

# SYMBOLISM, ITS MEANING AND EFFECT: THE UNIVERSAL ALGEBRA OF CULTURE

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**ABSTRACT:** The paper questions the meaning and significance of Whitehead's theory of symbolism from the perspective of (i) Whitehead's philosophical development, of (ii) the argument provided in *Symbolism, Its Meaning and Effect* (1927), and of (iii) the history of ideas.

The argument follows the general structure of the *Symbolism* lectures: first, the topic is introduced; second, it is analyzed through an ontological lens; third, the uses of symbolism are consequently sketched. Our discussion departs from Whitehead's in this third part, that introduces a humanistic standpoint through five conceptual knots: the distinction between the early (High) and the late (Low) Renaissance, the underground survival of the High Renaissance's values (with Is. Newton and J. Toland), Pantheism (a.k.a. Nature Enthusiasm), Republicanism (or Civic Humanism) and Freemasonry (*qua* Discrete Fraternity). In conclusion, Whitehead's underground inclination for modernity is underlined.

**KEYWORDS:** Symbolism; A.N. Whitehead; Culture

## 1. Introduction

Whitehead studied symbolism and the question of the necessary value of symbols mainly in *Symbolism, Its Meaning and Effect*, published in 1927. Before perusing that work, it is first of all important to remember the pivotal character of that book and to observe the way it introduces the question of culture and symbolism. Experience is the key word of Whitehead's assessment of symbolism and, unsurprisingly, his analysis leads him promptly in the epistemological field.

## 1.1. SYMBOLISM (1927) QUA PIVOTAL WORK

*Symbolism* was written during what is arguably the most productive period of Whitehead's Harvard epoch (1924–1947): in the years 1925–1929, when he was publishing on average one book a year. So it should by no means be treated as an epiphenomenal work: with *SMW* and *RM*, it paved the way to the Gifford lectures, his unchallenged ontological synthesis. In sum, the context is the following: *Science and the Modern World*, the Lowell Lectures of 1925, were delivered in the Lowell Institute, Boston, from February to March 1925 and were published—according to *SMW*'s Preface, “with some slight expansion”—in October 1925. *Religion in the Making*, the Lowell Lectures of 1926, were delivered in King's Chapel, Boston, in February 1926 and published in September 1926. *Symbolism, Its Meaning and Effect*, the Barbour-Page Lectures, were delivered in University of Virginia, in April 1927 and published in November 1927. *The Aims of Education* gathers addresses given between 1912 and 1928 (it actually recaptures most of the essays published in *The Organisation of Thought, Educational and Scientific*, 1917); it was published in April 1929. *Process and Reality*, the Gifford Lectures of 1927–1928, were delivered in the University of Edinburgh in June 1928 and published in October 1929.<sup>1</sup> *The Function of Reason*, the Louis Clark Vanuxem Foundation Lectures of 1929, were delivered at Princeton University in March 1929 and published sometimes before December 1929.

Whitehead remarked that “the interior spiritual life of man is a web of many strands. They do not all grow together by uniform extension.” (AE 39) According to Gustav Freytag's analysis (*Die Technik des Dramas*, 1863), based on ancient Greek authors and Shakespeare, a drama is divided into five acts: exposition, rising action, climax, falling action, and dénouement. I argue that the late Whitehead's developmental pattern—or dramatic arc—is the following:<sup>2</sup> *Science and the Modern World* and *Religion in the Making* are pre-systematic work rediscovering the process virtues of Plato. *Process and Reality*, the acme of Whitehead's speculations, substitutes creativity for creation while still offering possible theistic interpretations. *Adventures of Ideas* (1933) deepens the possible misunderstanding as the main categories of *Process and Reality* are introduced with the help of a vast picture of the major ideas haunting civilizations

<sup>1</sup> Whitehead sent the last proofs to Macmillan on Aug. 13, 1929. On Nov. 4 he wrote to his son North that he didn't expect a good reception from philosophers. For biographical matters, see my “Introduction” in Michel Weber and William Desmond, Jr. (eds.), *Handbook of Whiteheadian Process Thought*, Frankfurt / Lancaster, Ontos Verlag, 2008, I, pp. 15–38; cf. Lowe's bibliography, Vol. II, 252 and 339. The general context of my interpretation has been spelled in *Whitehead's Pancreativism. The Basics*. Foreword by Nicholas Rescher, Frankfurt / Paris, Ontos Verlag, 2006.

<sup>2</sup> Since this is an analogy, we do not worry about the loose connection with the actual phrasing of Freytag (*I. Exposition, II. Steigende Handlung mit erregendem Moment, III. Höhepunkt und Peripetie, IV. Fallende Handlung mit retardierendem Moment, V. Katastrophe*).

while the overtone is again Platonic. The same holds for *Modes of Thought* (1938) where one finds almost no mention of creativity. The real breakthrough occurs in “Immortality” (1941), that interprets the Uni-verse as the interplay between two “Worlds,” the World of Active Creativity and the World of Timeless Value.

## 1.2. CULTURE, SYMBOLISM AND EXPERIENCE

How is the matter introduced?

