

SCIENTIFIC RESEARCH AS ADORATION

Pierre Teilhard de Chardin SJ (1881-1955)

Thomas M. King

FOR PIERRE TEILHARD DE CHARDIN, SCIENCE AND PRAYER were intimately connected. 'There is less difference than people think between Research and Adoration', he once wrote.¹ Indeed he could make the point even more directly: 'Adoration's real name ... is Research'.² In a letter from South Africa, he told a friend, 'I am ... in close contact with old mother Earth: and you know that for me there is no better way for rejuvenation and even "adoration"'.³ He even claimed that without research 'there can be no possibility ... of real mystical life'.⁴

Devotion and Science in the Life of Teilhard

The author of these striking phrases was a Jesuit priest whose life's work as a scientist centred on the geology of Asia and the early human fossils found there, on which he published ten volumes of technical writings. But he is much more famous for his religious and philosophical writings, which were not published during his lifetime because of Church restrictions. When, shortly after his death, they became publicly available, he quickly became an international celebrity.

Teilhard was born in central France, the fourth of eleven children. He entered easily into the deep Catholic piety of his family. But,

¹ *The Phenomenon of Man*, translated by Bernard Wall (New York: Harper and Row, 1959), 250.

² *Lettres à Jeanne Mortier* (Paris: Editions du Seuil, 1984), 143: see Claude Cuénot, *Teilhard de Chardin, A Biographical Study*, translated by Vincent Colimore (London: Burns and Oates, 1965), 133. Texts cited directly from the French have been translated by Thomas M. King.

³ Pierre Teilhard de Chardin and Lucile Swan, *The Letters of Teilhard de Chardin and Lucile Swan*, edited by Thomas M. King and Mary Wood Gilbert (Scranton: Scranton UP, 2000 [1993]), 285.

⁴ *Letters from a Traveller* (New York: Harper and Row, 1962), 119.



looking back to his childhood, he wrote that his 'real me' was elsewhere, practising a devotion to his 'God of Iron'. This was a devotion to scraps of metal found around the family farm: a hexagonal bolt, a wrench, empty shells from a neighbouring firing range. Iron awakened devotion

because it appeared hard and durable, but he soon found out that it could rust. He had to look elsewhere for consolation. He turned first to the crystalline rocks in the neighbourhood, and then to the earth itself. This interest became a fascination with the All (*le Tout*) that remained a passion throughout his life.

Pierre attended a Jesuit college, and shortly before his eighteenth birthday joined the Jesuits, only to find that his interest in rocks distracted him from his prayers. His novice director told him to continue his work in geology nevertheless, and, after many years of confusion, he came to an understanding that reconciled it with his vocation. Drawing on his reading of St Paul, he saw Jesus as the Soul of the World. St Paul spoke of the Christian community as the Body of Christ, and several additional passages suggest—but do not state—that the universe could also be considered his Body. This identification of the cosmos as Body of Christ with Jesus as the Soul was central to Teilhard's reconciliation of science and faith.

Teilhard's conventional Catholic devotion enabled him to see Jesus as a brother, teacher and friend; and this devotion was encouraged by his entering the Jesuits. But, looking back, he would judge that his love for Jesus, as a man who lived 2000 years ago, was timid and constrained. For Teilhard's 'real me' continued to love the world: Jesus was a man he could admire, but not a God he could adore.

The situation of Teilhard has some resemblance to that of St Thomas the apostle. Thomas knew Jesus as a teacher and friend. On the first Easter the risen Jesus appeared to his disciples when Thomas was not there, and on hearing their story he could not believe: 'Unless I ... put my finger in the mark of the nails and my hand in his side, I will not believe' (John 20:25). A week later the disciples were in the same place, and Thomas was with them. Jesus told Thomas to put his fingers into the wounds saying, 'Do not doubt but believe'. Thomas

exclaimed, 'My Lord and my God!' Jesus said, 'Have you believed because you have seen me? Blessed are those who have not seen and yet have come to believe.' (John 20:27-29)

Though Thomas is known as 'doubting Thomas', his exclamation 'My Lord and my God!' is often considered the strongest statement of the divinity of Jesus in the New Testament. Thomas took the world seriously, and so he could not believe all that he was told. Thomas had known Jesus as teacher and friend, but in seeing and touching the risen Jesus he knew him as Lord and God, and could adore. Jesus called those who believe without seeing 'blessed', but Thomas was not among them. He wanted direct evidence. When he had the evidence, what he saw agreed with what he was told, and he could say, 'My Lord and my God!'

All those who take the world seriously can have the difficulty that Thomas had, and Teilhard took the world seriously. Most of Teilhard's fellow Jesuits came from devout families like his own, and accepted the faith on the word of their family and of a faith-community that they trusted. They could be called blessed, but Teilhard was not among them. The world meant too much to him. For him to believe, there had to be a reconciliation between what he was told and the tangible-visible world that he experienced.

Teilhard was reaching out to the All. He came to believe this was true of everyone. He would wonder how psychologists could,

... ignore this fundamental vibration whose ring can be heard by every practised ear at the basis, or rather at the summit, of every great emotion? Resonance to the All—the keynote of pure poetry and pure religion.⁵

He would claim that every mystical system has been 'fed from the never failing spring within us of love for the great whole of which we are a part'.⁶ Every religion worthy of the name was pantheist.⁷ He would soften this term to speak of a Christian form of pantheism, or of a spiritual pantheism. He appealed to St Paul, who spoke of Christ descending to the lower parts of the earth so that rising from there 'he

⁵ *The Phenomenon of Man*, 266.

⁶ *Writings in Time of War*, translated by René Hague (London: Collins, 1968), 182.

⁷ *Lettres à Jeanne Mortier*, 155.

might fill all things' (Ephesians 4:10).⁸ On three occasions, St Paul speaks of the ultimate earth when God will be 'all in all' (1 Corinthians 15:28, Ephesians 1:23, Colossians 3:11). So Teilhard would identify himself as a pantheist in St Paul's sense.

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For Teilhard the All was first identified with the material world, and was symbolized by rock. He approached rocks with religious awe, and claimed that many scientists were motivated by 'a great surge of worship towards the world'.⁹ While he was studying theology at Hastings from 1908 to 1912, 'there were moments when it seemed to me that a sort of universal being was about to take shape in nature before my very eyes'.¹⁰ Now the All was no longer seen as 'ultra-material' but as 'ultra-living': the cosmos was alive with a single life. Yet he still could not integrate human beings into his cosmic awareness; they seemed radically separate.

In December 1914 Teilhard was drafted into the French army. There he felt a deep bond with his fellow soldiers, and saw them in battle acting with a single mind; the 'Human-million' seemed to be a single reality, and Humanity became 'as biologically real as a giant molecule of protein'.¹¹ Now he saw humans as the essence of the physical world, so that the All could be found in a humanity already real, but still coming into being.

Teilhard saw many scientists who were motivated to build a better world and dedicated to a common human future. He spoke of these scientists knowing a 'dark adoration', an adoration reaching toward an immanent God, a '*Deo ignoto*'—an impersonal godhead they seemed to find in their work. 'Scientific research', he wrote, 'for all its claim to be positivist, is coloured and haloed—or irresistibly animated, when you get to the bottom of it—by a mystical hope'.¹² But all the while Christianity was presenting a more dualist vision: on the one hand, a transcendent God who was apart from it all; on the other a Jesus who

⁸ Teilhard accepted the traditional attribution of Ephesians and Colossians to Paul himself; scholars today speculate that they may be the responsibility of a disciple writing in Paul's name.

⁹ *Christianity and Evolution*, translated by René Hague (New York: Harcourt Brace Jovanovich, 1971), 64.

¹⁰ *The Heart of Matter*, translated by René Hague (New York: Harcourt Brace Jovanovich, 1979), 26.

¹¹ *The Heart of Matter*, 31.

¹² *Science and Christ*, translated by René Hague (New York: Harper and Row, 1966), 22.

was a human ideal to be sure, but not a reality commensurate with the innate human capacity for adoration.¹³

For Teilhard, the Church was not presenting the fullness of Christ as he found it in the writings of St Paul. If faced with the cosmic

Christ of Paul, many scientists, Teilhard believed, would recognise him as the God whom they had been finding in their work and worshipping with a 'dark adoration'. The unknown God would no longer be faceless, and the dark adoration could become luminous. At one time, Teilhard knew Jesus as a great teacher and a friend, while his 'real me' was looking for a God he could adore. But then he found St Paul speaking of a God who filled all things, a God whom Paul could identify with Jesus. Thereby the dark adoration Teilhard had once known in the rocks had become luminous.

Many have believed without seeing, and Jesus called them blessed. But Teilhard would not be among them. After telling how he had come to see the Lord present in all things, Teilhard addressed a prayer, not to Jesus his friend, or Jesus his teacher, but to Jesus his Lord and God. It was a prayer of adoration:

What I discern in your breast is simply a furnace of fire; and the more I fix my gaze on its ardency the more it seems to me that all around it the contours of your body melt away and become enlarged beyond all measure, till the only features I can discern in you are those of the face of a world which has burst into flame. Glorious Lord Christ ... you whose forehead is of the whiteness of snow, whose eyes are of fire, and whose feet are brighter than molten gold ... it is you to whom my being cried out with a desire as vast as the universe, 'In truth, you are my Lord and my God'.¹⁴



¹³ *Letters from My Friend Teilhard de Chardin*, translated by Mary Lukas (New York: Paulist, 1976), 149, 96; *Lettres à Jeanne Mortier*, 53.

¹⁴ *The Heart of Matter*, 131-132.

Teilhard repeated the words of Thomas, 'My Lord and my God', but he added to them by saying, 'It is you to whom my being cried out with a desire as vast as the universe'. Jesus was now more than teacher and friend. Moreover, the universe was involved; both Teilhard and his universe were at prayer. No longer was Teilhard simply worshipping the God of whom he had been told; rather, his 'real me' had finally identified the unknown god he had once adored darkly as 'Iron'.

There is a long Christian tradition of turning from the world in order to find God. 1 John advises, 'Do not love the world or the things of the world' (2:15). St John of the Cross encourages us to deal with the world in a spirit of complete detachment, emptiness and poverty. Thomas à Kempis tells us to forget all created things. In this tradition only the heart that is free of all things earthly can give itself wholly to God. Only when the world means nothing to us can we adore, be totally at prayer.

But Teilhard believed he could still adore while loving the world, because he found that the world that he loved and that he let into his heart was itself reaching for God. Earlier writers had set love of the world in opposition to a love for God, and we are told, 'No one can serve two masters' (Matthew 6:24). But Teilhard found an understanding of the world that assisted him in loving God. Perhaps no other writer in the Christian tradition has made such a claim as radically as Teilhard did.

A Parable Concerning Matter

A strong religious feeling for the All runs through the writings of Teilhard. It was evident in his first essay, and it is evident again in his final essay, written a few days before he died: 'Research, Work and Adoration'. He wrote that religious superiors often advised him, 'Go quietly ahead with your scientific work without getting involved in philosophy or theology'. (No such restrictions were ever placed on his scientific writings.) He judged such advice psychologically unviable; for he and other scientists were motivated by 'the fire of a new faith'.¹⁵

To understand his final essay better, consider an imaginative essay which was written some thirty years earlier, 'The Spiritual Power of

¹⁵ *Science and Christ*, 216.

Matter'.¹⁶ This essay or parable tells of two travellers (they could be seen as Teilhard and a fellow Jesuit), who are walking together in a desert. Matter swoops down, invading the soul of one of them (Teilhard), and moving within him like a hurricane. Matter says:

You called me; here I am. Driven by the Spirit far from humanity's caravan routes, you dared to venture into the untouched wilderness; grown weary of abstractions, of attenuations, of the wordiness of social life, you wanted to pit yourself against Reality entire and untamed.¹⁷

The traveller has gone far from 'humanity's caravan routes' and 'the wordiness of social life'. He has even left his companion behind. Back on the caravan routes, people tell one another what they believe, bewildered by claims and counter-claims. But the call of the desert is a call to the 'real me' to set aside all that I have been asked to believe, and instead to see what IS. 'In the sweetness of a first contact' with Matter, the traveller feels 'a wave of bliss in which he had all but melted away'. Then Matter challenges him to battle. To survive, he must wrestle with Matter and see what it reveals. In the same way, the researcher wrestles with the world, and comes to understand it in a way that someone who simply gazes on it never can.

The traveller has left the confines of culture—including Christian culture—to return to immediate experience. Having done so, he can 'never go back, never return to commonplace gratifications or untroubled worship'. Should he return to society, he will find that many of its beliefs and claims do not hold up. For he has found a *point d'appui*, a place of support, in Matter, away from the claims made in the caravan. Now that he knows God immediately, he can no longer rejoin his faithful companion either. Henceforth, he will be separated even from 'his brothers in God, better men than he'. May they be blessed! For 'he would inevitably speak henceforth in an incomprehensible tongue, he whom the Lord had drawn to follow the road of fire'.

¹⁶ *The Heart of Matter*, 67-79.

¹⁷ *The Heart of Matter*, 68.

Science and Mysticism

When the traveller first encounters Matter, he feels a 'wave of bliss'. Teilhard was referring here to a spiritual tradition that tells of losing one's self in the great All by relaxing into a quiet contemplation. But this was not the way of Teilhard. He could find no rest in Nature until he had reached the ultimate term hidden within it. He wrote,

Perhaps this peculiarity of my sensitivity derives from the fact that things in the cosmos and in life have always presented themselves to me as objects to be pursued and studied—never just material for contemplation.¹⁸

Teilhard was challenged to wrestle with Matter and he did. This sets his mysticism apart from other mystical traditions. St Ignatius could gaze at the stars all night and be at prayer, and so he advised other Jesuits that they could contemplate God in a blade of grass. Teilhard would sympathize with these passages in so far as they suggest an immanent God, but he would not go along with the quiet contemplation. His retreat notes make it evident that throughout his life he had difficulties with Ignatian prayer.

When the traveller in the parable first encounters Matter, Matter tells him, 'Your salvation and mine depend on the first moment'. The first moment is a moment of choice: which mysticism will he choose? His alternatives could be seen in terms of a distinction that the medieval philosophers made between *intellectus* and *ratio*. The *intellectus* rests passively, gazing at what is before it; while the *ratio* is the active power of discursive thought to search, abstract, refine and conclude. The medieval philosophers saw the *intellectus* as the basis of mysticism; and would-be mystics were advised to hush the busy *ratio* in order to gaze quietly. But in presenting a mysticism centred on research, Teilhard set the *ratio* at the centre of the mystical. Here the mystical act involves the synthesizing work of the mind as it gathers facts and strives to form them into a wider synthesis.

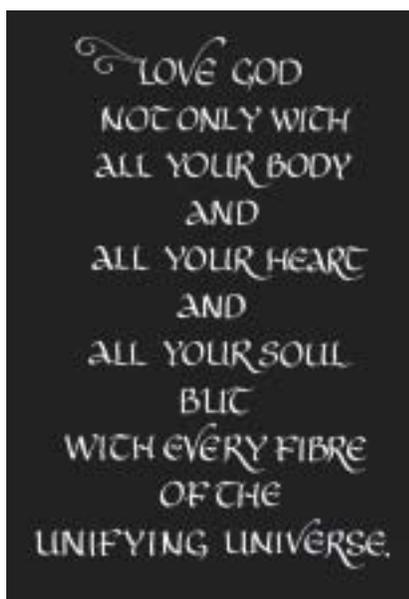
It is not difficult to see why Teilhard saw scientific research as essential to mysticism. For him, science was not a given set of truths about the universe; science, like the mind itself, was a process, always

¹⁸ *The Making of a Mind*, translated by René Hague (New York: Harper and Row, 1965), 213-214.

probing into the unknown. Mysticism for Teilhard was therefore not a matter of contemplating a truth already established; mysticism lay in the very act of discovery that created a new truth. It is in these terms that we must understand Teilhard's talk of loving God 'not only with all one's body, all one's heart and all one's soul, but with every fibre of the unifying universe'.¹⁹ The universe was in process; and one theatre of the unifying process was the mind of the scientist.

As scientists struggle to make sense of their findings—or, rather, as reality's elements order and reorder themselves in the scientist's mind until they fit—they are groping towards a unity and a form that will be new. The 'fibres of the unifying universe' come together in the scientist's mind, which is essentially process. The scientist's call to the love of God, to adoration, involves his or her research activity, an activity which is a participation in the universe's thought-fibres.

The scientist gropes about to form a hypothesis. Teilhard called this 'the supreme spiritual act by which the dust cloud of experience takes on form and is kindled at the fire of knowledge'.²⁰ This is the central activity of the mind, at the peak of its powers, vaguely aware of an awesome Power beyond it, a Power calling the mind to bring a new unity into being. Do we not, Teilhard asks, evaluate minds in terms of the synthetic power of the gaze?²¹ This supreme spiritual act is an act of dark adoration, homage to the unifying Power. Drawn back to the moment of adoration, the scientist feels a holy mission to continue the process. When Teilhard returned to fieldwork in the African earth, and wrestled



¹⁹ *The Phenomenon of Man*, 297.

²⁰ *Activation of Energy*, translated by René Hague (New York: Harcourt Brace Jovanovich, 1963), 9; *The Vision of the Past*, translated by J. M. Cohen (New York: Harper and Row, 1966), 205.

²¹ *The Phenomenon of Man*, 31.

with what he was finding, he was again able to adore. At such moments, he found, 'the Divine reaches the summit of adorability, and evolutionary [process] the extreme limit of activation'.²²

In Christian mysticism there is a tradition, exemplified by St Gregory of Nyssa and St John of the Cross, known as the *via negativa*, that centres on a process of unknowing and thereby hopes to come to the God beyond all knowing. Teilhard is obviously not a part of this tradition. But there is also the *via positiva* of St Augustine and St Bonaventure; here the mind ascends to God by mounting up the ladder of creatures. Teilhard, however, would be apart from this tradition as well, because this way of understanding spirituality presupposes that we already know what these creatures are, and that we then, subsequently, find God within them. Teilhard's mysticism is intellectually creative, based on the activity of the *ratio*. It begins with a world that is not understood, and comes to know God at the moment when the dust of experience lights up with the fire of knowledge.

Science and Synthesis

There is a second point to be drawn from the parable of the traveller and Matter, one about convergence and synthesis. Prompted by the parallels which he sees between the process of evolution and the action of the mind bringing about ever larger syntheses, Teilhard speculates about a global society: human beings are themselves becoming synthesized as elements of a global society with a single Soul. As Teilhard's mind was effecting a synthesis, he felt that it was at the same time *being synthesized* into a higher Mind. And this was adoration.

Writing of his experience in the trenches of World War I, Teilhard speaks of the troops as being drawn into a new unity with 'a sense of rising to a higher state of existence'.²³ At the Front they acted with a single Soul.²⁴ Teilhard called such moments 'mysteries of profound affinity which appear only fleetingly'.²⁵ At such moments Teilhard felt his mind in immediate contact with other minds. Moreover, what he felt in the army he also felt as part of a team of scientists. Science is a

²² *The Heart of Matter*, 101.

²³ *The Future of Man*, translated by Norman Denny (New York: Harper and Row, 1964), 22.

²⁴ *The Heart of Matter*, 175.

²⁵ Unpublished letter to Joseph, 10 December 1945.

collaborative enterprise; as scientists' minds synthesize the data with which they are working, they come to feel their very selves being synthesized into a higher and common identity, into a humanity with a single Soul. Teilhard spoke of 'humanity grouped by the act of discovery'.²⁶ In the act of research it is not just that the data are being summed up in our minds; it is also that a greater Mind or Spirit is drawing our synthesizing minds into Itself.



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Shortly before he wrote the parable of the travellers in the desert, Teilhard learned that Woodrow Wilson, then the US President, had called for what became the League of Nations: 'a single great enterprise that will unite all free people for ever', so that they would become 'a single body of free minds'.²⁷ Teilhard came to believe that others were coming to a similar intuition. At one time people worked for the future of their family, or sacrificed themselves for the future of their nation. But, Teilhard believed, many people—especially scientists—were now dedicating themselves to a common future for people as a whole, living and working to make the world as better place. For Teilhard, this also meant that they were intuiting a higher state of humanity united by a single Soul.

Science and Troubled Worship

The traveller in the parable is told that he cannot return 'to commonplace gratifications or untroubled worship'. Having been

²⁶ *Human Energy*, translated by J. M. Cohen (New York: Harcourt Brace Jovanovich, 1969), 171.

²⁷ *The Heart of Matter*, 213.

raised to a higher state of being, he will taste 'the triteness of human joys and sorrows, the mean egoism of their pursuits, the insipidity of their passions, the attenuation of their power to feel'. Along with other mystics, Teilhard knew this sense of alienation. The answers that he found in his researches would sometimes be troubling, disturbing his prayer and worship. Many people do not operate in that way. They simply hold on to a set of religious beliefs, and know great peace no matter what troubles they endure. But Teilhard would struggle with the questions that his discoveries raised, and this gave substance to his prayer.

Scientists must test their hypotheses against experience. Consider a fundamental hypothesis that Teilhard developed: the claim that all people, believers and non-believers, were striving towards unity in a higher Soul. Was this really the case? Was there really a universal mystical sense? In the parable, Matter tells the traveller that henceforth he will be a burden to others, 'for they would sense his compulsion to be forever seeking something behind them'. In

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other words, he will be listening behind the words that others say in the hope of finding a mystical hunger like his own. Psychologists speak of a listening with the 'third ear'—listening behind the evident words for what is really being said.

Teilhard often heard the mystical hunger in others and responded to it; and many were affected by his response. Lita Osmundson, who was office manager at the Wenner Gren Anthropological Foundation when Teilhard worked there in the last years of his life, said that people there believed that Teilhard was among their closest friends, because he seemed to understand them as others did not. He had addressed them in terms of such a hunger, and they felt understood.

But there were also times when he could not find this mystical interest, and this left him troubled. Did his hypothesis hold up? When Teilhard first went to Asia in 1923, he spoke of losing his 'moral footing' when he saw civilisations that had never known Christ. His letters told of the 'swarming populations' of India and Ceylon. He quoted a lama, an ascetic priest, from a novel by Kipling, who said that the world 'is a great and terrible place'. The lama was awed by Western civilisation; but Teilhard said, 'it is the immense mass of undisciplined

human powers that overwhelms me'.²⁸ On first arriving in Tianjin, he wrote in his Journal, 'The incoherence of Humanity = an agitated and broken sea'. Soon he wrote to a friend,

How can we hope for the spiritual and heartfelt unification of these fragments of humanity, which are spread out in every degree from savage customs to forms of neo-civilisation considerably at odds with our Christian perspectives? ... At first view, the appearances are contrary, and crumbling and division presently seem to dominate the history of Life.²⁹

Listening with the third ear, he could not hear among the Chinese any interest in mysticism or in an all-embracing unity. This left him shaken; as he departed from Tianjin on his first Asian expedition, he noted in his Journal, 'Lord, that I may see'. On the expedition he wrote of the ocean of humanity troubling 'the hearts of those whose faith is most firm'. The people of China troubled his heart because they did not seem to fit in to his hypothesis. But he soon met a missionary with many years' experience of work in China, who assured him that the Chinese did indeed have an interest in mysticism, and who helped him understand the forms that Chinese mysticism had taken. This was important for Teilhard, for he was again able to see. Then he could adore; what he saw agreed with what he believed.

Teilhard, the desert traveller, was warned by Matter that he would never again know untroubled worship. He still took the troubled way, leaving behind the path to God trod by generations of Christian mystics. Did he do well? Years later he reflected,

Even today I am still learning by experience the dangers to which ... one is exposed who finds one's self led away from the well beaten ... path of a certain spiritual asceticism.³⁰

He would claim that the path left him at times 'unable to shake off a feeling of terror'. But he wondered how else one could find nourishment for one's prayer.

²⁸ *Letters from a Traveller*, 70.

²⁹ *Lettres intimes* (Paris: Aubier-Montaigne, 1972), 104.

³⁰ *The Heart of Matter*, 46.

Teilhard's need to see often left him troubled. He had formed the hypothesis that all people desire a mystical union. When it seemed that all people and things were calling, 'Lord, make us one', he could see. For then what he saw converged with what he believed, and he could adore: he could cry to Jesus, 'with a desire as vast as the universe, "In truth, you are my Lord and my God"'.³¹ But he could also, wonder why he was the only one to see what he saw. In the last months of his life, he told of being unable to quote a single 'authority' (religious or lay) in which he could claim fully to recognise himself, and asked, 'Am I, after all, simply the dupe of a mirage in my own mind?' This is the troubled question of one who has stepped apart from the human caravan.

But Teilhard could also sense that the human caravan was coming to accept his ideas; he heard,

... the pulsation of countless people who are all—ranging from the border line of unbelief to the depths of the cloister—thinking and feeling, or at least beginning vaguely to feel just as I do The unanimity of tomorrow recognises itself throbbing in my depths.³²

Towards the end of *The Phenomenon of Man*, Teilhard wrote, 'Religion and science are the two conjugated faces or phases of one and the same complete act of knowledge'.³³ In science, the first phase, we do the synthesizing; in religion and adoration, the second phase, we find our own selves being given their place within a higher synthesis. 'Adoration's real name ... is research.'

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³¹ *The Heart of Matter*, 132.

³² *The Heart of Matter*, 101.

³³ *The Phenomenon of Man*, 285.