [https://repozytorium.uwb.edu.pl/jspui/bitstream/11320/2685/1/Chmiel\\_Sylwia\\_doktorat.pdf](https://repozytorium.uwb.edu.pl/jspui/bitstream/11320/2685/1/Chmiel_Sylwia_doktorat.pdf).

neurological and circulatory criteria of death in organ donation are non-compliant with the definition of death in Islam".<sup>9</sup>

Scholars believe that the commonly announced death criteria (circulatory-respiratory and cerebral) are neither in line with the concept of human death, as presented in the Holy Quran, nor do they provide diagnostic certainty, therefore they demand to continue research to learn more about the work of the brain and the role played by loss of consciousness in determining the patient's death.

According to the decision of the Presidential Council for Bioethics of 2008, "the patient's cerebral death is not a biological death".<sup>10</sup> This means that there is no evidence that confirms that the brain is the central integrator or superior organ of the body whose destruction or irretrievable cessation of activity means the loss of the somatic and integrated unity of the entire organism. Muslim universities which refer to the information contained in this research agree with the statement above. To defend their beliefs, they accept the arguments of Alan Shewmon who in his publications lists a whole range of integrative functions of the body that can be observed in patients getting brain death. These include, among others: "circulation; nutrition and breathing, in the sense of metabolic processes taking place in the body; elimination of harmful metabolic products, functioning of the kidneys, maintaining the energy balance of the body. In addition, the following patients are observed: wound healing, resistance to and response to fever, response to cardiovascular and hormonal stimulation of the surgical incision of body shells and long-term survival of pregnant women".<sup>11</sup> All this confirms the maintenance of the state of homeostasis in the patient's body and distinguishes the accusation that the patient is only a dead body, a collection of tissues and organs.

Following the suggestion of representatives of the Presidential Council for Bioethics, replacing the term "brain death" with the term "total brain failure" was proposed. It is worth noting that this concept not only strongly rejects the understanding of death as a "permanent loss of consciousness", i.e. death of the cerebral cortex, but also does not accept the social justification of brain death contained in the Harvard Report of 1968. As a consequence, it was assumed that the arguments used by the authors of the Harvard Report were utilitarian and did not meet

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<sup>9</sup> Mohamed Y Rady, Joseph L Verheijde, "Brain-Dead Patients Are not Cadavers: The Need for Revise the Definition of Death in Muslim Communities", *HEC Forum* 25 (2013): 26.

<sup>10</sup> Ibidem, 44. See "The President's Council on Bioethics", access 17.04.2020, <https://bioethicsarchive.georgetown.edu/pcbe/reports/death/>.

<sup>11</sup> Alan Shewmon, "The brain and somatic integration: Insights into the standard biological rationale for equating 'brain death' with death", *Journal of Medicine and Philosophy* 26 (2001): 457-478.

the criteria of the biological understanding of brain death, which is why it was criticized. According to Muslims, the proposal of the representatives of the Presidential Council is particularly important if it is assumed that the medical definition of death should convey the theological message that occurs in the Holy Quran.

Since in the any particular man is an image of psychophysical unity, and one should not accept the superiority of one organ, e.g. the brain over others, but look for new, more perfect methods for establishing permanent and irreversible criteria for human death.

We can see how much religion in the Muslim world has influenced the views of the public by analyzing the statistical surveys of transplants carried out over the past nine years in the United Arab Emirates and Saudi Arabia.

Table 1. Organ transplants in the United Arab Emirates in 2010–2018\*

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Collection of organs from the dead donors	–	–	–	0	0	–	–	6	–
Collection of organs from the living donors	–	–	–	30	51	–	–	34	
Total	–	–	–	30	51	–	–	40	–

Table 2. Organ transplants in Saudi Arabia in 2010–2018\*\*

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Collection of organs from the dead donors	244	210	200	189	241	288	265	351	–
Collection of organs from the living donors	389	546	599	571	624	748	818	915	–
Total	633	756	799	760	865	1036	1083	1266	–

The results of the research conducted in the United Arab Emirates are as follows. In the years 2010–2012 and 2015–2016 there is no data on the number of transplants performed. In fact, no organs were taken from the deceased because *ex mortuo* transplants were not legally allowed or socially accepted in that country.

