

# *The Concept of Continuous Creation*

with Fabien Revol, “The Concept of Continuous Creation Part I: History and Contemporary Use”; and Fabien Revol, “The Concept of Continuous Creation Part II: Toward a Renewed and Actualized Concept.”

## THE CONCEPT OF CONTINUOUS CREATION PART I: HISTORY AND CONTEMPORARY USE

by Fabien Revol

*Abstract.* The concept of continuous creation is now widely used in the context of reflections on the dialogue between science and religion. The first part of this research work seeks to understand its meaning through a twofold elaboration: (1) the historical setting of the three philosophical trends in which this concept was developed: scholastic (conservation), Cartesian (conservation through repetition of the creative act at each instant), and dynamic (interpreting the emergence of radical and contingent novelty in nature as a sign of the continuity of creation); (2) a philosophical and theological critique of the concept of continuous creation regarding the question of the relationship between change and creation, in the light of its highly polymorphous contemporary use, and, in opposition, its absence within the Catholic Magisterium. This work opens the field a further step toward reflection on a renewed concept of continuous creation.

*Keywords:* continuous creation; divine action; ecology; metaphysics; novelty; theology and creation; theory of evolution

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When we speak of continuous creation in theology and philosophy, we spontaneously refer to scholastic thinking on conservation and to the contributions of René Descartes for whom God is incessantly creating *ex nihilo* the totality of the universe at each and every one of its instants of time. This way of apprehending continuous creation as synonymous with conservation is still relevant, as is shown in the writings of Timothy D. Miller<sup>1</sup> and Paul Clavier (Miller 2007; 2009, 471–85; 2011, 3–22; Clavier 2011). We cannot allow the semantic field of this concept to fade in the light of its contemporary use in the dialogue between science and

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religion (see Clavier 2011). The renewal of this concept at the end of the nineteenth century was conditioned by the impact of evolutionary theory on the scientific, philosophical, and religious mentalities of the time. The representation of the natural world changes, it parts ways with the fixity to which a certain Christian approach of creation has confined it. The world of the living becomes dynamic through the ages of the Earth, and one must seek to understand how new species can arise through previous ones if they are not to be considered as directly created by God. Thus, we discover that the universe has a story, as does the life in it, and this quite independent of human history. We must find the meaning of this story, and we have to recognize and interpret natural novelty, as was attempted by Henri Bergson in *Creative Evolution* (1998). Today, despite Karl Barth's criticisms of the relationship between science and theology (Barth 2004, ix–x) and his criticism of the concept of continued creation (Barth 2009, 5–7, 61–72), many theologians of the end of the twentieth century, from different confessions, have recourse to this concept in a dynamic conceptuality called on to make sense of natural novelty, to refresh creation theology, even to strip it from that which is perceived as a rigid straightjacket expressed, according to many, in the concept of creation *ex nihilo*.

The upshot of this re-expression is to come up with a theology of creation which will, through its representations, live up to two challenges: (1) the challenge of the dialogue of theology, as a reflective expression of faith, with the natural sciences and in particular the sciences of the living; (2) that of offering representations of the world which are capable of meaningfulness for those who seek to model their Christian life in connection with the recent rise of consciousness around ecology, in order to pursue the objectives of integral ecology: to become good stewards and wardens of our common home (after the expression of Pope Francis in the homily of his mass of enthronement on March 19, 2013).<sup>2</sup> To this effect, the work of reformulation of continuous creation sets itself in the pathway cleared up by the Encyclical Letter *Laudato Si'* (*LS*) which, in its second chapter titled "The Gospel of Creation," offers a sketch of such a topic in its § 80: "His divine presence, which ensures the subsistence and growth of each being, 'continues the work of creation'."

Thus, this article aims at answering the following question: is it possible to theologially interpret natural novelty as a furtherance of God's creative action in time, and if so, how is this to be done?

On the question of "how," I wish to clarify in an important way something that is going to be part of the whole endeavor. Any Christian theological approach must take into account this particular creature whom Christ has encountered in its existential condition: the human person. The starting point of the endeavor of Pierre Teilhard de Chardin is in effect the phenomenon of man as a key that allows reading the history of the cosmos

and of cosmogenesis (Teilhard de Chardin 1965). Just as Pope Francis busies himself with calling into question the deviant anthropocentrism of modernity in *Laudato si'* (§§68, 69, 115, 118, 119, 122), there is a strain in the dialogue between theology and militant ecology which blames Christianity for an excessive anthropocentrism conceived as an obstacle to any resolution of the ecological crisis. If we were to develop a theology in dialogue with ecology on the basis of the central place of the human person, we would risk falling short of our objective because of a lack of prudence and diplomacy. And this is why we must here take the risk of developing a theology which bases itself on a cosmological point of departure and not in an anthropological one. With this, we can perhaps understand the formulation of this problem when it considers continuous creation starting from natural phenomena such as they are described by the natural sciences, and not starting from the vocation of man to accomplish creation by his responsible action as was done by Karl Rahner (1969, 7–9) in his time. The reader can notice that the anthropological problem is not going to be ignored in our proposal; it is going to be taken into account—following on the footsteps of Teilhard—as a final cause which guides and orients the reflection on creation at the heart of the Christian mystery.