*Symbolism’s* Dedication approaches the theme of the lectures with the help of an appeal to experience that is then symbolically interpreted. More precisely, the author’s actual experience is introduced as a cultural one—culture being another name for common sense, i.e., for the atmospheric feeling bringing together individual growth and solidarity. Let us specify how culture embodies vision.

Whitehead’s definition of culture can be found in his earlier writings:<sup>3</sup> on the one hand, culture is activity of thought. *Qua* ferment of genius, adventurous and creative, culture aims at bringing worlds together under the aegis of a vision. It has nothing to do neither with scraps of information, disconnected ideas, nor with pedantry or routine.<sup>4</sup> On the other hand, culture is receptiveness to beauty and humane feeling.<sup>5</sup> Culture defines indeed the conditions of possibility of authentic life.

If we take a bit of mental altitude, we have to acknowledge that the qualities of culture evoked here are related to the virtues of *Bildung* in Humboldt (1792), of *humanitas*, as Cicero would say, and of *paideia* in ancient Greece, starting with Homer

<sup>3</sup> “Culture is activity of thought, and receptiveness to beauty and humane feeling. Scraps of information have nothing to do with it. A merely well-informed man is the most useless bore on God’s earth. What we should aim at producing is men who possess both culture and expert knowledge in some special direction. Their expert knowledge will give them the ground to start from, and their culture will lead them as deep as philosophy and as high as art. [...] The valuable intellectual development is self-development, and that it mostly takes place between the ages of sixteen and thirty. [...] A saying due to Archbishop Temple illustrates my meaning. [...]” (OT 3-4 = AE 1)

<sup>4</sup> “In training a child to activity of thought, above all things we must beware of what I will call “inert ideas”—that is to say, ideas that are merely received into the mind without being utilised, or tested, or thrown into fresh combinations. [...] useless [...] harmful.” (OT 3-4 = AE 1-2)

<sup>5</sup> “What education has to impart is an intimate sense for the power of ideas, for the beauty of ideas, and for the structure of ideas, together with a particular body of knowledge which has peculiar reference to the life of the being possessing it.” (OT 23 = AE 11-12 ) Cf. “What I have said about art is a parable which applies to other occupations and other studies. It is more than a parable ; it is the literal truth. The love of art is the love of excellence, it is the enjoyment of the triumph of design over the shapeless products of chance forces. An engineer, who is worth his salt, loves the beauty of his machines, shown in their adjustment of parts and in their swift, smooth motions. He loves also the sense of foresight and of insight which knowledge can give him. People say that machinery and commerce are driving beauty out of the modern world. I do not believe it. A new beauty is being added, a more intellectual beauty, appealing to the understanding as much as to the eye.” (OT 67)

(see Jaeger 1936/1939). Becoming oneself does not involve egoism and even less individualism, but finding one's own destiny within our kins. To do so, citizens are feeding upon the social tissue and nurturing it. Culture is the "invisible hand" granting the synergy between the two requirements: it provides the atmosphere in which each person can both live as an individual and take part in civil bounds. Every grand narratives worthy of the name allow together an independent and an interdependent life. All the more striking is the fact that the stronger the individuation is, the healthier the solidarity. Family is now almost an obsolete concept, testifying for the corruption of our current societies, but everybody can see that the stronger the family bonds are (used to be), the stronger its members will be—while, in turn, the strength of the familial group depends upon the individual virtues of its members.

Hence culture is really the compass of authentic life, it involves the capacity to govern the city, to resist oppression, and to refuse to become an oppressor oneself if unfortunate circumstances could allow it. Culture binds together the human trajectories, stretched between birth and death, with the communal axis cementing fellow human beings and their natural environment. The idea of harmonious perfection is instrumental here. The transformation of individuals through their immersion and participation in culture belongs to a sphere traditionally branded as sacred. In Whiteheadian parlance, civilized life is made of three threads akin to Whitehead's creative advance, a proto-concept that weaves together individuation (creativity), solidarity (efficacy) and culture (vision).

Furthermore, the Dedication's evocation of romance is not accidental. On the one hand, Romanticism has been praised by Whitehead as the healthy reaction to scientific reductionism (SMW, ch. V). On the other hand, romance is the relational stage, when particular observation takes place, of Whitehead's learning theory (in OT and later in AE).

### 1.3. AN EPISTEMOLOGICAL ENQUIRY

The equally short Preface contextualizes the Barbour-Page Lectures twice. First, from the perspective of the Barbour-Page Foundation's explicit desiderata. Lowe remarks that "Barbour-Page lecturers were required to choose subjects that were new to them. This requirement had an obvious reason; but it could result in the presentation of material that was too novel for a college audience. This is what happened in Whitehead's case (and, later, in T. S. Eliot's)." (Lowe II, 207)

Second, from the perspective of the history of philosophy. Basically, the Preface claims that Locke provides the relevant epistemological questions while Santayana brings in the metaphysical naturalism backing the appropriate answers.

In sum, on the pretext of a study of symbolism, Whitehead announces (once again) a metaphysical theory in the making. How does his argument unfold?

## 2. Theory of symbolism

Whitehead does not define symbolism straight away. He first evokes the question with an historical overview that implicitly exploits an axiology: most of the history of humankind exploits some form of cultural symbolism; with the Reformation (1517), some have tried to dispense with symbols as “fond things, vainly invented;”<sup>6</sup> later, with the rise of modern science and philosophy, the focus shifted on language itself, and especially on a deeper (more specialized) form of language: algebra and its applications.

In light of the naturalistic response to Lockean scepticism he seeks to foster, Whitehead claims that we need a theory of symbol that focuses on sense-perception and, more precisely, on the universality of the presentation/representation dialectic.

Three steps are thus important to contextualize the development of Whitehead’s theory of symbols in this 1927 work: history, epistemology, and ontology.

### 2.1. SYMBOLON IN HISTORY

Broadly speaking, a symbol has always been a lieutenant: etymologically, it stands or holds for something/someone else (“in lieu of”),<sup>7</sup> it is a conventional sign of some object, idea or process. In Greek, *symbolon* means token or watchword. Originally, symbols were ways to recognize each other by reuniting the two complementary parts of a broken token. Symbols are thus modes of togetherness or ways of “throwing things together” (“syn” means “together” and “bole,” “a throwing, a casting”)—and, especially from the perspective of *Process and Reality*, it is difficult to overemphasize the importance of the notion of “togetherness.”

In his 1927 lectures, Whitehead is however concerned with the fallibility of symbols and his project is obviously to abstract the essence of symbolism from its loose cultural marrow. The question—is there such a thing as necessary symbols?—is the thread.

<sup>6</sup> Whitehead uses here an Anglican expression. (“The Romish Doctrine concerning Purgatory, Pardons, Worshipping and Adoration, as well of Images as of Relics, and also Invocation of Saints, is a fond thing, vainly invented, and grounded upon no warranty of Scripture, but rather repugnant to the Word of God.”—*The Thirty-Nine Articles of Anglican Religion* [1562], art. XXII [as amended in 1801 for use in the USA].)

<sup>7</sup> The OED defines *lieutenant* as “one who takes the place of another [...] a representative, substitute” and *symbol* as “something that stands for, represents, or denotes something else.”

## 2.2. THE NECESSITY OF SYMBOLS

The cultural import of symbolism lies in the two complementary dimensions that it perfectly exemplifies: a symbol allows both the individuation and the solidarity of the members of a group. The personal interpretation of a symbol is a powerful tool to become oneself while the very existence of the symbol allows a community to grow stronger. But Whitehead is an algebraist and the question in the back of his head is the one of the bare necessity of symbolism. Where do we find truly necessary symbols and universal symbolic laws? A symbolic corpus that has been discarded by history is scientifically irrelevant. Even if we leave aside the validity of the scientific question here, we open a Pandora's box. It could be the case indeed that necessary symbols are nowhere to be found.

### 2.2.1. Symbols

Cultural relativism has already been mentioned: some symbols that were the backbones of longstanding civilizations have become meaningless for everyone but a few specialists (think, e.g., of Isis for Egyptians in predynastic times, or of Mjölhnir—the hammer of Thor—in the *Edda*, c. XIIIth century). As far as we know, symbols are always intrinsically—if not explicitly—dual: where Isis is invoked, Osiris is never far; the tree of life brings together heaven and earth; the Taijitu is, and is not, dual, etc. Polarity is structuring the natural and the cultural worlds: male/female, day/night, sun/moon, up/down, left/right. Remember that, historically, a symbol was a broken token; later on, the dialectic between presentation and representation remained.

A specification has nevertheless to be introduced: although symbols are, by definition, bipolar, the natural world is not universally so: some species do not rely upon sexual differences for reproduction, cosmological peculiarities could be otherwise (solar systems with two stars and planets with no moon, do exist in our galaxy); in dreams or in altered states of consciousness, the very idea of opposites can be challenged.<sup>8</sup> Likewise, transhumanists seem to hope to be delivered from all the contingencies linked with embodiment. Even the One could be interpreted as Two (Manicheans) or, indeed, as Three (Christians) while Jung argued for Four...<sup>9</sup>

Fundamental physical constants (e, G, h, c, ...)<sup>10</sup> could be understood as embodying such necessary symbols, but three cautious restrictions are in order: first,

<sup>8</sup> The *Advaita Vedanta* proposes a complex set of arguments to show that the most important awareness takes actually place in the NREM state. Cf. Arvind Sharma, *The Experiential Dimension of Advaita Vedanta*, Delhi, Motilal Banarsidass Publishers, 1993.

<sup>9</sup> Jung, C. G., *Psychology and Alchemy* [1944], Princeton University Press, Collected Works, Vol. 12, 1980.

<sup>10</sup> I.e., the elementary charge e, the gravitational constant G, Planck's constant h, the speed of light in vacuum c, the electric constant  $\epsilon_0$ .

one cannot but speculate about the necessity for all these constants to keep their current value in all possible universes or to have a value at all (could, for instance, a universe operate without “c”?); two, these constants could have different values in our universe (why is the value of “c” 299292 km/s?); three, in the long terms, these constants are probably fluctuating even in our own universe (starting with “c”<sup>11</sup>). Additionally, the symbols themselves are contingent: nothing but a convention really prevents “G” to be named “N,” for instance, to celebrate Newton himself, and so forth and so on.

This blend of relativism is called since the seventies the (Cosmological) Anthropic Principle and its historical development is well studied.<sup>12</sup> In 1973, Brandon Carter proposed two distinct definitions: the Weak Anthropic Principle, according to which “we must be prepared to take account of the fact that our location in the universe is necessarily privileged to the extent of being compatible with our existence as observers,” and the Strong Anthropic Principle, claiming that “the Universe (and hence the fundamental parameters on which it depends) must be such as to admit the creation of observers within it at some stage. To paraphrase Descartes, *cogito ergo mundus talis est.*”<sup>13</sup> In sum: the observed values of all constants are not equally probable but they take on values “restricted by the requirement that there exist sites where carbon-based life can evolve and by the requirement that the universe be old enough for it to have already done so.”<sup>14</sup> The former specifies a coherence clause; the latter introduces teleology.

In light of all this, it is not difficult to guess Whitehead’s move: perhaps that arithmetics could provide the necessary symbolism. Actually not. On the one hand, in some cosmic epochs, arithmetics could be nothing but a useless hobby;<sup>15</sup> on the other,

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<sup>11</sup> Marcel Urban, François Couchot, Xavier Sarazin, Arache Djannati-Atai, “The quantum vacuum as the origin of the speed of light”, *The European Physical Journal D*, 2013; 67 (3) DOI: 10.1140/epjd/e2013-30578-7

<sup>12</sup> Barrow, John D. and Tipler, Frank J., *The Cosmological Anthropic Principle*, Oxford, Oxford University Press, 1986 (Issued with correction as an Oxford University Press Paperback in 1988).

<sup>13</sup> Carter, B., “Large Number Coincidences and the Anthropic Principle in Cosmology,” in *Confrontation of Cosmological Theories with Observational Data. Symposium IAU n° 63*, ed. by M. S. Longair, Dordrecht - Boston, Reidel, 1974, pp. 291-298.

<sup>14</sup> Barrow, John D. and Tipler, Frank J., *The Cosmological Anthropic Principle*, p. 16.

<sup>15</sup> “There is no difficulty in imagining a world—i.e., a cosmic epoch—in which arithmetic would be an interesting fanciful topic for dreamers, but useless for practical people engrossed in the business of life.” (PR 199)

history shows—including the fatum of his own *Principia Mathematica* (1910–1913)<sup>16</sup>—that theoretical blunders are frequent in this field as well.<sup>17</sup> What are numbers anyway?

Since mistakes are theoretically easy to fix (provided that they occur in a scientific body spared of any ideology, and this is a very theoretical hypothesis indeed), the first (epochal-cosmological) claim is perhaps more problematic. Even if you bracket the question of the nature of numbers and define arithmetics as the science of special forms of process, basic operations such as addition should not be understood as purely necessary operations.<sup>18</sup> Whitehead insists that it is always a matter of context to interpret a process and, eventually, we have to rely upon common sense. Processes themselves are furthermore always a matter of changing environment.

### 2.2.2. *Laws*

We could thus suspend our judgment regarding the question of the nature of numbers, focus on their pragmatics, and ask: what are the functions that operates validly upon numbers? If we find no necessity in symbols themselves, perhaps that some symbolic laws are endowed with such necessity?

Let us take the simplest case: the sentence “One and one make two.”<sup>19</sup> This holds in most everyday cases, such as “one apple plus one apple equals two apples” but

<sup>16</sup> Grattan-Guinness, Ivor, *The Search for Mathematical Roots, 1870–1940. Logics, Set Theories and the Foundations of Mathematics from Cantor through Russell to Gödel*, Princeton, New Jersey, Princeton University Press, 2000.

<sup>17</sup> “We make mistakes in arithmetic. We can misconceive the very meaning of number and of the interconnections of number. The great mathematicians of the seventeenth and eighteenth centuries misconceived the subject matter of their studies.” (MT 68)

<sup>18</sup> “Consider arithmetic as being concerned with special forms of process. We shall here be contradicting the fashionable notion of “tautology.” Conceive the fusion of two groups, each characterized by triplicity, into a single group. The whole essence of the notion of “twice-three” is process, and “twice-three” expresses its special form of process. This form derives its peculiar character from two sources. One source is the triplicity of each of the two groups in process of fusion. his triplicity arises from some principle of individuation dominating the process of aggregation of each group. As a result of this principle, each group exemplifies three-ness. There is then a process of fusion of both groups into one. We are considering the characterization of this resultant group in terms of number. It is not true that this process of fusion necessarily issues in a group of six, in which the me principle of identifying individual things is preserved.” (MT 90-91)

<sup>19</sup> “Let us take the simplest case; for example, the sentence, “One and one make two.” Obviously this sentence omits a necessary limitation. For one thing and itself make one thing. So we ought to say, “One thing and another thing make two things.” This must mean that the togetherness of one thing with another thing issues in a group of two things. At this stage all sorts of difficulties arise. There must be the proper sort of things in the proper sort of togetherness. The togetherness of a spark and gunpowder produces an explosion, which is very unlike two things. Thus we should say, “The proper sort of togetherness of one thing and another thing produces the sort of group which we call two things.” Common sense at once tells you what is meant. But unfortunately there is no adequate analysis of common sense, because it involves our relation to the infinity of the Universe. Also there is another



notice that if the apples in question have to be somehow different (see Leibniz on indiscernibility), as soon as they are too different (say a “wild *malus sieversii*” and a “cultivar D’Arcy Spice”), performing the operation can require some level of generalization that is perhaps not pragmatically expedient anymore (e.g., for cooking or commercial purposes). In some cases, one plus one equals zero: “the togetherness of a spark and gunpowder produces an explosion, which is very unlike two things” (ESP 95). In other cases, one plus one equals one: Whitehead mentions the drops of water; candle flames also qualify and the so-called annihilation of matter (that refers to transformation of one particle and one antiparticle into one photon) would do as well. Last but not the least, the togetherness of a male and a female is likely to produce offsprings, leading to a new law: “One and one make three.” And in political matters, sometimes “two plus two equals five.”

If arithmetics cannot provide necessary symbolic functions, what about algebra and, above all, logic? *Principia Mathematica*’s bold program of deducing mathematics from a set of logical axioms failed. Thanks to Gödel’s Incompleteness Theorem, it is now accepted that logicism—the understanding of arithmetics (and much more mathematics) as an extension of deductive logic—is mistaken.

Could we claim that the very act of thinking necessarily relies upon a basic set of operators, such as the following ones?:<sup>20</sup> the logical symbols “ $\supset$ ” (implies), “ $\wedge$ ” (and), “ $\vee$ ” (or), “ $\neg$ ” (not), “ $\forall$ ” (for all), “ $\exists$ ” (there exists); the predicate symbol “ $=$ ” (equals); and the function symbols “ $+$ ” (arithmetic addition), “ $\cdot$ ” (arithmetic multiplication). And, if need be, spice the argument with some genetic (Piagetian) claims? The same skepticism applies: rationality, as embodied in common sense does indeed involve these operators, but it is unclear that microphysics sticks to them while some states of consciousness (oniric, mystical, meditative, romantic and so forth) clearly avoid them.<sup>21</sup>

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difficulty. When anything is placed in another situation, it changes. Every hostess takes account of this truth when she invites suitable guests to a party; and every cook presupposes it as she proceeds to cook the dinner. Of course, the statement, “One and one make two” assumes that the changes in the shift of circumstance are unimportant. But it is impossible for us to analyse this notion of “unimportant change.” We have to rely upon common sense. In fact, there is not a sentence, or a word, with a meaning which is independent of the circumstances under which it is uttered. The essence of unscholarly thought consists in a neglect of this truth.” (ESP 95-96)

<sup>20</sup> Kleene, Stephen Cole, *Introduction to Meta-Mathematics*, Amsterdam, North-Holland Publishing Company, 1952.

<sup>21</sup> See the work of Graham Priest, who promotes a transconsistent logic where some contradictions are true (he speaks then of “dialetheias”); the quantum logic, framed by Garrett Birkhoff and John von Neumann to cope with the advances in microphysics (it revokes the excluded middle) or psychoanalytical speculations of Ignacio Matte Blanco (*The Unconscious as Infinite Sets. An Essay in Bi-Logic*, London, Duckworth, 1975).

In conclusion, Whitehead's relativism anticipates, and is akin to, the Anthropic Principle. In Whitehead's own words: "Not even the simplest notion of arithmetic escapes this inescapable condition for existence. Every scrap of our knowledge derives its meaning from the fact that we are factors in the universe, and are dependent on the universe for every detail of our experience." (ESP 101-102; cf. 211) Obviously the quest of necessary symbols does not stop here.

### 2.3. A SYMBOLIC ONTOLOGY

Actual processes are never twice the same because they depend on their environment and because this environment is always changing. However, reason craves for necessity; and it seems that only metaphysics can provide such necessity. In the Preface to the second edition of the *Principles of Natural Knowledge* (dated August, 1924), Whitehead was already stating that he hopes "in the immediate future" to embody the standpoint of his epistemological inquiries "in a more complete metaphysical study." *Symbolism* (1927) evidently continues the work adumbrated in *Science and the Modern World* (1925) and *Religion in the Making* (1926). If symbols are given an ontological role, they become, without discussion, necessary.<sup>22</sup>

The first formal definition of symbolism that Whitehead provides strictly correlates symbolism and consciousness: "The human mind is functioning symbolically when some components of its experience elicit consciousness, beliefs, emotions, and usages, respecting other components of its experience." (S 7-8) Symbolic reference is the "organic functioning whereby there is transition from the symbol to the meaning." (S 8)

A sharp definition of consciousness would have been handy,<sup>23</sup> but when Whitehead does not provide a definition, he simply assumes a common-sensical one, which means that consciousness involves memory, anticipation, representation and imagination. It remains to be seen that conscious experience is for him neither the only form of experience nor its most important feature.

*Symbolism* makes two claims that amounts to the "inversion of symbol and meaning" (S 10): on the one hand, symbols spring from experience and allow its meaningful interpretation; on the other hand, process thought requires that "we assign to the percipient an activity in the production of its own experience" (S 9). Experience

<sup>22</sup> Of course one could fiddle with the question of *Process and Reality* exact scope: an essay in speculative philosophy, in cosmology, in metaphysics? Where does exactly ontology stands in this nested set of foci?

<sup>23</sup> See my own attempt in Weber, Michel and Weekes, Anderson (eds.), *Process Approaches to Consciousness in Psychology, Neuroscience, and Philosophy of Mind*, Albany, New York, State University of New York Press, 2009.

is real, i.e., experience is introjected<sup>24</sup>—but experience is also constructed, i.e., projected. The goal is to save “appearance” and “being,” opinion and science.

The world should be seen as an interplay of functional activities (S 29, cf. 26). Actually, our experience has three main modes, “each contributing its share of components to our individual rise into one concrete moment of human experience” (S 17). Two of these modes are perceptive—we do have a direct experience of an external world (S 28)—, and the third one names the interplay between the former. These modes do not however repeat each other (S 30). In respect to “pure (sense-)perception”<sup>25</sup> or “direct recognition,”<sup>26</sup> the philosopher distinguishes “causal efficacy” and “presentational immediacy,” both constituting an objectification of the mundane tissue.

On the one hand, in “perception in the mode of causal efficacy,” we “conform to our bodily organs and to the vague world which lies beyond them” (S 43). In other words, we undergo the pressure of an external world which is both determined and *past* (S 44, 50, 55 and *PR* 178). That heavy and primitive experience (S 44) brings to the fore the meaning of our embodiment (the “withness of the body,” as he will later call it), which is to root us deeply in the World.

On the other hand, “perception in the mode of presentational immediacy” corresponds to what is usually termed “sense-perception.” It delivers a clear and distinct image of the *contemporary* world in its spatial relatedness. An instantaneous cut-out presentifies (i.e. renders present) reality as an extensive pattern: determined items localized in a spatio-temporal continuum. This projection, in our present, is achieved with the (past) data delivered by causal efficacy. Its paradigm is sight and the coldness of its objectification: to locate is the act of sight itself. The intrinsic natural processuality is here obliterated; the World becomes stiff and lifeless, a mosaic of qualities spread out in front of an acosmic subject.<sup>27</sup> “The knowledge provided by pure presentational immediacy is vivid, precise, and barren.” (S 23)

None of the two pure modes can be judged true or false, only their confrontation could: Aristotle saw it already, truth and falsehood are not “in” things, but in the synthesis made by the mind. In order to explain perceptual errors and other, more

<sup>24</sup> The concept is used here independently of course of its psychoanalytical meaning that goes back to Sandor Ferenczi’s “Introjektion und Übertragung,” *Jahrbuch für psychoanalytische und psychopathologische Forschungen*, I. Band, 1909.

<sup>25</sup> See, e.g., S 5, 40 and cf. also 17, 20, 53-56 and *PR* 168. Cf. my “Alfred North Whitehead’s onto-epistemology of perception,” *New Ideas in Psychology*, 24, 2006, pp. 117-132.

<sup>26</sup> S 7 and passim; *PR* 65, etc.

<sup>27</sup> “Une mosaïque de qualités étalée devant un sujet acosmique” (Maurice Merleau-Ponty, *Phénoménologie de la perception*, Paris, NRF Éditions Gallimard, 1945, p. 359). Cf. Hans Jonas, *Philosophical Essays. From Ancient Creed to Technological Man*, Chicago, University of Chicago Press, 1974.

positive, degrees of freedom humans can enjoy with facts, Whitehead introduces “symbolic reference,” which is the conscious synthetic activity whereby the two pure modes are “fused into one perception” (S 18). To mistake a square tower for a round one is to misinterpret what is actually given to us: although what is seen is undoubtedly a roundish object, the tower is indeed square and this fact cannot but be conveyed by causal efficacy. “Direct experience is infallible. What you have experienced, you have experienced” (S 6). The mistake lies in the *conscious judgment* claiming that this tower *is* round. His answer to Hume (and Descartes) is thus the following. Although it is with good reason that the Scot criticizes perception in the mode of presentational immediacy, his reduction of all possible perception to sensory perception (restricted to the five senses) is mistaken. In sum: conscious perception is understood as “the symbolic interplay between two distinct modes of direct perception of the external world.”<sup>28</sup>

In conclusion, we have here a particular form of dialectic: it seems that in order to understand the world, we need to use polar concepts but when these distinctions are introduced they themselves call upon their obliteration in a *tertium quid* that, in turn, is supposedly closer to reality in the making than our first (preconceptual or at least conceptually unsophisticated) grasp was. The fact that “philosophical reason” seems to work only with paired distinctions could be called its “quantic functioning.” Out of the conceptual nothingness of the raw experience only two *specular* concepts can be generated. And indeed, looking at the way Greek concepts are functioning suggests that dual transcendent movement. They all point out a twofold vanishing point, both beyond the operational sphere of reason. In other words, we have two kinds of inexpressibility. On the one hand, an “infradicible” (chthonico-lunar<sup>29</sup>) dimension: the unfathomable, bare presence, embodied in Plato's *chora* or Aristotle's *ulè*. On the other hand, a “supradicable” (cosmico-ouranian) dimension: the intelligible, the marvellous

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<sup>28</sup> “There are, in this way, two sources of information about the external world, closely connected but distinct. These modes do not repeat each other; and there is a real diversity of information. Where one is vague, the other is precise: where one is important, the other is trivial. But the two schemes of presentation have structural elements in common, which identify them as schemes of presentation of the same world. There are gaps, however, in the determination of the correspondence between the two morphologies. The schemes only partially intersect, and their true fusion is left indeterminate. The symbolic reference leads to a transference of emotion, purpose, and belief, which cannot be justified by an intellectual comparison of the direct information derived from the two schemes and their elements of intersection” (S 30-31; see *PR* 122-123).

<sup>29</sup> On the old universal bipartition of the chthonico-lunar and the cosmico-ouranian, see Eliade's “The “God who Binds” and the Symbolism of Knots”, in *Images and Symbols. Studies in Religious Symbolism*, English translation by Mairet, New York-London, Harper and Row-Harvill Press, 1960, pp. 92-124. On the conceptual binomials, see the other pairs of the *Metaphysics* A5, 986a21

transcendence,<sup>30</sup> marrow of Plato's *Ideas*—and, at least to some extent, of Aristotle's *morphe*. Whitehead himself can be read from that point of view, for example with his use of the pairs of opposites actual entity/eternal object, mental pole/physical pole, or the couple World/God.<sup>31</sup>

In the process field, Charles Hartshorne is also famous for his bipolar systematic claims. Inspired by Cohen's "Law of Polarity"<sup>32</sup> and Schelling's pairs of contrasting terms, Hartshorne speaks of "categorially universal contrasts" or "ultimate or metaphysical contrarities."<sup>33</sup> A fallacy of the type of the "perfect dictionary"<sup>34</sup> is however to be feared in his late use of Cohen—something already problematic in the context of "classical ontology," but even more burdensome in the "process" area.

By way of concluding, let us keep in mind that *Symbolism* is noteworthy for its introduction of Whitehead's mature—ontological—analysis of sense-perception.<sup>35</sup> The fallibility (and contingency) of symbols, as well as (Bergsonian) irresolution in action, are interpreted in terms of symbolic reference.<sup>36</sup>

### 3. Uses of Symbolism

In his third and last chapter, Whitehead claims that although (scientific) intelligence prefers facts to old-fashioned symbols, symbolism remains culturally prevalent because it is inherent in the very texture of human life (notice that he does not write "human mind").<sup>37</sup> Hence, he distinguishes three modalities of action: pure instinctive, reflex

<sup>30</sup> See *Symposium* 210a-212c and *Republic* VII on the Idea of Good. *Philebus* 28 speaks of a "marvellous intelligence."

<sup>31</sup> MT 75 claims: "I suggest to you as fundamental characterizations of our experience, three principles of division expressed by the three pairs of opposites—Clarity and Vagueness, Order and Disorder, The Good and the Bad. Our endeavor to understand creation should start from these modes of experience."

<sup>32</sup> Morris Raphael Cohen, *Reason and Nature. An Essay on the Meaning of Scientific Method*, New York, Harcourt, Brace and Compagny, Inc., 1931.

<sup>33</sup> Charles Hartshorne, *Creative Synthesis and Philosophic Method*, London, SMC Press, Ltd, 1970, esp. chap. VI.

<sup>34</sup> In Whitehead's words, "it is widely held that a stable, well-known philosophic vocabulary has been elaborated, and that in philosophic discussion any straying beyond its limits introduces neologisms, unnecessary, and therefore to be regretted" (AI 228-229).

<sup>35</sup> The conclusions of *S* are synthetized in *PR*, mainly on pp. 117-125 and 168-183. Although *PR* contains the key to Whitehead's conceptual revolution, its study will probably be fruitful only if it comes after the contemplation of less technically dense material. Besides *S*, *FR*, *AE* and *MT*, Price's *Dialogues* are highly recommended (and it is a very interesting question, indeed, to determine why exactly some scholars have ridiculed that work).

<sup>36</sup> "Irresolution in action arises from consciousness of a somewhat distant relevant future, combined with inability to evaluate its precise type." (S 42)

<sup>37</sup> "The attitude of mankind towards symbolism exhibits an unstable mixture of attraction and repulsion. The practical intelligence, the theoretical desire to pierce to ultimate fact, and ironic critical impulses have

and symbolically conditioned action. “Pure instinctive action is that functioning of an organism which is wholly analysable in terms of [...] pure causal efficacy.” (S 78) Without any reference to presentational immediacy, that force of instinct suppresses individuality (S 66). “Reflex action” is an action conditioned by presentational immediacy (S 79). “Symbolically conditioned action arises in the higher organisms which enjoy [...] the analysis of the perceptive mode of causal efficacy effected by symbolic transference from the perceptive mode of presentational immediacy.” (S 79-80)

A short discussion is needed in order to clarify Whitehead’s lexicon: according to anthropology, ethology and physiology, reflex action—not instinct—is the most primitive action while instinct involves more complex brain circuitry. This very important debate was initiated by Marshall Hall (1790–1857) with his famous paper “On the Reflex Function of the Medulla Oblongata and the Medulla Spinalis” (1832). The reflex arc was actually known for two centuries, thanks to the observations of Francesco Redi (1626–1697), but Hall and Johannes Peter Müller (1801–1858) were the first to propose a theoretical background allowing, for instance, the mechanical interpretation of Mesmerian hypnotherapy.<sup>38</sup> Now, if at least some movements are explained by the autonomous responses of one sensory neuron and one motor neuron located in the spinal cord, the law governing the building blocks of mentality become deterministic and rationally transparent (as Pavlov will later argue). John Hughlings Jackson (1835–1911) furthered this move by implementing the evolutionist agenda.<sup>39</sup> In the background, psychophysics was rising with the works of Herbart (1824), Weber (1829), Helmholtz (1859), Fechner (1860), Wundt (1878), then of Lotze (1884), Ward (1886), Münsterberg (1889) and Myers (in the years 1889–1895). The concept of conscious threshold (“Bewußtseinsschwelle”), introduced by Herbart and systematized by Myers and James (who speak of “threshold” and “limen”), relies upon Myers’s the “transmarginal field of consciousness” and the “subliminal door.”<sup>40</sup>

In sum, the only explanation for Whitehead’s inversion of instinct and reflex seems the fact that since, by definition, the reflex arc requires a central nervous system to be implemented, a broadened concept of instinct is required in a full process worldview.

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contributed the chief motives towards the repulsion from symbolism. Hard-headed men want facts and not symbols. [...] However you may endeavour to expel it, it ever returns. Symbolism is no mere idle fancy or corrupt degeneration: it is inherent in the very texture of human life.” (S 60-62)

<sup>38</sup> Charles Richet, *Leçons sur la physiologie générale des muscles, des nerfs et des centres nerveux*, Paris, Germer Baillière, 1882 ; Georges Canguilhem, *La Formation du concept de réflexe aux XVIIe et XVIIIe siècles*, Paris, Presses Universitaires de France, 1955. Marcel Gauchet, *L’inconscient cérébral*, Paris, Éditions du Seuil, 1992.

<sup>39</sup> John Hughlings Jackson, *Evolution and Dissolution of the Nervous System* [1881–1887], Bristol, Thoemmes Continuum, 1998.

<sup>40</sup> Cf. the *Varieties of Religious Experience*, pp. 511 and 243.

However, we have to conclude from our general argument that Whitehead understands the import of symbolism through a modern lens. Whitehead, who is expected to processualize all cognitive fields, is *de facto* not concerned with Renaissance categories here—the ones that framed the first or “Radical Enlightenment”—, but with the counter-Renaissance ones, as reverberated in the second or “Moderate Enlightenment.”<sup>41</sup> This can be seen through the absence in his works of three main themes: pantheism, republicanism and freemasonry. Before delineating this, we need to remember some important historical facts and especially to define “modernity.”

### 3.1. THE TWO RENAISSANCES

The Renaissance’s heart is the spatial opening of the “enclosures” (including Columbus’ “discovery” of 1492) that was crowned with the works of Cues (*De Docta ignorantia*, 1440), Ficinus (*Theologia Platonica de immortalitate animae*, 1482), Copernicus (*De Revolutionibus orbium caelestium*, 1543), Bruno (*La Cena de le ceneri*, 1584) and Andreae (*Christianopolis*, 1619). The Greek given *kosmos*, that offered its premises to the Christian created *mundus*, was becoming a pluriverse and its finite hierarchy, infinite. By the same token, social reform was in the air. More’s utopia (*De optimo reipublicae statu, deque nova insula Utopia*, 1516) foreshadowed that movement.

The second Renaissance of Galileo (Sidereus Nuncius, 1610), Bacon (Novum Organum, 1620), Mersenne (Quaestiones celeberrimae in Genesim, 1623), Gassendi (Exercitationes paradoxicae contra Aristoteleos, 1624), Descartes (Regulae ad directionem Ingenii, 1628), Boyle (The Sceptical Chymist, 1661) and (e.g.) Malebranche (De la recherche de la vérité, 1674) was, volens nolens, designed to crush the theological, social and political reformism of the first Renaissance and to provide a new—scientific—foundation to Christian supernaturalism.<sup>42</sup> Philosophers ought not to forget that the counter-Renaissance replaced free individuals by complex machines

<sup>41</sup> See Jacob, Margaret C., *The Radical Enlightenment: Pantheists, Freemasons and Republicans*, London and Boston, George Allen & Unwin, 1981. Jacob, Margaret C., *Living the Enlightenment: Freemasonry and Politics in Eighteenth-Century Europe*, New York / Oxford, Oxford University Press, 1991. Israel, Jonathan I., *The Radical Enlightenment: Philosophy and the Making of Modernity 1650–1750*, Oxford, Oxford University Press, 2002. Toulmin, Stephen Edelston, *Cosmopolis. The Hidden Agenda of Modernity*, Chicago, Chicago University Press, 1990. Arran Gare, “Reviving the Radical Enlightenment: Process Philosophy and the Struggle for Democracy,” Franz Riffert and Hans-Joachim Sander (eds.), *Researching with Whitehead: system and adventure: essays in honor of John B. Cobb*, Freiburg/München, Verlag Karl Alber, 2008, pp. 25-57. Arran Gare, “The Liberal Arts, the Radical Enlightenment and the War Against Democracy,” