

An investigation of the role of stem cells in explaining bodily resurrection

تحليل دور الخلايا الجذعية في شرح المعاد الجسماني

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Abstract

Bodily resurrection is one of the most important issues in the field of religion. Proving and explaining it as well as answering its relevant objections have constituted one of the most fundamental concerns of theologians, religion philosophers, and other men of faith. One of the objections to the materiality of resurrection is the theory of the eater and the eaten, variously answered by Islamic thinkers. However, receiving inadequate responses, it has ensued serious problems. Using the findings of genetics, this paper presents a new version of the theory of the main components of the body (one of the responses with a focus on hadith) that will prove bodily resurrection, be generalizable, and make sense to common readers.

Keywords : Bodily resurrection , stem cells , objection of the eater and the eaten , main components of body.

Introduction

Belief in the after-life and resurrection is the *sine qua non* of religion, and it is one of the most hotly debated issues among theologians and philosophers. Thus, almost all religions believe in the afterlife and consider it to be one of the most basic religious issues. Meanwhile, the extent to which Islam stresses resurrection is unsurpassed by other religious creeds. In the Quran, around one thousand two hundred verses deal with this subject. Such an emphasis on resurrection, in addition to its believing aspect, implies the great many educational effects of this subject matter. Following the Quran, Muslim theologians and philosophers have attempted to provide a rational exposition of resurrection, extending it to explaining bodily resurrection. In this regard, Mohammad Baqer Majlesi holds that bodily resurrection is unanimously accepted by all religious creeds and its disbelievers are excluded from Islam. He believes Quranic verses are crystal clear about it and no room has been left for interpretation. Authentic hadiths also reinforce its truth (Majlesi, 1982, Vol. 7, 47; Hilli, 2001, 406).

There are generally three schools of thought regarding the idea of resurrection:

- 1) Atheists who only accept bodily resurrection, though in a peculiar way by believing that human body disintegrates after death and what remain are some components and materials that turn into other objects and creatures (survival through transformation to energy).
- 2) Rejecting bodily resurrection, some others believe in the resurrection of soul. Two sub-branches of this perspective are noteworthy: those who believe that souls do not enter a new body in purgatory and after resurrection (reincarnation), and others who restrict soul's transmission among other bodies to this world.
- 3) Finally, most believers are convinced of bodily and spiritual resurrection both, holding that just as God originally created human being, he will do the same at the Day of Judgment when the two dimensions of human beings will either receive their proportionate reward and punishment (Sobhani, 1994, 45). For more information on the perspectives of various religious creeds on this matter, see *A Comprehensive History of Religions* (p. 31) on Zoroastrians; the first book of Samuel, chapter 2, verse 6 and Isaiah, chapter 26, verse 19 for Judaism; and Matthew, chapter 32, verse 31 and 32 for Christianity).

Bodily resurrection means the restoration of body's scattered components the way they would have been in this world (Hilli, 2001: 406). Hence, religious scholars and most theologians think of bodily resurrection as an indispensable requirement of the creed, excommunicating those who deny it. (Khajeh Tusi: 1986: 300; Hosseini Shirazi, 1989: 384; Institute for Islamic Studies, 2007: 412).

For some peripatetic philosophers, scientific and philosophical debates should have their bases in argument; nonetheless, concerning beliefs and especially in regard to a complex issue like bodily resurrection, we cannot merely trust science and reason, so assistance should be sought from the Quran and Sunnah in this realm. This might be one of the reasons for recourse to oral traditions in proving the bodily resurrection among varying groups of scholars (Ashtiani, 2002, 9). Avicenna, for instance, maintains that proving bodily resurrection is easy through traditions and verses, but it cannot be supported by reason or through philosophical discussions (Avicenna, 1983, 682; *ibid*, 423).

Some other Islamic scholars ⁽¹⁾ have only attempted to explain bodily resurrection using Plato's theory of forms. A few others ⁽²⁾, by misinterpreting the religious texts (e.g. Quranic verses and hadiths) have taken bodily resurrection as afterlife by another body similar to the worldly one (Sadeghi Arzakani, 2009: 293).

However, Transcendental Philosophy (*Hikmat Mota aliya*) strives to bring philosophical arguments for the bodily resurrection. Mulla Sadra claims that from among the Islamic scholars the only rational arguments to prove the bodily resurrection have been presented by him (See *Mafatih al-Ghayb*, 1984: 145). Nonetheless, as a critique of Mulla Sadra's emphasis on the objectivity of material and eternal body, he does not adhere to the objectivity of worldly and eternal body in his arguments.