This work is also situated in the disciplinary field of the “dialogue between science and religion” as it is practiced at the “Chaire Science et Religion” at Lyon Catholic University: the dialogue between the scientific discourse and the theological discourse is mediated through the interface of the philosophical discourse. This work of mediation is done under the form of a critical function—to distinguish that which is pertinent to science or to ideologies in formulations that claim to be scientific—and an hermeneutical function—to provide meaning so as to further a theological reflection—in the methodological footsteps of Jean Ladrière (1972) and his disciple Dominique Lambert (1999, 2004, 367). This current undertaking is interdisciplinary at the onset, since the philosophical instruments are going to be called on to work on scientific data and help in theological formulations.

First, we have to delve into the history of philosophy and of theology in order to identify the origins of the concept of continuous creation. I must stress that this historical undertaking keeps a focus on the expression “continuous creation,” bearing on the Latin *creatio continua* (or *continuata*), and its different French or English possible forms (“continued creation,” “continuation of creation,” “ongoing creation,” “*création continue*,” and “*création continuée*”). This historical work will end with the identification of the contemporary use of this concept. The second part of the work shall be the constructive part of a renewed concept of continuous creation. It will go through an evaluation of its relevance, and its validity in Catholic thinking, particularly through confrontation with the major representative of Catholic thought that was Thomas Aquinas, the “Common Doctor.” The

theological elaboration of this reformulation cannot be achieved without a confrontation with Scripture and with the tradition of the Church Fathers, by which we may find ground to support our initiative. It implies then a new philosophical step, a hermeneutical reading of the scientific discourse, in order to establish the notions of historicity and of natural novelties so as to better construe the concepts which will be used in the work of properly theological interpretation. The fourth step is that of elaboration in the proper sense, which will have to rely on a choice of metaphysical instruments that are capable of conceptualization the temporal dynamism of creative action, particularly in the Neoplatonic framing of Eriugena (1987), whom we revisit in order to think through the unfinished dimension to creation relying on the modern notion of information borrowed from the Catholic philosopher Claude Tresmontant (1966, 273–82) and the theologian John Haught (2008, 62).

The concept of continuous creation can be situated within three distinct philosophical trends: the scholastic trend, the Cartesian trend, and a trend which I would call dynamical, starting at the end of the nineteenth century. The history of the concept of continuous creation starts at the turn of the sixteenth and seventeenth centuries with its first expression in the neo-scholastic thought of Francisco Suarez, as a reinterpretation of the Thomistic concept of conservation. A few decades later, it was integrated to the Cartesian philosophical conceptuality. Then, with the revolution introduced by transformism and by the theory of evolution of Charles Darwin, continuous creation was transformed into a dynamic trend in order to interpret the novelty of living in a nature characterized by historicity and described in particular by Henri Bergson. From this historical survey, we shall then have another to accomplish it, that is, the analysis of how the concept of continuous creation is used in the contemporary Christian theology.

#### THE SCHOLASTIC TREND

First, one must acknowledge that the exercise was not an easy one, since the modern commentators of the concept of continuous creation (“continued creation” in that case) refer almost entirely to writings of Thomas Aquinas (Bouillier 1868, 102 n. 2; Hamelin 1921, 395–97; Sertillanges 1945, 73; Gilson 1976, 340; Miller 2007, 9), in which the expression is never to be found upon verification. The scholastic uses of this concept refer first of all to the topic of the conservation of creation as defined by the angelic doctor in Questions 22, 103 and, above all, 104 of the “prima pars” of the *Summa theologiae*. But it is thanks to a footnote by École (1985, 149 n. 119) that the first source of the expression “continued creation” could be identified: in the twenty first metaphysical meditation of Francisco Suarez in 1597, “That is why S. Thomas claims that conservation is, as it were, a continued

creation” (Suarez 2002, D. 21, 2, 4, 112). “*Et ideo sæpe dicit divus Thomas, conservationem esse quasi continuatam creationem*” (Suarez 1861, D. 21, 2, 4, 791). As one can see, he has Aquinas say, without being more precise or without referring to one of his texts, that conservation is a continuous creation, but Thomas himself never speaks of “continued (or continuous) creation.”

With Suarez, we can locate the beginning of a true career for this concept which will be used again in modern philosophy, precisely because the metaphysical meditations belong to writings that are properly philosophical, and not theological in the sense that no reference is made to Christian revelation. Suarez speaks of God as would a philosopher, and he grounds thus the distinction which is being made at that era between theology and philosophy, thus contributing in the emancipation and the acquisition of autonomy for this discipline. From theology, continuous creation is brought into philosophy, which gives it so to speak its birth act as a concept.

In this tradition, because creation is synonymous with continuous creation, the issue for Suarez is to understand how God can invest his power to maintain creation in being without the later falling back into nothingness. The initial creative act is prolonged in an action of sustaining which is not of a different nature than the initial act. This idea is located within the Augustinian legacy of the nonsuspension of divine creative activity (Augustine 1982, IV, 12 and IX, 15). With the desire to show the rational dimension of conserving action, Suarez identifies three modes of conservation: (1) through the accidents which consist in the resistance to corrosive agents; (2) *per se* and mediated, that is, that one or many agents keep the being of an entity, such as the Sun for instance, which is necessary for the sustenance of plants; (3) *per se* and immediate, which can only be accomplished by the divine being, cause and giver of substance to created entities. Continuous creation is attributed to this third modality. The divine power which we hear thus invested is afterward qualified by the concept of divine concurrence, that is, the participation of divine power invested in the minutest detail of creation, among creatures. This power contributes to help creatures persevere in their being, but it also constitutes the internal force for all motion (Suarez 2002, D. 22, 148–249). We have to stress immediately that Suarez has a certain hesitation in front of the expression: “this should not be interpreted as signifying continuity in the proper sense, but more as implying a continuity in our matter of conceiving, that is, through the coexistence of a true continued succession” (Suarez 2002, D. 21, 2, 4, 112). This means that we cannot speak of continuous creation in the restricted context of our temporal perception as we determine it.