\* "IRODaT", access 17.04.2020, <http://www.irodat.org/?p=database&c=AE#data>.

\*\* "IRODaT", access 17.04.2020, <http://www.irodat.org/?p=database&c=SA#data>.

The first regulations on transplants were introduced in this country only in 1993.<sup>12</sup> By law, transplants were found to be allowed, but only between living and related persons. Therefore, it was forbidden to obtain organs from people outside the family circle and from dead donors. This prohibition specifically explains why, during the indicated years, virtually no organs were taken from the deceased. The changes took place only in 2017, when 6 operations were performed (only kidneys were taken). This situation is understandable because the new definition of brain death was adopted in the United Arab Emirates in 2016, and one year later, the first transplants were carried out by retrieval of organs from dead donors.<sup>13</sup>

A similar situation occurred in the same years in Saudi Arabia. Here, too, we can see a large difference in the number of organs taken from deceased and living donors. It is clear that the numbers are different because they depend on the higher population of Saudi Arabia than that of the United Arab Emirates.<sup>14</sup> This does not change the fact that transplants from living donors have been more often approved for the past nine years than those from deceased donors. Organs most often transplanted from living donors are kidneys and fragments of livers, and from the donors of the deceased – kidneys, livers, pancreases, hearts and lungs.

Based on the data published by the International Register of Organ Donation and Transplantation, it can be concluded that in Muslim countries, socio-cultural factors shape the image of citizens death. Despite the introduction of legal changes in the abovementioned countries, no increase in transplantation could be seen in recent years, which does not change the fact that the discussions on this topic will be continued in order to establish permanent and irreversible criteria of death that meet the principles of the Holy Quran.

The second and third of these ethical problems are the fear of the dissemination of utilitarian values that have emerged with an access to new forms of therapy, such as transplantation and compliance with the content of the holy books of Islam. According to Mohamed Rady and Joseph Verheijde as well as members of the Ad Hoc Harvard Medical School Committee, i.e. Henry Becher – the American anaesthesiology pioneer and committee chairman, Joseph Murray – the transplant surgeon, and Van Rensselaer Potter – the American biochemist, creator of the term “bioethics”, and later, a professor of Oncology at the University of Wisconsin-Madison, the decision concerning the introduction of changes

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<sup>12</sup> Zaman Samihah, Staff Reporter Staff, access 17.04.2020, <https://gulfnews.com/going-out/society/transplants-in-the-uae-1.2251332>.

<sup>13</sup> Ibidem.

<sup>14</sup> “IRODaT”, access 17.04.2020, <http://www.irodat.org/?p=database&c=SA#data>.

and establishing a new definition of death was made.<sup>15</sup> According to Muslim researchers, the selection of the committee members was not accidental because the institution was to meet a specific goal – to increase the supply of organs.<sup>16</sup> This was all done with a view to disseminate transplantology that would meet the expectations of patients to improve their quality of health and even to have a chance to live longer.

Although according to these Muslim researchers, it is incompatible with the traditional principles of Islamic ethicists, this goal is very important, which is why there are so many opinions on this subject in the Muslim world. Persons presenting utilitarian views argue pragmatically. They believe that increasing financial outlays will determine the development of intensive care.<sup>17</sup> Nevertheless, people with orthodox beliefs justify that it is impossible to save human lives at the expense of other patient. In other words, you should not take any medical action that would be associated with accelerating the death of a sick person only to retrieve organs from him or her and pass them on to a patient who is more likely to survive. Such behavior is a violation of medical and criminal law and it is the reason for the accusation of a medical professional to perform homicide. “Islam shares the same fundamental rule set forth in Judaism and Christianity ‘Thou shalt not kill’”.<sup>18</sup>