Accordingly, numerous questions and controversies arise in this area as follows:

- a) What is really the resurrected one or the one assigned with divine duty on the Day of Judgment?
- b) How can we answer objections like that of the eater and the eaten such that both the objectivity of the worldly and eternal body is preserved and no disagreement is made with Quran and oral traditions?

The final answer is that bodily resurrection entails the survival of even the smallest parts (e.g. cell-size components) of the human body and the composition of a new heavenly body based on that single-cell in such a

way that it has all the characteristics of the previous entity based on biological and scientific evidence.

The eater and the eaten objection

Different accounts of the eater and the eaten projection have been reported so far (Tayyeb, 1983: 632-631; Khatami, 1991: 44, Majlisi, n/d: 374; Sabzevari, 1990, vol. 5: 344). As regards the corporeality of resurrection, we have following assumptions:

- a. God will restore all parts of the human body formed through life to death. Because the body is constantly engaged in metabolism and old cells are replaced with newer ones, anyone in resurrection would be giant as a mountain. As for the fact that some components of the body might be eaten as food by another human being in the lifecycle, a common component might be required between two human beings that again seems impossible.
- b. The last body which existed at the time of death is resurrected; an idea which sounds invalid because it may happen that a servant be obedient all his life and turn into disobedience in his later life. Thus, if the recent components are restored and rewarded by God, that would entail giving the right to the disqualified or vice versa. This argument is also incompatible with divine justice (Mohammadi, 2008: 528-529).

Based on the impossibility of the two above-mentioned premises, various ideas have been proposed as to which component of the human being is the addressee of the divine speech and the carrier of the holy duty. These approaches are explained below.

Spiritual resurrection

In the eyes of the early philosophers of religion, Christians, followers of reincarnation and al-Ghazzali as an al-Ash'arite and Ibn al-Haytham from among Karramiyya and a group of Shias and Sufis only the immaterial human self is resurrected. Anyhow, this view is contrary to the clear verses of the Quran ⁽³⁾ and Imams' hadiths ⁽⁴⁾ (AS) (Sha'rani, n/d: 565-566).

The theory of main components of body

A group of religious thinkers believe in the resurrection of main body components together with a rational soul (*nafsi natiqa*); namely those components that are given to some specific individuals from among the human beings according to God's knowledge and are constant from the beginning to the end of the life, without any decrease or increase. In such a view, development and growth, overweight and underweight, or big

and small size are all due to secondary appendages that have joined the main components with no need to their restoration (ibid.).

Therefore, if we take the eater and the eaten hypothesis for granted (i.e. a man eating another man), accordingly the main components of every human being would be fixed in the knowledge of God and the components of the eaten one would just be the additional and subsidiary components of the eater that would finally be disposed by him and remain constant (Tayyeb, 1983: 632).

However, the problem is that what those main components are and where they are located and how they can be differentiated from other components. Several responses have been given to these questions which include:

- a. The main components are the “genes” within “chromosomes” and in the middle of the cell nucleus. The “genes” are thus part of the nucleus that remain unchangeable all through the life and form the primary components of the human body.
- b. The last vertebra, namely the lowest bone in the vertebral column (i.e. the coccyx) is the main component of the human body that is never perished (Ibn Hajar, n/d, vol. 13; 369; Ahmad ibn Hanbal, 1998, vol. 2; 428; Makarem Shirazi, 1978: 238).
- c. Or there are some unknown parts in the body that we are only aware of their existence in the body with their top feature as stability and unchangeability (ibid.).

The critique of “the main components of the body hypothesis”

As a response to the objection claiming that the “genes” are constant, modern science has proven that the building blocks of “genes” are constantly evolving and changing. In other words, over time, their forming materials undergo changes and what remains just includes the properties of genes.

The scientific studies and empirical observations have nowadays refuted the second view by holding an equal view towards the body parts. Therefore, after death, all the body parts return to the basic elements, and the corpse buried in the grave completely turn into earth, and can accordingly compose a part of other human’s or animal’s body.

But the hypothesis for the unknown elements is not but a mere hypothesis and there is no reason for the existence of such organs (See Makarem Shirazi, 1997: 239-238).

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From a critical perspective, it should be clarified that the meaning of verses 78 and 79 of the Surah Ya sin is not that the same bones that are rotted away with their remainders left would be collected and remade, but God says: “Who will revive these bones when they have rotted away?” Resurrection is referred to using the term “revival”, but in the primary case, it has been indicated by “Who created them for the first time!” (Mojtaba, 2008, 192-193). Thus, the primary creation is different from revival in hereafter. In other words, there the body might be the same as the earthly body, but not like it; the bones are of the same type as the worldly ones, but are not the same.

Furthermore, in the traditions concerning the main components of the body nothing have been reported about subsidiary or additional parts, but the only thing that has been raised is that all the body decomposes except for one component. Therefore, all the body cells and its components can be seen as the main components and only survival of one of them would be sufficient for recreation of a heavenly body.

Based on what was mentioned, separating the main components from the subsidiary ones, both from the point of view of science and the philosophy and religion seems unacceptable. Holding that God will resurrect the main components on the last day and the additional components that have been integrated into other bodies are not relevant to the main component, is basically a baseless proposition with no place in the logic of science (Hosseini, 2002, vol. 6: 157).

The eternity of human nature (Tināt) after death

The third answer of the Islamic theologians and Hadith scholars is that with the coming of death human body is shattered and scattered, but his self that is the main component and carrier of all individual characteristics of every human being, continues life as the core of the physical body in the grave. Such a core spins around itself and never integrates into another human's body. Even, in case it enters another person's body, it exits again. When the Hour comes, human natures are revived and reform the heavenly body with all the features of their previous worldly frame.

By nature we mean the rational soul (*annaf alnatiqah*), to which the happiness and misery of man depends. Some scholars equate the rational soul with the main components of the body while others consider it as the ideal or purgatory body. Still others view it as the atomic particles in the body (Shariati, n/d: 250).

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This view is adopted from a hadith that should be investigated in terms of its authenticity and indications. Moreover, nobody can solve the objection of the eater and the eaten just with one hadith that is vague and ambiguous (ibid.).

Individuality is spiritual rather than physical

Another answer to the given objection is that if the body is transformed or eaten, human identity would not be damaged because one's personality has its basis in soul, and body depends on the soul to ensure its validity. Thus, a body that is eaten, even without every part of it being collected, or if it is restructured through the components of another person's body, or in the words of Mulla Sadra, even if the soul (*nafs*) develops a body for itself (Sadr al-Din Shirazi, 1981, vol. 9, 199 & 200), again is known through the soul and its truth is identified with the soul or *nafs* (Institute for Islamic Studies, 2007: 298).

Shared characteristics and features of the body cells

The last answer to the objections that is more consistent with the discoveries of modern science is that in some cells of the human body, there are genetic potentials that can be used for the regeneration of the human's personality and organism. Thus, if one cell of the body of the eaten remain, it would be possible to regenerate his body using it (Makarem Shirazi, 1997: 242-243, Institute of Islamic Studies, 2007: 297-298).

Mendel discovered that traits are not transferred during reproduction, but some elements or factors that determine the traits are transmitted from generation to generation. These factors are now called gene. (Cf. Peter J. Bowler, *The Mendelian Revolution*, p. 45; Claybourne, Anna, *Introduction to Genes and DNA*, p. 31; Berg, Paul. Singer, Maxine. *Dealing With Genes: The Language of Heredity*, 23).

Therefore, from the point of view of the scientific arguments, it can be held that a new version of the hypothesis on the main components of the body is compatible with modern science (See Babalhavaeji, 1963: 152). By the late twentieth century, scholars believed that stem cells are only unspecialized cells that develop in the early stages of proliferation of embryonic cells whereas they do not belong to any part of human body. Moreover, there is the possibility of simulation of a new human through this cell.

But by the sustained efforts of scientists, for the first time, Willmott et al (1996) succeeded to simulate a full human being using specialized

adult human cells that apparently was only able to replicate only in one aspect and in the form of a specific cell of the body.

It was at this time that scientists concluded that each cell in each organ of the human body, entails all biological information required for the development of a complete living organism, but when it is allocated to a certain organ, other programs in these cells to reproduce a perfect human being are stopped or turn off. Therefore, we can activate these programs and proliferate the single-cells in order to achieve to a complete organism like that of the prior worldly one (Islami, 2007: 76; Nazemi, 2006: 18; Hosseini Pajuh, 2005: 123). In a piece of meat or bone or nail etc., one can find all human existence; namely the eyes, ears, hands and feet, heart and brain and liver, include all other organs, and every particle in the human body represents a perfect full-grown human. Science has proven that all human body can be thought of as a sperm which recounts the story of all human existence. Accordingly, one cell of the human body can be taken and developed the same as an embryo in the womb which takes some time to turn to a baby. Similarly, the cells adopted could gradually grow into a full human being provided that the necessary conditions are provided (Hosseini Tehrani, 2002, vol. 6: 154-155).