Scholastic thinking will follow up in the same way. This is how we can find a similar doctrine in Henri Pinard’s *Dictionnaire de théologie catholique*, particularly in the articles “creation” (Pinard 1907, col. 2034–202) and

“conservation” (Pinard 1907, col. 1187–97), which were both written by Pinard in his third volume. This same approach was also used by Marie-Dalmace Leroy, O.P. (1891) in order to attempt to harmonize Catholic theology and the theory of evolution, The book was put on the Index of Forbidden Books (Artigas, Glick, and Martínez 2006, 53–59).

Further on, during the twentieth century, the reflections of Antonin-Dalmace Sertillanges (1945, 72 n. 1) will remain prudent on this matter. Creation and conservation are in themselves identical and only differ from the point of view of the beginning, in other words only in the terms, or if one prefers in the way we speak about the phenomenon. If there was no beginning of creation, then creation and conservation would have been one and the same divine act. Creation “cannot keep on going as our language is prone to imagine” (French original says that creation “*ne peut se continuer comme l’imagine notre langage*”). In other words, to speak of continuous creation is only legitimate if we have a clear consciousness that we are realizing an anthropomorphism of which we measure the implications.

We can say that since Suarez all the bases have been laid for the beginning of modernity to grasp this concept in order to reassimilate it and to modify it in a substantial way. Divine action, altogether conservative, becomes also a totalizing action in front of a creation that progressively becomes less and less autonomous. Because we absolutize the divine concurrence, such as we find in John Calvin (1813, 231–47) for example, continuous creation becomes synonymous with continuous recreation of each instant and of each motion of creatures. We can say that, within philosophy,<sup>3</sup> the debates of the post-Cartesian era on continuous creation will revolve around these questions.

#### THE EXPRESSION OF CONSERVATION AND OCCASIONALISM IN THE MODERNS: THE CARTESIAN DEBATES

##### *Continuous Creation: The Cartesian Turn*

The goal of Descartes (1998, 23f.) was to elaborate a science which would have allowed him to know the world in a rigorous way by establishing laws of nature founded on quantity, and on the measure and motion of mobile objects in space. Descartes is the father of the concept of law of nature, as is shown by Jaeger (1999, 244). To establish this science, he built on the idea that motion of a mobile is always the same, which required that the law governing this motion also be stable and even invariable in its purest mathematical formulation (Descartes 1960, 6–7, 15–22). Cartesian philosophy is also a philosophy of the subject who is defined by the capacity to think (Descartes 1960, 24). By this experience, the subject realizes that he is not the cause of his existence and that as such he is not perfect. So he will need this necessary being which is at the source of the existence of things,

a creator credited with all the perfections, among which is existence, and this in order to establish the laws of nature by creation and their stability as a finite and temporal expression of divine eternity (Clavier 2011, 312).

Descartes establishes this thinking on creation and on the relationship between God and creation after criticizing the Thomistic perspective on substantial forms. In Thomas, the conservation is mediated by the substantial form of a being which is characterized by ontological autonomy—God sustains the form by conservation, which in turn sustains existing beings in their materiality—and by the deployment of this being toward its end. The form also acts as a final cause which allows us to go from potency to act. But for Descartes—influenced in this by Suarez (Garber 1987, 575–76)—there is no other cause than an efficient cause because the other ones, among them the final cause, are not accessible through mathematical formulation of the laws of nature (Garber 1987, 577). By his criticism of substantial form, Descartes empties beings of their autonomy and requires that a creative action would be there to sustain them and to guarantee the existence of those beings at every instant, as well as this sustaining of their activity, for example, the inertia of a moving body whose trajectory we can know by calculation (Frankfurt 2003, 56–57).

Descartes needs a creator God not only to justify the existence of beings and particularly his own existence, but also to guarantee the perennialism in time of these beings—a function that was previously allotted to substantial forms. Descartes needs the creative action to be reinvested in every instant  $t$  of the flow of time. For Descartes, God creates *ex nihilo* all there is and every motion at every instant (Descartes 1960, 105; see also 72). This is how the Cartesian doctrine of continuous creation is formulated. We need to specify “Cartesian,” because as in Thomas Aquinas, we must not look for the literal expression in his writings (I have searched, but to no avail). However, we must seek it in his disciples and commentators, to discover that it is in fact the Cartesians who spoke of continuous creation, as we see in the example of Louis de la Forge (Nadler 1998, 215–31).

#### THE CONTINUATION OF THE CARTESIAN DOCTRINE

The Cartesian legacy on continuous creation is important, particularly in its occasionalist interpretation. In the writings of the Oratorian priest Nicolas Malebranche, the requirements of this conception are pushed to their limits. For Malebranche, no being can subsist without the immediate concurrence of divine creative action, it cannot even move itself autonomously (Malebranche 1997, 104f.). If God creates all beings at every instant, then he creates them in successive states in which they are supposed to find themselves in the succession of instants. From this fact, it is not beings that move by themselves but it is God who, in creating successive instants, creates the illusion of motion. In this perspective,

creatures have no causal autonomy. Secondary causes are an illusion which is perceived on the side of creatures. In reality, on the side of the creative act, it is God who does everything and who is the only efficient causality that is absolutely active. The position of a creature at instant  $t$  indicates to God what will happen in the instant  $t + 1$ , and in that sense creatures are *occasions* for a divine causality by continuous creation; they are only occasional causes, from which comes the name given to this Malebranchean doctrine, “occasionalism.”

With Malebranche, we can appreciate the ultimate consequences of the severance of substantial forms from natural beings: the radical dependence of creation on God and its heteronomy. This approach of Cartesian continuous creation presupposes a notion of time which implies mathematical discontinuity of every one of the moments of time, in which God reinvests his creative power. This matches well the modern conception of time stemming from Cartesian thinking, a linear time which is visible in as many measurable periods as the necessary measuring units of modern science will allow. In the dynamical trend, we will now see that a different conception of time will allow for a new approach to the concept of continuous creation.

#### THE “DYNAMICAL” TREND IN THE CONCEPT OF CONTINUOUS CREATION

Modern science, as it was elaborated by Cartesian thinking and those that followed Descartes, has brought about the progressive development of the different scientific disciplines, with biology having come rather late in terms of the history of science. The search for the mechanisms that make possible the appearance of species leads us to think of nature as an entity in motion and capable of creativity by the production of novelty in the midst of the living. The transformism of Jean-Baptiste Lamarck (2011) and the theory of evolution of Darwin (2001) represent fundamental steps in this new vision of nature. This has been made possible by a reflection on the age of the earth, ushered in by the science of geology. This new discipline opened the door to the idea that long periods were necessary and available for the realization of very slow processes of modification of living beings. This representation of nature forced the Christians to reappropriate for themselves the meaning of Scripture as far as the creation narratives go. Some have refused to do this, as one finds in the creationist strands from the end of the nineteenth century until today (Arnould 1996, 6–7). It is in theology that the concept of continuous creation reappears in the United States in a Protestant context with pastor Myron Adams, in an attempt to reconcile his faith with the data of the modern sciences, particularly, geology and Darwinian transformism. He suggests thinking of creation as a continuous process in which God acts permanently through the laws of nature (Adams 1890, vii). But, we will focus now on three authors that



manifest a true filiation in their thinking as far as continuous creation: Henri Bergson, Pierre Teilhard de Chardin, and Claude Tresmontant.

*The Concept of Continuous Creation in Henri Bergson*

For Bergson, the starting point of the reflection on the theme of creation is to be found in the question of time (see Gouhier 1961, 19–20). He criticizes physical time, Cartesian and objective, discontinued through artificial means in measurable instants, and opposes to it a duration, characterized by continuity and a subjective dimension of its experience on an existential plane. It is therefore through the mediation of duration that a true unpredictable novelty can come about in the world (Bergson 1965, 104).

Bergson thinks that reductionist scientific rationality is not able to grasp the motion of nature as a source of novelty. Physical causality is not sufficient to account for natural processes, particularly in the evolution of the living, but also as far as human action goes. This is why he takes his model in human mind-causality (Hude 1989, 133–45). This model contains the capacity to make a free decision and, as such, to make something happen in the world that is not determined, that is unpredictable, and that has a result that is not contained in its antecedents. Unpredictable novelty is, according to Bergson, a reality which happens in duration and which is not knowable in advance by the properties of the elements that compose it. A human action that is free is by definition an active creation, when it implies a free decision of a consciousness that applies itself to bring about novelty in the midst of duration. Duration is here understood as the extension of consciousness through itself and on itself, in the grasp of the continuity of an event, of the process in its integral extension from beginning to end (Bergson 1998, 223).

Bergson chose to apply this not only to human consciousness but also to the consciousness of the whole of natural beings. In the synthesis which he effected of the approaches of Lamarck, of Darwin, and of August Weismann (1891, 67–106), he thought that the cosmos was crossed over by an *élan vital* (Bergson 1998, 23–24, 202), a vital thrust, the psychical dimension of the cosmos which looks at expressing itself in the bringing forth of mind in the midst of matter. This is manifested by an evolution of life and of living beings which are bearers of this thrust in the sense of a production of beings that are more and more complex and capable of consciousness, and therefore also capable of duration. The vital thrust is manifested as a fundamental duration of the cosmos which finds a particular expression among the living and in the phenomenon of the appearance of new living beings.

In the midst of a metaphysics based on the empirical knowledge of the natural world (Bergson 1998, 247), the causality exerted by the vital thrust

in the world is understood as an active creation, more precisely “unceasing creation, the uninterrupted up-surge of novelty” (Bergson 1965, 18; in the original, “*création continue, jaillissement ininterrompu de nouveauté*”; see Bergson 1941, 115). On a philosophical level, this approach is therefore different from that of previous writers, who founded the revision of continuous creation on conservation. Here, the breakthrough bears on the efficiency of creation as continuous applied to novelty, and mostly to the mechanisms able to bring it about.