In the interest of the moral conduct of doctors, it is recommended to perform daily medical activities in accordance with the contents of the Holy Quran, Hadi and Sunny. According to Muslims, care for eternal life should be carried out every day. Daily duties cannot obscure the pursuit of holiness, so if the performance of specific tasks may be related to moral errors, Muslims offer the possibility to use the principle of conscience clause, so that every doctor can do his or her work in accordance with their religious beliefs.<sup>19</sup>

To defend this thesis, it is worth mentioning that Muslims accept the “maslah” argument, which means the concern for public interest. How it is understood depends on the aspects of this culture. On the one

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<sup>15</sup> Mohamed Y. Rady, Joseph L Verheijde, “Brain-Dead Patients are not Cadavers: The Need for Revise the Definition of Death in Muslim Communities”, *HEC Forum* 25 (2013): 27–28.

<sup>16</sup> George Khushf, “A matter of respect: A defense of the dead donor rule and of a ‘whole-brain’ criterion for determination of death”, *Journal of Medicine and Philosophy* 35 (2010): 330–364.

<sup>17</sup> Mohammed A. Alsultan, “Utilization of intensive care units’ beds occupied by brain-dead patients”, *Saudi Journal of Kidney Diseases and Transplantation* 22 (2011): 444–447.

<sup>18</sup> Mohamed Y. Rady, Joseph L Verheijde, “Brain-Dead Patients Are not Cadavers: The Need for Revise the Definition of Death in Muslim Communities”, *HEC Forum* 25 (2013): 37.

<sup>19</sup> Michelle McLean, “Conscientious objection by Muslim students startling”, *Journal of Medical Ethics* 39 (2013): 708.



hand, it can be assumed that the public interest is to offer patients' universal access to modern forms of therapy in order to provide them with a quick recovery. On the other hand, it is in the interest of every Muslim not to create situations in which another person would feel compelled to perform actions against their will and against the principles adopted in a given community.

It turns out that this second way of explaining the "maslah" argument is considered to be valid, because it reflects the record in the Holy Quran, the content of which reads as follows: "[...] if anyone killed a person not in retaliation of murder, or (and) to spread mischief in the land – it would be as if he killed all mankind, and if anyone saved a life, it would be as if he saved the life of all mankind".<sup>20</sup>

According to Mohamed Rada and Joseph Verheijde, the prevention of evil takes precedence over the promotion of good. In other words, premature ending of a patient's life to obtain organs for transplant should not be implemented because of the good intent of saving another patient's life, because evil actions never lead to good results, so condemnation of killing clearly substitutes praise for saving life.

To sum up, according to Muslim orthodox doctors, a patient who has been diagnosed with coma should continue to be treated as a living person, and should therefore be provided with adequate palliative care so that he or she can die with dignity and natural death. According to Islamic principles, it is medical workers duty to treat their patients with respect, which is why no utilitarian goals, e.g. willingness to save another patient's life, have a better chance of survival, should not override the most important ethical principles such as charity, autonomy, avoiding harm, justice. Only acting in accordance with the traditional principles of medical ethics can ensure equal and fair treatment of all patients, and medical staff can offer the performance of daily duties in accordance with the principles of religion.

## Religious Views on Death – Position of the Roman Catholic Church

The Roman Catholic Church teaching concerning a man's death is connected with the main assumptions of monotheistic religions. According to theologians, death is a momentary phenomenon because it is identified

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<sup>20</sup> "The Holy Quran. Mohsin Khan-English Translation of the Holy Quran", access 17.04.2020, <http://www.quranexplorer.com/Quran/>. Mohamed Y. Rady, Joseph L Verheijde, "Brain-Dead Patients Are not Cadavers: The Need for Revise the Definition of Death in Muslim Communities", *HEC Forum* 25 (2013): 38.

with the separation of the body from the soul.<sup>21</sup> The end of human existence is only the end of temporal life, but not eternal one. According to the church magisterium, the soul does not die, only everything that is material, e.g. the body, is destroyed and turns into dust.<sup>22</sup> Catholics believe that, after death, human actions will be subject to God's judgment. Belief in resurrection and eternal life are both the supreme message of the New Testament as well as the source of work on their behavior, which is aimed at changing behavior and removing bad habits.

Temporal life is therefore a time of trial. Since every person has the mind, feelings and free will that have been given to him or her from God, it means that they have the right to make decisions according to their own thoughts and can make mistakes. Man is not an infallible being, but weak and sinful; therefore, he or she needs support in prayer and participation in sacraments such as the sacrament of confession, penance, Eucharist, and anointing of the sick.

According to the Roman Catholic religion, a believer whose priest makes a sign of forgiveness and forgives sins in the name of Christ can receive God's grace and salvation. However, before this happens, he will participate in the Last Judgment because his conduct must be subject to moral evaluation.<sup>23</sup> Actions will decide whether they will receive a reward and be able to stay in the presence of God or will be condemned to eternal damnation.

## Socio-Cultural Remarks on Death and Transplantation – the Position of the Roman Catholic Church

According to the teachings of the Roman Catholic Church, like other monotheistic religions, death is a momentary phenomenon. This term is not an empirical concept; therefore, it is not present in medical sciences. Could the differences in the definition of death by theologians and doctors have caused the Church's magisterium to misappropriate the right to determine the moment of death in medicine as well?

According to the opinion expressed by Pope Pius XII of November 24, 1957, issued in an address to anesthesiologists in Innsbruck,

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<sup>21</sup> Stanisław Luft, *Medycyna pastoralna* (Warszawa: Wydawnictwo Archidiecezji Warszawskiej, 2002), 285.

<sup>22</sup> *Katechizm Kościoła Katolickiego* (Poznań: Wydawnictwo Pallotinum, 1994), 92–93.

<sup>23</sup> *Ibidem*, 254–255.

it was reported that the Roman Catholic Church never interfered with the doctors' competence to determine the moment of death.<sup>24</sup>

The position of the Pope was also confirmed by the Pontifical Council of "Cor Unum, whose important task is to coordinate and supervise the entire actions taken in the field of medicine in the Catholic world".<sup>25</sup> A group of fifteen, involving ethicists, doctors, nurses and theologians, was to present the ethical assumptions of caring for seriously ill and dying patients, which are accepted by the Roman Catholic Church.

In the group's work report, which was published in the document *Questioni etiche relative ai malati gravi e ai morenti*, it was written that medical specialists should make statements about the death criterion. Since we more and more often hear that the total and irreversible lack of brain activity determines the death of a man, it is necessary to agree with the above court.<sup>26</sup>

Over the years, the number of church magisterium documents in which brain death was considered to be the real criterion of human death grew. The most important of these are: *Dichiarazione circa il prolungamento artificiale della vita e ladeterminazione esatta del momento della morte*,<sup>27</sup> *Healthcare Card*<sup>28</sup> and *Why the Concept of Brain Death is Valid as a Definition of Death*.<sup>29</sup>

Acceptance of the new definition of death also had consequences related to organ transplantation. In the history of the church, Pius XII and John Paul II were the popes who expressed complete approval for transplantology. The first of these church theologians did so during the speech at the First International Congress of Histopathology of the

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<sup>24</sup> Pius XII, "W sprawie sztucznego utrzymywania pacjenta przy życiu", in: *Opieka paliatywna nad dziećmi* (Warszawa, 2005), 68. See Tadeusz Biesaga, "Kontrowersje wokół nowej definicji śmierci", *Medycyna Praktyczna. Ginekologia i Położnictwo* 3 (2006): 23.

<sup>25</sup> Joanna Dudzińska, Beata Dobrowolska, "Zagadnienie śmierci pnia mózgu i transplantacji w świetle nauczania Kościoła Katolickiego", *Pielęgniarstwo XXI wieku* 1, 54 (2016): 56.

<sup>26</sup> Rada Papieska Cor Unum, "Niektóre kwestie etyczne odnoszące się do ciężko chorych i umierających (27.07.1981)", ed. K. Szczygieł, in: *W trosce o życie. Wybrane dokumenty Stolicy Apostolskiej* (Tarnów: Wydawnictwo Biblos, 2008), 445.

<sup>27</sup> Papieska Akademia Nauk, "Deklaracja o sztucznym przedłużaniu życia i dokładnym ustaleniu momentu śmierci", in: *W trosce o życie, wybrane dokumenty Stolicy Apostolskiej* (Tarnów: Wydawnictwo Biblos, 1998), 453–454.

<sup>28</sup> "Karta Pracowników Służby Zdrowia", in: *W trosce o życie, wybrane dokumenty Stolicy Apostolskiej* (Tarnów: Wydawnictwo Biblos, 1998), 595.

<sup>29</sup> Papieska Akademia Nauk, *Why the Concept of Brain Death is Valid as a Definition of Death* (Scripta Varia 10. Vatican, 2008), 2.

Nervous System in Rome (1952)<sup>30</sup> and the second one – in the encyclical *Evangelium Vitae*, with the following message: “In addition to the well-known facts, there is still heroism of everyday life, which consists of small or large gestures of selflessness, strengthening the authentic culture of life. Among these gestures, deserving special recognition is the organ donation, in accordance with the requirements of ethics, in order to save health, and even the lives of the sick, sometimes deprived of all hope”.<sup>31</sup>

The words of John Paul II were once again repeated during the World Congress of the Transplant Society in Rome (2000). “The Holy Father reminded that there is a need to instill in the hearts of people a sincere and deep conviction that the world needs brotherly love, which can be expressed by the decision to donate organs”.<sup>32</sup>

The views of the Roman Catholic clergy on transplantation had a significant impact on the change of the public opinion. This is also confirmed by the results of the research presented by Poltransplant.

Table 3. Recruitment of organ donors by neurological criteria (DBD) and circulatory (DCD) in 2012–2017\*

		2012	2013	2014	2015	2016	2017
Donors qualified	DBD	786	775	782	703	668	718
	DCD	–	–	–	3	8	2
	Total	786	775	782	706	677	720

\* “Poltransplant”, access 17.04.2020, [http://poltransplant.pl/Download/Biuletyn\\_2018.pdf](http://poltransplant.pl/Download/Biuletyn_2018.pdf).

<sup>30</sup> Bożena Majchrowicz, Ludwika Sadowska, “Problemy społeczne w świetle badań poziomu akceptacji transplantacji narządów i tkanek wśród mieszkańców Podkarpacia”, *Onkologia Polska* 1 (2012): 15.

<sup>31</sup> Jan Paweł II, “*Evangelium Vitae*, o wartości i nienaruszalności życia ludzkiego”, in: *W trosce o życie, wybrane dokumenty Stolicy Apostolskiej* (Tarnów: Wydawnictwo Biblos, 1998), 86.

<sup>32</sup> Jan Paweł II, *Przemówienie do uczestników Światowego Kongresu Towarzystwa Transplantacyjnego* (Rzym, 2000).

Table 4. Total number of organs taken from living and dead donors in 2010–2017\*

Year	2010	2011	2012	2013	2014	2015	2016	2017
Total number organs taken from dead donors	1360	1536	1710	1688	1711	1579	1637	1714
Transplanting the kidneys and livers from living donors	70	58	65	75	85	82	78	80
Total	1430	1594	1775	1763	1796	1661	1715	1794

In Poland, in the years 2012–2017 (Table 3), organs were collected mainly from people who died of neurological disorders. These results prove that Polish society accepted the new criterion of brain death, which became the basis of medical diagnosis. The data presented in the Table 3 are comparable with the results of the tests from Table 4 because from 2010 to 2017 there was an increase in the number of collected organs from donors of the deceased.

Although there are no social contraindications in Poland to collect organs from people who died as a result of brain death, we should not forget about some contentious issues which still raise doubts among some doctors and bioethicists. One of them is the use of reductionistic anthropology and utilitarian ethics.<sup>33</sup>

As I wrote earlier, the culture of the West refers to the views of Descartes, who adopted the anthropological duality. Separation of the soul from the body gave rise to new research in medicine, especially in the field of neuropsychology, psychiatry, and with the technological development, also transplantology. Since the philosophy of Descartes, the value of humanity has become dependent on thought processes that determine both the ability to articulate one's beliefs or express feelings, as well as to bear responsibility for one's own decisions.

\* "Poltransplant", access 17.04.2020, [http://www.poltransplant.pl/Download/Biuletyn2011/biuletyn\\_2011\\_s.pdf](http://www.poltransplant.pl/Download/Biuletyn2011/biuletyn_2011_s.pdf). "Poltransplant", access 17.04.2020, [http://www.poltransplant.pl/Download/Biuletyn2012/Biuletyn\\_2012.pdf](http://www.poltransplant.pl/Download/Biuletyn2012/Biuletyn_2012.pdf). "Poltransplant", access 17.04.2020, [http://www.poltransplant.pl/Download/Biuletyn2013/Biuletyn\\_2013.pdf](http://www.poltransplant.pl/Download/Biuletyn2013/Biuletyn_2013.pdf). "Poltransplant", access 17.04.2020, [http://www.poltransplant.pl/Download/Biuletyn2014/Biuletyn\\_2014\\_web.pdf](http://www.poltransplant.pl/Download/Biuletyn2014/Biuletyn_2014_web.pdf). "Poltransplant", access 17.04.2020, [http://www.poltransplant.pl/Download/biuletyn2015\\_www.pdf](http://www.poltransplant.pl/Download/biuletyn2015_www.pdf). "Poltransplant", access 17.04.2020, [http://poltransplant.pl/Download/Biuletyn\\_2016\\_www.pdf](http://poltransplant.pl/Download/Biuletyn_2016_www.pdf). "Poltransplant", access 17.04.2020, [http://poltransplant.pl/Download/Biuletyn\\_2017.pdf](http://poltransplant.pl/Download/Biuletyn_2017.pdf). "Poltransplant", access 17.04.2020, [http://poltransplant.pl/Download/Biuletyn\\_2018.pdf](http://poltransplant.pl/Download/Biuletyn_2018.pdf).

<sup>33</sup> Tadeusz Biesaga, "Kontrowersje wokół nowej definicji śmierci", *Medycyna Praktyczna. Ginekologia i Położnictwo* 3 (2006): 22.

Opponents of this concept, e.g. Hans Joachim Türk and Hans Jonas, believe that the human person cannot be restricted to the functioning of one organ – the brain or consciousness, because otherwise we will refuse to participate in personal identity in the extra-cerebral part of the body.<sup>34</sup> This concern relates to minimalist criteria, which both scientists consider insufficient to obtain organs for transplantation. According to the researchers, if this concept persisted, some people who would not be able to live independently, such as anencephalic infants, patients in coma or people in a chronic vegetative state would be deprived of rights and excluded from the group of living people. According to Hans Joachim Türk and Hans Jonas, this is an unacceptable situation because it violates the basic rights of the patient, and with them, the right to a dignified and natural death.

According to the above mentioned phenomenologists, philosophers and ethical personalists, the development of medicine should go hand in hand with the development of moral reflection: “when the unity of human being is broken, the unity of its bodily-spiritual structure, when the internal cohesion breaks down resulting in disintegration and disintegration?”<sup>35</sup>

The search for better criteria for adjudging on death as well as respect for fundamental principles of ethics and a patient’s rights are considered by the representatives of the above-mentioned philosophical positions as the overriding goal of the medicine of the 21<sup>st</sup> century.