The selected theory

It seems necessary to elaborate on one point prior to discussing some problems and before giving an explanation on our *selected* view, which is the fifth theory in determining the audience for the divine address (i.e. survival of only one cell and the formation of the same body from it):

On the one hand, in justifying the bodily resurrection, several scholars assert that there is no need for the elements of the physical body to be revived in the hereafter as the human personality and individuality depends on the soul. In other words, as God in this world, creates a new physical body for humans every now and then, and tailors the human soul to that new body every seven years, and all these bodies are created from the same basic elements, there would be no problem if God creates another body as the worldly body to which the soul might depend. These scholars take as the evidence for their own beliefs verses 11 and 12 of Sura As-Sajdah: “They say, 'What, when we have gone astray in the earth, shall we indeed be in a new creation '... Say: Death’s angel, who has been charged with you, shall gather you, then to your Lord you shall be returned”. They also reproach the conjecture of man’s body as its truth and reject such an idea. The surface of some verses apparently supports

the perspective of the group under discussion. (See As-Sajdah, 7; al-Hajj, 5; Al-Anbia, 104; Qaf, 15; Taha, 55, Nisa, 56).

But on the other hand, in line with the surface requirements of some Quranic verses, the restoration occurs for the earthly bodies. Among the relevant verses for this premise are the following ones: The verses concerning the witnessing of eyes, ears, hands and feet and skin, because the witness is expected to be present at the time of the crime (See Fussilat, 23-20; An Nur, 24; Ya-Sin, 65).

The bottom line is that three implications of the verses apparently stand opposite to the theory of the creation of a new body:

1. Witnessing of organs and limbs that must be present during the crime.
2. In resurrection, human beings rise from the graves that as the location where the body has been abandoned.
3. The rotten bones revive as well as the fingers which will be put together in order.

Now, we will attempt to provide a reasonable explanation for the above-mentioned problems that is compatible with all the above verses (Ma'refat, 2004: 20-24).

According to the biological evidence and findings of the modern science, all cells of the body are the same and each of them can function like a sperm and through proliferation in certain circumstances, regenerate the entire human body. In this case the body will be the same material creation that was formed at the beginning of life by emerging from embryo. Thus, if we assume that a human body is eaten by a creature in the natural cycle and only a single cell remains of him in the soil, or the human being is disposed as waste in natural cycle, it would again be simple for Allah on the Day of Judgment so as to turn this single cell (like stages of prenatal development which leads to a complete human formation) impromptu and instantaneously, and not gradually, and under the supernatural terms into a perfect human being that is at the same time the one that lived in the world; the same unchanging soul and body taken from the worldly body with all the characteristics and traits of the previous earthly body.

Martyr Motahhari says in a statement to this effect that a cell that is created in a human being is itself the creator of millions of other cells, such as sperm that – in case the womb is healthy- can regenerate other human beings. Each of these cells are an storage for power and energy, a single cell in the womb reaches to the point of developing into the eyes, ears, hands, heart, lungs and limbs etc. (Motahhari, n/d, vol. 4: 676-678).

According to this view, the major problems of the objection of eater and the eaten and bodily resurrection are resolved as every human being that is composed from his own cells in the world, in the resurrection after replication, will have his cells arranged in terms of his different actions; namely the arrangement will differ based on the deeds (i.e. embodiment of actions). Therefore, an arrogant man who, according to the accounts, will be resurrected as ant is indeed composed from the same human cells that are cast in another frame. People know each other in spite of differences in resurrection no matter whether they have the appearance of an ant, or as another case, the face of a pious believer who has died in old age with a normal face, but in the resurrection is revived with a bright face or as a handsome man.

The results of the selected view

1. As the outward arrangement of fetal cells in the world is like that of the parents and a genetic issue, on the Day of Judgment the order of the cells is determined based on deeds. Many traditions report that the blind and the maimed would be raised in full health in Resurrection (Ravand Kashani, 1997: 185). According to the selected view, those of men and women who due to material and genetic factors in the world might suffer from some disorders in the course of reproduction, can be resurrected healthy and flawless for their good deeds on the Judgment Day. Conversely, there are healthy ones who might be revived blind or disabled in the Hereafter (Ta Ha, 125: "He shall say, 'O my Lord, why hast thou raised me blind, and I was wont to see?'")
2. According to this view, the witnessing of the organs and limbs for the human action is justified along with the resurrection from the soil as the place for worldly body as well as the revival of the bones and fingertips ...
3. On the other hand, although the verse of the Quran reads: "when that which is in the tombs is over-thrown", but does not necessitate the last body to return; because this body is not supposed to be punished for the sins of the previous bodies; so chastising one body instead of the other is no more reasonable. Therefore, as we claim, the single-cell being proliferated can be resurrected in different shapes and bodies, and this way, there would be no problem with the punishment of a body committing sin at different ages. This idea