Debates have occurred in order to evaluate if this philosophical approach could be reconciled with Catholic theology. Between a conciliatory approach as in Fr. Joseph de Tonquédec, S.J. (1936), or the more prudent one of Fr. Antonin-Dalmace Sertillanges, O.P. (1941), if there is a possible dialogue with Bergson it will be through the mediation of analogy: the continuous creation of unpredictable novelty is analogical relative to the creative act understood as creation *ex nihilo*, a unique act anchored in a temporal eternity and in the allmightyness of God’s power.

This notwithstanding, this form of thought has borne fruit in Catholic thinking on creation, particularly in Fr. Pierre Teilhard de Chardin, S.J., and in the philosopher Claude Tresmontant.

*Pierre Teilhard de Chardin: Novelty in the Cosmogenesis without Continuous Creation*

The Jesuit palaeontologist Pierre Teilhard de Chardin is a thinker that is not easily classifiable in a category (Crespy 1961; de Solages 1967; d’Ouinice 1970). He presents himself as a scientist elaborating a unified synthesis of his spiritual life by calling into play his scientific experience as a fundamental relationship to reality and a mystical experience of union with Christ, which he perceives present in the world according to an understanding inspired by St. Paul’s theology of creation. Teilhard indeed builds on the theology of the cosmic Christ revived by Irenaeus and the Greek Fathers, such as Maximus the Confessor, and through the Scotistic perspective in the thirteenth century (Teilhard de Chardin 1998, 168; see Edwards 2014, 59). He is neither a philosopher nor a theologian, but he rather makes a phenomenology of human beings as key to read the history of the cosmos and of the living. This phenomenology cannot be understood if one does not integrate the fact that human beings are creatures which give meaning to evolution, from the simple and the multiple toward complexity, mind, and unification (Teilhard de Chardin 1965, 48). For him, the universe is, before all other things, a process of complexification that is continued, from the simplest reality and the most material, toward a more complex and more spiritualized reality. The universe is a process of cosmogenesis (Teilhard de Chardin 1964, 262) which, as in Bergson, has for its finality the birth of the spirit through complexity. Human beings are a decisive step

in this process because there we find beings capable of self-consciousness, which makes the universe come to consciousness, a consciousness of itself. But this process does not end with human beings. Human beings are called to continue, by a progressive unification of consciousness, what Teilhard called the noosphere: the spiritual sphere of the planet Earth, which gathers all the interconnected consciousnesses of mankind having reached its perfection.

On the theological level, this cosmogenesis is also a Christogenesis (Teilhard de Chardin 1998, 90), that is, the process of the formation of the body of the resurrected Christ. Teilhard de Chardin (1960, 104) understands the evolution of the universe and its completion as a great cosmic Eucharist, during which an epiclesis is pronounced by God on the world, and during which the Spirit operates this transformation. The coming of the noosphere is that step of the accomplishment of this process, in a spiritualized universe recapitulated in Christ and of his body according to the perspective of Ephesians 1:9–10. The Holy Spirit occupies a fundamental place in this process—we have spoken of epiclesis—when, through his spiritual energy, he makes complexity generate itself by putting the elements of the world in relation with all the others (Teilhard de Chardin 1965, 65). This complexity is understood as interaction of all these elements. And this interaction is an active creation, according to Teilhard's dictum: "*creare uniri, creari unire*" (Teilhard de Chardin 2002, 195–96). From this it stems that in Teilhard there is no difference between the creation of the universe by God and its Christological completion in a new creation which is the Constitution of the body of Christ. As a consequence of this, Teilhard does not need to formally develop a concept of continuous creation, since creation is a temporal process, from nothingness (said to be "creatable"; see 2002, 194 for "*néant créable*") which is a pure multiple and a figment of the mind. This process is understood according to the analogy with birth and, bearing on the painful dimension that this comprises, that is, the confrontation of this creative thrust with all the forces that are opposed to it also accounts for ontic evil in creation (Teilhard de Chardin 1998, 61–70).

Teilhard de Chardin (1965, 149–50 n. 1) is indebted as was Bergson to the legacy of Lamarckian transformism. He therefore considers that evolution has a direction, which is the direction of an increase in complexity through the exploration of possible forms of complexity, and through the interplay of trial and error. The aleatory dimension of evolution paradoxically serves an *orthogenesis* (1965, 108) rejected by contemporary biologists of evolution. We see therefore how the spiritual energy occupies in Teilhard's vision the same place as the vital thrust in Bergson, in the process of the bringing about of novelty that is unpredictable in the midst of a cosmos that is historical.

An original synthesis of Bergson and Teilhard was propounded by Claude Tresmontant, who reinjected the vocabulary of continuous creation in a more apologetic perspective than that of Teilhard.

*Novelty as a Sign of Continuous Creation in Claude Tresmontant*

The endeavor of Claude Tresmontant is that of a Christian philosopher who wants to underscore the rational and metaphysical foundations of Christianity (Tresmontant 1979, 317), and, in the case which is of interest to us, of the doctrine of creation. For this apologetic philosopher the evolution of the living in its Darwinian understanding, rather than demonstrating the nonexistence of God is a strong signal in favor of God's existence. The evolution of the living manifests, as we have seen in Bergson and in Teilhard, a process bringing forth unpredictable novelty. The philosophical question to ask is that of the origin of this novelty. Tresmontant interpreted this novelty in terms of an introduction of new information—in the context of information theory that became prominent in the second half of the twentieth century (Tresmontant 1979, 280; see Gagnon 1998, 212–15)—information being called to sustain the novelty, but which was not hidden in the cosmos awaiting its expression. It has to be extrinsic, that is, it has to come from outside the cosmos. This argumentation is laid out in the context of a discussion between theism and pantheism. If the world is the only absolute, then it is necessarily eternal, it cannot have had a temporal beginning. As such, all the information it contains, even if it is infinite, would have to be expressed without the possibility of true novelty ever appearing. All that would appear to us as novelty would only be the expression of pre-existing information already expressed in one form or another.

