

Insights from Christian anthropology for a water-related technoethics

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Abstract

The personal dimension of the divine creation, the creation of a human being as the image of God and its consequences, particularly the constitution of mankind as ‘lord’ of the rest of creation with the duty of manifesting Love in this lordship, and finally the total inclusion of the material dimension of creation in the original divine design, can be seen as the main points to consider to establish biblical guidelines for a water-related technoethics. The relevance of these aspects in the modern and postmodern paradigms is discussed, pointing to the causes of the negative modern crisis, and proposing an integration between the concepts of natural, cultural and artificial (‘artificial water’) in order to improve the use of water as a common good for the whole of humanity.

Keywords: Christian anthropology; Creation; Image of God; Redemption; Technoethics; Technology

1. Introduction

‘Water plays a central and critical role in all aspects of life – in the national environment, in our economies, in food security, in production, in politics. Water has indeed a special significance for the great religions ... Water has a central place in the practices and beliefs of many religions of the world. This significance manifests itself differently in various religions and beliefs. Yet two particular qualities of water underlie its central place in religions: water is a primary building block of life, a creative force; water cleanses by washing away impurities, purifying objects for ritual use as well as making a person clean, externally and spiritually, ready to come into the presence of the focus of worship’ (Pontifical Council for Justice and Peace, 2003)

The intention of this paper is to illustrate some aspects of the special role of religions in the water question, from a shareable Christian perspective, taking as reference biblical anthropology and some recent teachings of the Catholic Church. The main idea is that religious thought ever involves an anthropological significance, insofar as the omnipotence of the divinity is oriented to the true good of the

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human person. The paper is divided into two parts: first, a very brief presentation of the headlines of the biblical anthropology regarding the question of water; second, an endeavor to contextualize these items in modernity and post modernity, regarding the question of water technologies.

2. Elements from the Christian anthropology

The first element of this anthropological vision of the Christian Revelation is the idea of creation. The Christian biblical vision of creation is mainly founded in Genesis, Chapters 1–2, and in the New Testament idea of ‘Creation in Christ’ (mainly Colossians, 1:15–20): ‘He is the image of the invisible God, the firstborn of all creation. For in him were created all things in heaven and on earth, the visible and the invisible, whether thrones or dominions or principalities or powers; all things were created through him and for him. He is before all things, and in him all things hold together. He is the head of the body, the church. He is the beginning, the firstborn from the dead, that in all things he himself might be preeminent. For in him all the fullness was pleased to dwell, and through him to reconcile all things for him, making peace by the blood of his cross (through him), whether those on earth or those in heaven’, which completes and brings to perfection the doctrine of creation of the human being as an image of God. From this perspective it is possible to understand the role of the human person in creation and the relation between mankind and matter, particularly in reference to water.

2.1. Creation as an inter-personal reality

The Christian idea of creation can be explained in the statement that mankind and the cosmos originated from divine action which caused the whole being of reality. The classical expression ‘*productio ex nihilo*’ underlines the absolute lack of pre-existent matter; further scholastic extensions of this definition (‘*productio alicuius rei secundum suam totam substantiam*’ and ‘*productio rei ex nihilo sui et subiecti*’, meaning the entire absence of any prior subject matter), notwithstanding their conceptual accuracy, are inclined to foster a not entirely correct cosmological idea of creation, which is above all that of the personal spiritual character of the divine agent, as is manifested in the fact that God creates only with his word.

Denying the notions of pantheism or emanationism, the idea of creation also includes a real distinction between the Creator and the universe, between God and the world. The world is simultaneously different and dependent on God: the autonomy of the Creation is factual but not absolute. In this sense, an absolutely deterministic or a-teleological vision of nature and specifically of man is impossible; if an intelligent creator exists, the determinant power (‘*kratos*’) of the cosmos is not inevitable.

In Christian Anthropology, the idea of Creation is not only, nor primarily, the explanation of the existence of beings; it is first and foremost the manifestation of God’s Love. The sense of Genesis 1 is that of a creation which is the result of a free, not-conditional, divine action. There are no previous premises to the Word of God, that takes origin only in the free divine Will and becomes efficient: ‘then God said ... and so it happened’; this personal action results in the transmission of Goodness (‘God saw how good it was’). Thus, we can say that the reason for Creation is the free will of goodness for the created, and that is the definition of true love (freely willing the good of the beloved). This implies a vision of Creation as the starting point of an interpersonal relationship, since otherness is a condition for love.

From the theological Christian point of view, understanding this ‘communional’ structure of Creation is only possible in reference to the Trinitarian faith: the beloved Creation originates from the eternal fullness of the intra-Trinitarian Life, in which God is Love himself (it is not possible to understand Creation as the only divine activity aimed at fulfilling the loving capacity of God). Through Creation, God shares his Love with those created, but this participation has sense only if the beloved Creation can experience this Love; this is possible only in human beings, in which all of Creation is summarized: ‘Though made of body and soul, man is one. Through his bodily composition he gathers to himself the elements of the material world; thus they reach their crown through him, and through him raise their voice in free praise of the Creator’ (Vatican Council II, 1965: no. 14).

2.2. *Creation as image of God*

The theological reason for the creation as an interpersonal reality is the biblical idea of the creation of the human person as the image and likeness of God. ‘This means not only rationality and freedom as constitutive properties of human nature, but also, from the very beginning, the capacity of having a personal relationship with God, as “I” and “you”’ (John Paul II, 1986: 34). The idea of creation as the image of God is not very common in the Old Testament, in which it is possible to find only a few quotations which are very difficult to interpret, in consideration of the fact that the semitic culture of Israel is basically manifested by the word, not by the image; in fact, most of the quotations are found in the books written when Israel comes into contact with Hellenistic culture (Book of Wisdom, Proverbs).

Even so, the most important reference is that of Genesis, 1:26–31. From the theological point of view, this is a very deep and developed text, arising from a sacerdotal environment, in which divine activity is strongly emphasized by the use of the plural (as in the plural ‘*elohim*’, positively a special manifestation of Almightyness) and with the intensity of a form of approbation (‘God looked at everything he had made, and he found it very good’, Genesis, 1:31).

The exclusive involvement of God in the creation of his image is well manifested in the final benediction, the only one in which God speaks directly to a created being: ‘God blessed them, saying: “Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that move on the earth”.’ (Genesis, 1:28). The content of this blessing is mainly that of the assignment of the dominion over the whole of creation, which is the consequence of the condition of the image of God in the human person: as God is the Lord of Creation, his image is also Lord in a derivative way; that is to say, dominion over Creation is not autonomous but subjected to the role of God, who discloses his Love in the Creation: a person can be ‘*dominus*’ only as God is ‘*Dominus*’, therefore he/she must subject his/her dominion to the law of Love. A human dominion over the creation which is not submissive to the Will of God becomes the doom of both creation and the human person. This happens when the creature-image attempts the divine condition (‘You will be like gods who know what is good and what is bad’, Genesis, 3:5).

2.3. *Creation in Christ and the inclusion of matter in the dialogue*

The idea of Creation as the image of God is developed in the New Testament with the idea of ‘creation in Christ’. ‘For in him were created all things in heaven and on earth, the visible and the invisible, whether thrones or dominions or principalities or powers; all things were created through him and for him’ (Colossians, 1:16; see also 1 Corinthians, 8:6, ‘there is one God, the Father, from whom all things

are and for whom we exist, and one Lord, Jesus Christ, through whom all things are and through whom we exist'; John, 1:3.10, 'All things came to be through him, and without him nothing came to be ... the world came to be through him'). As Christ is the incarnated eternal Beloved Son, by Him the whole creation is taken into the trinitarian dialogue, also including in this process the material dimension of creation, ontologically linked to mankind: 'The Incarnation of God the Son signifies the taking up into unity with God not only of human nature, but in this human nature, in a sense, of everything that is "flesh": the whole of humanity, the entire visible and material world. The Incarnation, then, also has a cosmic significance, a cosmic dimension. The "first-born of all creation" becoming incarnate in the individual humanity of Christ, unites himself in some way with the entire reality of man, which is also "flesh", and in this reality with all "flesh" with the whole of creation' (John Paul II, 1986: 50).