contradicts with the one asserting that the last body is the one which is resurrected. At any point of the punishment of hell for the sinner's body, it is re-arranged accordingly and when the body burns as the Quran refers, Allah recreates a new body for the wrongdoer. Again, the sinner's body takes a new arrangement according to the later stages of his life and tastes a new punishment.

4. Another key point is that even the verses indicating the lack of objectivity of the physical body and the heavenly body and those based on the new creation can be justified according to our view. Namely, by creating a heavenly body from the remains of single-celled earthly body, God makes a body which is both that same worldly body (as the worldly body was created in the same way) and a new creation (with a different way and in another world). In other words, when God appeals to the first creation as an argument for the ability for a new creation, it means that like the initial creation, the creation is carried out in the hereafter and the origin of both is the same.
5. Basically, there is a new life in the "hereafter", everything is restored from the beginning according to the verse 20 of al-'Ankabūt "then behold how He originated creation; then God causes the second growth to grow". Therefore, the second growth is similar to the beginning of creation, nonetheless; (like other divine miracles) it happens in a way that humans do not understand due to the supernatural causes involved. This claim is also supported by a verse of the Quran saying that "as We originated the first creation, so We shall bring it back again" (al-Anbiyā, 104).

الملخص:

قضية المعاد الجسماني من أهم القضايا في مجال الدين و إثباتها و شرح كيفية و تحقيقها و الردّ إلي الشكوك ذات الصلة من أهم شواغل المتكلمين، فلاسفة الدين و المتدينين في مجال الدفاع عن التعاليم الدينية. من موارد الشكوك الواردة في مجال المعاد الجسماني، إدعاءات مختلفة حول شبهة الأكل و المأكول التي ردّوا عنها المفكرون

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الإسلامية الإجابات العديدة. ولكن كل منها واجهت نكسات و الأدلة غير الإقناعية. و ستعرض هذه الورقة بتقديم الأسباب المبتنية علي النتائج الجديدة لعلم الوراثة بيانا جديدا من نظرية المكونات الرئيسية (إحدي الإجابات للشبهة التي ذكرت استنادا إلي المصادر الروائية) و ليكن هذا لبيان مُثبتا المعاد الجسماني و مقبول للعام و قابل للفهم. الكلمات الرئيسية : المعاد الجسماني ، شبهة الأكل و المأكول ، المكونات الرئيسية ، الخلايا الجذعية .

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1 See Shahāb ad-Dīn" Yahya ibn Habash Suhrawardī, Collection of Writings, vol. 2, p. 216 & vol. 3, p. 27, 98 and 105.

2 Sa'ad al-Din al-Taftazani, Sharh ul Al-Maqasid, vol. 5; p. 88.

3 Baghara, 259, and 260 and 67-73; al-Ghiamat, 3-4; Ghaf, 42-44; Al-isra, 49-51; Naziat, 10-14; Adiat, 9-11; Yaseen, 51-57 and 78-79; Ghamar, 7; Maarij, 43; Infītar, 4; Inshiqaq, 3-4; Zilzalm 2; Ar-Rum, 25; al-Haj, 7; Nuh, 17-18; Araf, 75; Ar-Rum, 19; Fatir, 9. (see Sharhi Kashf al-Morad, 527; Zia alqolub, vol. 2. pp. 399-404; Kalim Attayib fī Taqrir Aqaid al-Islam, 620-622; Tonekaboni, 2008, vol. 2, 398 and 403).

4 ibn Abi al-Hadīd, 1983; vol. 6, p. 249 and 69 and vol. 7., p. 200, and vol. 10, p. 122; AL-Qommi, 2007, 105; Bahrani, 1996; vol. 2, 515; Koleini, 1986; vol. 251; ibn Babawaih, 1992, vol.1, p. 191; Majlisi, 1983, vol. 14, p. 241; ibid, 1982, vol. 7, p. 43; Ibn Hajar al-Asqalani, n/d, vol. 13, p. 369; Ahmad

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ibn Hanbal, 1998, vol.2, p. 428; Hassan ibn Ali, 1988, 278, Tayyeb, 1988, pp. 624-662.