On the contrary, if novelty, which the history of the cosmos (Big Bang) and that of life (new species) bear out, is authentic, we have to think of its origin as being necessarily other than the cosmos itself. This means we have to think of an absolute and necessary being from whom this novel information springs forth, and who therefore, by definition, must inform the world and its evolution. For Tresmontant this information is said to be creative; it is introduced progressively in the history of the world, and it is responsible for the creation of new beings in a process of continuous creation (Tresmontant 1966, 264). This process is manifested by the accumulation and addition—according to the Teilhardian vision—of new information in living beings, particularly in their genome. The Darwinian process of mutation–selection of genes becomes the seat and the place where we can witness novel information happening in the world by continuous creation.

One could criticize Tresmontant for sticking too closely to a scientific theory of biology which is already outdated, as one would find in the

gradualism of Kimura (1968, 624–26), and to not be sufficiently open to the evolutions of the theory of the same name, particularly as it was complemented by saltationist theories in Niles Eldredge and Stephen Jay Gould (1972, 82–115), or by the theories of *Evo Devo* which take into account epigenetic aspects that are manifested in embryonic development (Jacob 1977, 1165; 1981, 88; Morange 2011, 80), or to have also ignored emergentist philosophy which was available to consider as early as 1990 (see Kauffman 1993, inspired by Thompson 1917).

With Tresmontant, we have nevertheless a philosophical elaboration that is the most complete and that is capable of providing a framework for a theological thought of continuous creation within Christian theology, situated in a dynamic trend of continuous creation since the end of the nineteenth century.

## THE CONTEMPORARY USE OF THE CONCEPT OF CONTINUOUS CREATION IN THEOLOGY

### *Preliminary Remarks*

Nonetheless, one must reckon that this approach does not have a real fecundity in theology. Claude Tresmontant is still much ignored. But this is not true of the work of Teilhard de Chardin, which has provided much inspiration, especially in the framework of North American theology. In this case, a point must be made. Those theologians are also much influenced by process philosophy. As we will see below, Alfred North Whitehead developed quite interesting tools in order to think and express continuous creation, though the expression is never to be found as such in his writings. He, however, should be put in the framework of the third trend, which is the dynamical trend of continuous creation. But he is not connected to Bergson, Teilhard, or Tresmontant. They were ignorant of Whitehead, and Whitehead was ignorant of them in return. As I wanted to show the filiations within the third trend in the previous section, I did not include Whitehead in it. I will then show in this section why and how he is really present in it, and how contemporary theologians refer to him.

For a lot of contemporary authors from Anglo-Saxon culture, the concept of continuous creation is an appropriate one to establish a dialogue with the evolutionary vision of living beings and of the history of the universe. A survey of literature is disturbing because authors make reference to trends of thought which they claim are stated in tradition, by which they mean the one of *creatio continua* (or *continuata*), without ever really identifying them. In the same sense, the use of vocabulary fluctuates, because if in French the expressions “*création continuée*” or “*création continue*” or “*création continuelle*” are used, in English the diversity is greater because other expressions come into play such as “continuous creation,” “continued

creation,” “continuing creation,” or even “ongoing creation.” The confusion gets even greater when we realize that there is a lack of homogeneity in the use of these terms; indeed, we find that different authors will use different expressions to speak about an identical content, and (vice versa), authors speaking with an identical formulation refer to different contents. We thus have to attempt an identification according to trends that have vacuous boundaries: the scholastic trend, the dynamical trend, the Whiteheadian trend of process theology, and a proposal of categorization according to the perspective of the origin or of the *eschaton*. In the confines of this article, we cannot survey all the trends. We will be content with outlining the main ones.

*The Actualization of the Concept of Continuous Creation in the Scholastic Connection*

The Thomistic perspective is a legacy with a significant follow-up within the group of contemporary theologians who are looking to articulate the classical theological perspective in the context of the theory of evolution. For Medard Kehl, the will of God is turned toward creation in a continued way, and God “remains by his will and his action the foundation which bears continually the world and all that is produced in it, and in it therein develops” (Kehl 2008, 30). For Jacques Arnould, the effort aims at thinking the creative relation in the present of time as a foundational link with divine origin (Arnould 1998, 103). Then we have the reformed theologian Gérard Siegwalt, for whom speaking of continuous creation is tantamount to speaking of creation in the present, as much in the perspective of conservation as in a soteriological perspective in which redemption and creation are acts that are originally identified (Siegwalt 2000, 356–75). Jean-Michel Maldamé studies the problem at the level of causality. For him, continuous creation refers to the concept of divine concurrence. It is an attempt to envision the action of the first cause as sustaining the dynamism of secondary causes so as to say that natural processes about the springing forth of novelty signify as much the product of secondary causes in their economy, as they do the product of the action of a sole first cause which is divine. The analogy of the musician is called into play to understand this interpenetration of causes: in the same way that music is said to come entirely from the instrument of music, it also comes from the musician (Maldamé 2007, 531–60; 2011, 235–36). The problem in this perspective is the status of the divine act of which we are speaking. It is thought about by analogy and not in the direct sense of a truly creative divine action. The creative novelty signifies by analogy the unique creative and divine act grounded in eternity.

An original attempt is to be found in the German theologian Ulrich Lüke, who proposes a synthesis of scholastic trends and Cartesian trends

in a theology of continuous creation. Starting from a reflection on time in physics, he identifies the present instant as being always transcendent to the time measure done with the instruments of physics. The present instant is the vertical dimension of time which passes and leaves a trace in the measured chronology of past instants. In the midst of this transcendence, Lüke identifies the locus of God's continuous creative action inasmuch as the present is the connection of eternity with the chronological time of creation. He therefore attempts to think the compatibility of creation *ex nihilo* with continuous creation relying on the coincidence between the eternal act and its temporal perception (Lüke 1996, 281–95). The risk of this very seductive approach is to fall back to a latent occasionalism, in which natural causes would have no real autonomy or efficiency.

*The Theological Actualization of the Concept of Continuous Creation  
in the Dynamical Trend*

The rebirth of the concept of continuous creation in contemporary theology comes essentially from a criticism of a popular representation of creation considered as something fixed once and for all. This creationism has three origins. First, a tendency on the part of Protestant theologians to identify creation *ex nihilo*, an original act situated in the beginning of time, with the idea that God withdraws himself afterwards and no longer interferes in his work. It is also an initiative which seeks to thwart deistic modern conceptions as for instance in Pascal, who wrote against Descartes and his famous flick: “I cannot forgive Descartes. In all his philosophy he would have been quite willing to dispense with God. But he had to make Him give a fillip to set the world in motion; beyond this, he has no further need of God” (Pascal 1910, §77, 33). The second criticism focuses on the literal reading of Genesis 1 which would abruptly affirm that the species were created by God in their definite state from the beginning of creation. Finally, the criticism aims at a fixed metaphysics of Greek origin, that is as much Platonic as it is Aristotelian, to which Christian theology is then indebted; in other words, the substantial form mode of thinking. These were understood as being eternal and as such invariable, which agrees with the classical idea that God creates archetypes which serve as models in their perfection for all existing creatures throughout time and becoming. Those three criticisms of creationism have as their goal a reformation of the theology of creation in order to make it compatible with the idea of a world in evolution where change is thought about in a positive way and where novelty can happen through variation in substantial forms.

According to Robert J. Russell, the concept of continuous creation is used to think about creative activities sustained by God throughout all natural phenomena: “those who view the universe in these more dynamic terms and speak about continuous creation are often eager to attribute

special significance to what appears to be the occasional appearance of genuine novelty, even if they agree that all events are in fact uniformly caused by God through the unfolding realizations of the potentialities of nature represented by the laws of nature” (Russell 1995, 10).

Thus, natural creativity as a source of novelty in nature is a sign that God acts in time as Creator. For John Polkinghorne (1997, 73), it is a concept which complements that which is lacking in the concept of creation *ex nihilo*. For Arthur Peacocke, the natural process shows capacities of self-organization. As such, he calls evolution the continued process of the emergence of new levels of reality, or forms of existence, which are irreducible and present properties, behaviors and networks of relations that are genuinely novel in the midst of nature (Peacocke 2004a, 79; 2007).

For a good number of those theologians, the contingency of natural events is the sign that continuous creation is not a program predetermined by God, but that it implies a certain autonomy in the becoming of creation. Creation as universal entity is situated as collaborating in God’s creative action, particularly in misleading attempts through evolutionary pathways that are not viable in a short or long term. With the Australian Dennis Edwards (1995, 166), we can qualify creation as a creative improvisation. The analogy that is best suited in this context to speak about creative action is that of an improvised symphony (Peacocke 1986, 106). Finally, this participatory conception of continuous creation is often accompanied by the thought of *kenosis* in the creative act, inspired by the Hebraic *tsimtsum*, the divine withdrawal of the Kabbalists of the Renaissance.<sup>4</sup> This withdrawal is in fact a withholding of one’s power, a self-limitation, a renunciation of the almighty action which allows us to think of the real participatory economy of the created partner.

### *The Approach of Process Theology*

A significant number of theologians of continuous creation are taking part in the integration of Whitehead’s process philosophy into the elaboration of a process theology, as we see in the works of Ian Barbour (2000, 114) and, in a more nuanced way, of Haught (2011, 277–94). One finds in Whitehead the concept of creative advance which is put in opposition to what he considers the “Christian understanding” of *creatio ex nihilo* which he deems fixist. For this author, the world in evolution is the actualized pole of divine nature in which are expressed in time creative proposals for new forms that are always suggested and lured, never imposed by the fundamental pole of divine nature. This fundamental pole is in fact the total sum of all possibilities of creation, or of successive creations. Whitehead’s cosmology must be understood as a succession of universes in extension and in contraction, characterized by a beginning starting from a chaos which is a remainder of the previous universe, and then the deployment



of new possibilities until the consummation of the universe in a cosmic destruction and death. The deployment of the universe within a cycle is the occasion for the invention of new forms through the actualized pole which enriches the fundamental pole of God (Whitehead [1929] 1979, 87–8) (understood as the total sum of archetypes of possible worlds). This brings Whitehead to use surprising expressions such as: “God is the primordial creature” (Whitehead [1929] 1979, 31). God transcends the world just as the world transcends God.

Such a succession of universes dynamized by the creative advance has neither beginning nor end, it is indefinite, giving a particular meaning to the notion of divine infinity (Whitehead [1929] 1979, 344–45). One often hears that process philosophy is a panentheism, a concept signifying that the world is not God but is inhabited by God or a part of God which does not exhaust divine nature as such. The problem that needs to be pointed out here for Whitehead, as much as for Spinoza, is that for them the world is only one manifestation of divine nature, and this is a particular form of pantheism. In point of fact, when time tends toward infinity, there is a pure equivalence between potential information of the fundamental nature of God and its realization in the actual nature of God in the material world. The Christian theologians who take over process philosophy do not keep everything from Whitehead’s system. They nevertheless retain, as is done by Haught in particular (2008, 173–92), this dynamic dialogue between creative proposals of God and the subjective pole of material creation capable of receiving creative information in time. They also do not retain the succession of universes in creative advance to adapt it to the unicity of the one universe in which we happen to find ourselves. Finally, in articulating creative advance with the concept of creation *ex nihilo*, they guarantee the thought of divine transcendence in relation to the world while entertaining a certain intimacy of God present and active in natural processes, which in the end opens on a thought of divine immanence that is different from the scholastic trend.

### *Continuous Creation between Alpha and Omega*

A last way of understanding continuous creation in contemporary theology is concerned with the origin of creative information. For American theologians and for Jürgen Moltmann, this information has an eschatological origin. In a Teilhardian vein, for Haught it comes from the future (alongside the theme of a metaphysics of the future), as it also does in Ted Peters who develops the concept of *proleptic* creation (Edwards 2000, 77–96), borrowing an expression from Wolfhart Pannenberg (Edwards 2000, 90–101; Haught 2011, 277–94). This amounts to saying that the eschatological status of the creation of new information informs the present and becoming of continuous creation. As one finds in Teilhard, the new

creation works like an attractor which orients creatures to their end and their accomplishment. This information is innovative even if it does not bear any constraint: it is proposed by God to creation which is free to accept it or not in relation to its state of evolution. This information is built by God so as to never interfere with the natural course of processes, since it is of the same nature as the information which governs the functionings of nature. For those theologians, this information has a character of new creation which surges out of nothing, that is, according to the transcendent act which presides over creation *ex nihilo*.

In opposition to a proleptic approach, one can have an *archonic* approach (Peters and Hewlett 2003, 199), that is based on what happens in the principle of things. Be it in Paul Davies (2004, 199–203), John Polkinghorne (1997, 80), Arthur Peacocke (2004b, 60), or Niels Henrik Gregersen (1998, 334–35), one finds this idea of the injection of information into creation to generate novelty. But according to this approach, this information preexists and coexists with the world, as the undetermined capacity of potentiality that creation is called to exploit for its own development throughout time. It is that which our authors call the invisible world. We find that in Polkinghorne, commenting on the first article of the creed of Nicaea (see 1997, 73). This archonic approach does not have an eschatological connotation. It does not have recourse to an information that is radically new, created from nothing. Everything is given in the principle.

### CONCLUSIONS

This journey across the theological world of continuous creation has shown us two things. First, there are three homogenous origins of the concept of continuous creation in its three trends, identified as scholastic, Cartesian, and dynamical. These will shape the reference that contemporary theologians will point to when they want to speak of continuous creation in their essays and propositions. Second, there is no homogeneity in the contemporary use of this concept because theologians are not always aware of the triple origin of this concept, and often see only one of them. A thorough work of analysis was required to identify the elements of this heterogeneity.

We have to notice that nowadays it is a concept that tries to make sense of evolutionary theory in the framework of a Christian theology and give meaning to an actualized vision of the relationship between the created world and its creator God. This actualization is based on the inputs of the modern sciences of the living, in a Darwinian setting and context. From this point of view, it is also generalized to the whole universe, understood as a historical system with a beginning, an expansion, and a possible end.

Half of the work is then done. I actually feel the need to go further and propose a unified concept of continuous creation with strong

theological ground, forged in dialogue with precise scientific theoretical outputs, within an original metaphysical setting. This is the subject of the next article.

## NOTES

1. This article summarizes the first part of my dual dissertation of theology and philosophy.
2. Encyclical Letter *Laudato si'*, Ch. 4 (hereafter *LS*). This mechanism that Pope Francis initiates in *LS* corresponds to the one described by Lynn White (1967).
3. But not in Catholic theology, which remains essentially scholastic and which will remain autonomous and untouched by Cartesian metaphysical philosophy which it will criticize. Nevertheless, the debates on Cartesian continuous creation are not extinguished (see, e.g., Miller 2007, 113–213).
4. An idea developed in the context of the Kabbalah tradition by Isaac Luria in the sixteenth century, on which see Gershom Scholem (1946, 163–264) and Scholem (1990, 31–59). Catherine Chalier thinks that this idea of creative withdrawal must not be interpreted literally, but rather as something that means an illuminated veiling on the part of God, so that the creatures could exist without being submerged and annihilated by such a power. See Chalier (1989, 68).

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