## Concluding Remarks

Islam and Catholicism are religions that have a great influence on the shaping of social perception of death and transplantology. Data on transplants from different countries presented in the article confirm this information. For many medical employees who want to work in accordance with their own worldview, the subject of religion is important, which is why they feel the need to discuss many problems that occur in medical practice. One of them is to redefine death. Still, at the beginning of the 20<sup>th</sup> century, the cardiopulmonary criterion was used. It was not until the development of medical technology that a person formerly declared

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<sup>34</sup> Hans J. Türk, “Śmierć mózgowa w aspekcie filozoficznym”, in: *Etyczne aspekty transplantacji narządów: materiały z sympozjum w Kamieniu Śląskim w dniach 15–16.04.1996* (Opole: WT UO, 1996), 69. See Hans Jonas, “Gehirntod und menschliche Organbank: zur pragmatischen Umdefinierung des Todes”, in: *Technik. Medizin und Ethik: zur Praxis des Prinzips Verantwortung* (Frankfurt am Main: Insel, 1985), 222.

<sup>35</sup> Tadeusz Biesaga, “Kontrowersje wokół nowej definicji śmierci”, *Medycyna Praktyczna. Ginekologia i Położnictwo* 3 (2006): 23.

dead with the help of apparatus, e.g. a respirator, can be sustained alive. There are examples of patients around the world who were not given any chance to recover, so families were prepared to come to terms with the death of the patient, and in some cases, it was suggested to agree to receive organs for transplantation. Despite the poor prognosis, some patients were awakened from coma.

Today, with the help of new methods of rehabilitation, stem cell implantation or brain stimulators, patients learn to communicate with their loved ones and, with time, even move independently. One of the important scientific centers in Poland known for waking patients from post-traumatic coma is the Jan Talar clinic at the Collegium Medicum of the Nicolaus Copernicus University in Bydgoszcz. As the research results show, this doctor has awakened about 300 people from coma for over the past 40 years.<sup>36</sup>

This example proves that since faith can be a force that will make the patient want to fight for recovery, for medical workers it may be a reason to seek new therapeutic and diagnostic methods, which is why religion should be treated as a source of inspiration to take on new challenges and not as an obstacle to the development of medicine.

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<sup>36</sup> Jan W. Talar, *Śpiączka mózgową a tak zwana śmierć mózgu* (Bydgoszcz: Wydawnictwo J. Talar, 2018).

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## Summary

Over the past few years, the problems of conscientious objection have mostly concerned abortion, but with the development of medicine, the spread of medical devices and the introduction of changes in the field of diagnostics of human death, its connection with thanatology was noticed at the end of the 20<sup>th</sup> century.

As a consequence of scientific considerations, it has been concluded that the cessation of brain stem function decides on the death of the patient, therefore the criterion of “cerebral death” was given priority over the criterion of cardio-respiratory. Legally, many countries in the world have adopted a new regulation, but this does not change the fact that in the last 9 years some doctors from the United Arab Emirates and Saudi Arabia continue to raise concerns. They believe that the criterion of cerebral death proclaimed by the Harvard Committee in 1968 is not permanent and irreversible, and therefore cannot determine the death of a human being. From the medical point of view, death is a dissociated process, so the subject cannot be limited to the diagnosis of the cessation of work of one organ – the brain.

For this reason, according to Mohamed Y. Rady and Joseph L. Verheijde, Muslim doctors invoke the principle of the conscience clause. These situations occur particularly during transplants, which is why in this article I intend to explain why religious beliefs have a significant impact on the establishment of criteria for the death of human beings, sometimes causing strong resistance on the part of society against not only accepting brain death, but also popularising transplants. I will present this problem on the example of the United Arab Emirates, Saudi Arabia and Poland.

**Keywords:** definitions of death, cerebral death, organ transplantation, conscience clause, monotheistic religions