For a human being, to be an image of God, according to these views, means to be in Christ, including both the spiritual and material dimensions of mankind. In the divine original design, matter is fully integrated into the interpersonal dialogue. Matter, in the original design, is completely transparent.

2.4. Creation and redemption: the broken image

In the Christian revelation, the incarnation of Christ is linked with the idea of redemption. For human persons to be the image of God implies freedom: in fact, the divine Will takes the risk of liberty, laying open the possibility of the ruin of creation. Original sin, in materializing this possibility (see Genesis, 3), causes a separation between mankind and the Trinity that has as a consequence the loss of the original transparency of matter; the image of God becomes a broken image. Redemption, as motive of Incarnation, is the re-integration of Creation in the intra-Trinitarian dialogue. This is possible only by the free participation of a human being, as a real link between God and creation, in the economy of redemption: 'For creation awaits with eager expectation the revelation of the children of God; for creation was made subject to futility, not of its own accord but because of the one who subjected it, in the hope that creation itself would be set free from slavery to corruption and share in the glorious freedom of the children of God. We know that all creation is growing in labor pains even until now; and not only that, but we ourselves, who have the first fruits of the Spirit, we also groan within ourselves as we wait for adoption, the redemption of our bodies' (Romans, 8:19–23).

2.5. The human person acting as image of God in creation

As demonstrated in the text quoted at the end of the last section (taken from the Letter to the Romans), the divine design includes the cooperation of human freedom in the redemption of the creation. This cooperation is possible because, as previously said, only a human being is able to 'understand' the divine creative action as an interpersonal dialogue and thus able to be aware of the dialogical structure of the material cosmos as creation. This awareness of creation has two points of view: first, man can see nature as a received resource in order to improve the human condition: 'When man develops the earth by the work of his hands or with the aid of technology, in order that it might bear fruit and become a dwelling worthy of the whole human family and when he consciously takes part in the life of social groups, he carries out the design of God manifested at the beginning of time, that he should subdue the earth, perfect creation and develop himself. At the same time he obeys the commandment of Christ that he places himself at the service of his brethren' (Vatican Council II, 1965: no. 57).

From the second point of view, nature is seen not only as a ‘given’ resource but also as a ‘gifted’ present. The idea of a ‘gift’ adds the concepts of gratitude, sharing and reciprocity to man’s awareness of creation. It is not possible to use the material creation merely as a resource.

Thus, it is not possible for a person to answer to his/her original vocation in Christ without involving in that answer the whole of creation. The material state of mankind is fully integrated into the condition of the image of God. In fact, this condition includes the appropriate use of natural resources and a solemn commitment to bettering nature itself, in which the inherent technical capacities of human beings consist.

3. Practical applications of these principles to the question of water

Water and water technologies have an utmost significance in this deep-rooted human task of using natural resources appropriately. The second part of this paper will now attempt to apply the ideas already presented to the specific question of water.

3.1. Water in the Bible

In a biblical and theological context, the role of water has a very special meaningfulness; the presence of water before the six days’ work in Genesis (‘... a mighty wind swept over the waters’ Genesis, 1:2; see also Genesis, 2:5–7) is a special manifestation of its meaningfulness as the element of creation that symbolically links Creation with the Creator.

The concrete and multiple tasks of water in the history of salvation (the peak of which is reached in the sacrament of baptism) always play a central role: ‘All you who are thirsty, come to the water!’ (Isaiah, 55:1). In fact, it seems to be a symbol of the nexus between the natural reality of creation and the divine realm of grace (see also Exodus, 17:1–7; Psalm 46; Psalm 104; Isaiah, 49:10; Ezechiel, 47:1–12; Matthew, 3:13–17; John, 19:34). This is probably linked to the special significance of water as a principle of life, and, in this sense, as a symbol of divine Almightyness. God’s Almightyness has its appropriate manifestation in Christ and, through Christ, in the engagement of Christians in the world; therefore, it is possible to conclude that the present emergency of water represents an eloquent call to all those who have received baptism.

3.2. ‘Homo technicus’: the material dimension of creation as gift

According to biblical anthropology, technology is not an addition to man but is, in fact, one of the ways in which mankind distinguishes itself from other creatures. Adam was meant to plant the Garden and work in it in order to reap its fruits and to improve Paradise (Genesis, 2:15). Animals are naturally endowed with the necessary instruments for their interaction with the rest of nature; human beings are born without these means but have the possibility of building artificial instruments, since they are themselves artificial creatures (in the sense that ‘artificial’ is what is formalized by freedom, and ‘natural’ what is formalized by instinct). The original condition of man requires free interaction with the material cosmos in order to produce technology: this interaction, guided by reason, can be called generically ‘work’. Man consciously proposes finality to his or her work.

Because human beings are naturally social, the completion of man's being is to have friends and positive interpersonal relationships; hence truth and good consist in inter-subjectivity, which is the sharing of the intentional objectives of intellect (truth) and free will (good) with others. In interpersonal relationships, the sharing of intellect and free will is manifest by the sincere giving of oneself to another. In this giving act, the human person includes not only the spiritual dimension but also the physical one. Therefore this act of giving to each other also incorporates the capacity of man to interact with physical matter, which is technology.

The human being is, thus, *homo technicus*, where 'technical' can be defined as the human interaction with matter in order to create an interpersonal dialogue. 'Coming as it does from the hand of God, the cosmos bears the imprint of his goodness. It is a beautiful world, rightly moving us to admiration and delight, but also calling for cultivation and development. At the "completion" of God's work, the world is ready for human activity. "On the seventh day God finished his work which he had done, and he rested on the seventh day from all his work which he had done" (Genesis, 2:2). With this anthropomorphic image of God's "work", the Bible not only gives us a glimpse of the mysterious relationship between the Creator and the created world, but also casts light upon the task of human beings in relation to the cosmos. The "work" of God is in some ways an example for man, called not only to inhabit the cosmos, but also to "build" it and thus become God's "co-worker".' (John Paul II, 1998: 10).

3.3. The abolition of gift in the paradigm of Modernity: water as a resource to be exploited ('added value' to capital)

The role of water in the technical condition of mankind should not be underestimated, because it is, indeed, a precondition to any other human development, and, first and foremost, a basic condition for life. But the material dimension of water itself causes, in fact, the possibility of freedom of subverting this condition. Indeed, in the 20th century, the cultural paradigm included the preponderance of scientific reasoning over the practical one, and this limited man's capacity to understand himself and his relationship with the world. This modern scientism is characterized by an exclusively objective vision of reality, related to the predominant immanentism of most of modern philosophy. Added to this is an independent vision of man in the cosmos, bringing man to a relationship with reality in which any founding dimension must remain within man himself.

This model of dominion tends to include the human being and its relationship with matter. When a deep sense of the human being is emptied and the person is reduced to a mere physical function, the temptation of substituting the person with a machine is very strong: at the functional level, the machine is less disappointing than man. This creates a sense of uncertainty toward other human beings, who are not easily dominated by empirical scientific laws and surely less reliable than machines. The assumption of the scientific paradigm of dominion is that of the absolute power of technology, seen as the only way to redemption from human imperfection: the human being cuts himself out. The tendency of this cultural system is to make immanence sacred, and since this cannot solve the problem of man's imperfection, demands to reduce history to a process where man is less and less important, so as to avoid the immeasurable and the unpredictable factor of risk that comes from the person. Technological progress takes the teleological place of man. This explains the anthropological refusal of technology, the fear of development seen in many of today's cultural movements. But the problem, it must be underlined, is not in technology but in the anthropological vision that guides it.

In this way, the only possible relationship of man with the cosmos is reduced to his dominion over the knowledge of its physical laws. Obviously this dominion brings technical knowledge, seen however from a purely instrumental dimension. The important thing is no longer ‘water for human beings’, but ‘water to maintain the productive system’. In this sense, the observation of Msgr Tommasi (permanent observer of the Holy See to the United Nations, in the 15th Ordinary Session of the Human Rights Council on access to, and delivery of, safe drinking water and sanitation services) is significant:

‘According to current and prevalent thinking, water primarily is regarded as a commodity, and its price should be based on the principle of profit. This concept is based on the theory that the cost of everything usable must be covered by the consumer, the one who pulls a utility from its use. Thus, in line with such thinking, even the poorest people should “pay” for access to the fifty liters of drinking water considered by the World Health Organization for minimal daily subsistence’ (Tommasi, 2010)

3.4. Resource as gift in the relational postmodern paradigm: water as ‘added value’ to mankind

We are certainly faced with a radical paradigm shift, and this mutation is in fact in continuity with a development that has never stopped since man first discovered fire and invented the wheel. The question posed is that of a new relationship between man and machine. The substance of this relationship will not change even in the light of great changes in the categorical dimensions of this same relationship; another thing is that man, master of his own actions, may manage poorly this relationship, or that new circumstances may render them particularly difficult.

The statement of the dominion of machine over man in contemporary literature and cinema seems to have only the objective of facing man with the question of his own identity, to search a way out of the anthropological closure to which the civilization of exasperated scientism has taken us.

However, the techno-scientific paradigm has not been able, up to now, to answer or render meaningless man’s deep questions that manifest his need to go beyond the measurable reality: pain, death, evil. These three enigmas make clearly obvious that it is not possible to reduce human beings simply to beings of the material universe. If post-modern man does not take a stand against the dominant cultural premises, he will find himself obliged to choose between desperate research into an imminent way of redemption (post-modern neo-gnosticisms, often characterized by a strong technodominant content), or giving up on the possibility of an answer to radical questions about ‘being’ and ‘history’.

To this we can add that technological development tied to the preceding paradigm has not brought forth the expected results but has instead caused a great number of negative effects: ecological crisis, unjust distribution of wealth, increase of violence, etc.

It is culturally ascertained that pure scientific rationality, with its objective dominion on reality, is not able to reach the essence of truth. Truth cannot be enclosed in universal and absolute formulas. Knowledge is not dominion but is instead a participation in reality, an empathetic sharing. We are aware that we cannot maintain an objective and uncommitted form of knowledge: our knowledge of reality must take us forward, requesting and answering, creating interwoven relationships. At the beginning of the third millennium it is not possible to go on with ‘mere’ reason: we need a ‘linked’ reason. This awareness seems to be one of the few bases common to humanity in this change of millennium. We can identify several different positions in a change of consideration of transcendence: while in Modernity

transcendence could be understood as the ambit of objective dominion that began immediately in ‘what I am not’, it now seems necessary to establish it with a relational tie. We could say that the clearest symptom that allows a differential diagnosis between Modernity and Post-modernity can be found in the type of relationship given between immanence and transcendence: we can find the change in this relationship alone. Therefore, it is the coming of ‘linked’ reason that obliges us to come out of ourselves and to go towards otherness, looking for the foundation of company. Postmodernity implies the vision of the material dimension of the universe as relational, and specifically water as an occasion for an interwoven vision of reality.

This need of transcendence is, in the end, a rediscovery of the metaphysical question, the only thing capable of ensuring that what transcends me can also be the destination of my being in the novelty of life. In other words, the referential tie with transcendence must be discovered in order to interpret the I and the non-I as relational realities. On the basis of the solidity of this relational tie, the anthropological convenience of the gift of oneself will be founded.

In the rediscovery of this relational being, which is typically biblical but was also already indicated by Aristotle as the fundamental teleological structure of man, can be found the key to human happiness and fulfillment. And since the relational being requires freedom, one can reaffirm that human future can be explained only as freedom. If we return to our starting point, that technology is winning the cultural battle in contemporary society, we can affirm that postmodern man, fully convinced that technology is his only means to happiness, must necessarily integrate it in his relational structure, rendering it a vehicle of his self giving.

3.5. ‘Natural water’ vs ‘artificial water’? *The real sense of water technologies*

It is now clear why many instances of world culture have recently been pushing towards the rediscovery of the ethical dimension of technology. It seems to be necessary that we initiate a wide and profound debate that could bring us, as with bioethics, to the birth of a series of common principles, laying the bases of what could be called ‘*technoethics*’. We can define technoethics as the corpus of knowledge that allows us to outline a system of ethical references that will enable us to underline the profound dimensions of technology, as a central element of reaching the final perfection of man. This definition requires the affirmation of an anthropological positivity for technology. If man is by nature a technological creature, it should be possible to share the technoethical principles at a trans-cultural level, even though this doesn’t necessarily mean that technology is not tied to culture, from which it is determined.

Technology could at first sight appear not to be an expression of personal freedom but rather the contrary. That which is formalized by nature is natural and that which is formalized by human freedom is artificial; human beings are by nature artificial, that is, he or she is fully fulfilled based on his or her personal freedom. In fact, the scarce level of specialization of the human body seems to present a limitation for man in becoming technological if he intends to survive an adverse environment. Experience, though, tells us that man does not act solely out of the need to solve problems that he, unlike the animals, cannot solve by his instincts which are, however, in humans, reduced to the barest minimum. In this sense, technological growth is above all linked with man’s desire to know more (science) and the need to experience this knowledge as anthropologically relevant: science engenders a more profound knowledge of present or actual reality and to this, technology adds the fact that this reality is ‘useful’ to man. It is therefore clear that man’s technical ability is an important element of his auto-programming

toward a greater fullness of self: therein lies his freedom. The orientation of this auto-programming toward the true good of man is the duty of technoethics.

It can therefore be held that technology, like the arts, gets at the very truth of being with more profundity than science, basically because it directly affects man. In fact, the promethean indetermination of man's material condition corresponds to the dialogical freedom with which the person interacts with matter in order to make it become a gift. In a way similar to during the Italian Renaissance, at the summit of truly scientific knowledge, technology and art seem to become one in memory of their common semantic origin: the Greek *technè*. Man transcends the universe, but the universe and man are not two separate realities since man incorporates the rest of material reality in his dialogical nature: every 'object' can through man become an occasion of meaningful interwovenness.

Within the horizon of the search for meaningful relationships with the cosmos, which never proceeds as if it were a mere object to be regarded but, on the contrary, wholly involves the person and his dialogical nature, the special fecundity of water technology appears almost evident: for mankind, 'natural resources' are always 'artificial-cultural resources', since there is an ethical imperative to use human technical talent to render access to the natural resources in a more rational, easy and universal way, both for us and for future generations. In this sense, it is natural to mankind to interact with natural water in order to substantially improve its quality, and to provide adequate and free admittance to world water reserves for all mankind. This is what might be called 'artificial water'!

The artificial element is seen in its highest sense as a product of the free interaction of man with material reality and, in so far as it is free, is the creator of an interpersonal dialogue. It is for this very reason that the production of artifices, from technical artifices (machines) to symbolic artifices (language), has an intrinsic ethical value. The artifice becomes thus a vehicle of being in the world, of being with others, of being oneself. Technology becomes an occasion of interwovenness: the aesthetic approach redeems it from danger, at times unduly exasperated in some cultural milieux, of replacing humans with machines, and integrating them into a condition that is fully human. Since the humanization of science by technology means that the human being is highlighted, the more a technique is developed the more it is taken for granted.

4. Conclusion

In this field it must be particularly true that technology is justified according to the degree which it serves man and humanity. Water technologies are, before anything else, a fraternal service, a due engagement for the betterment of the whole of mankind. It is hardly conceivable to have profit-oriented water technology. Water 'cannot be treated as just another commodity among many, and it must be used rationally and in solidarity with others ... The right to water ... finds its basis in human dignity and not in any kind of merely quantitative assessment that considers water as a merely economic good. Without water, life is threatened. Therefore, the right to safe drinking water is a universal and inalienable right' (Pontifical Council for Justice and Peace, 2005: no. 485).

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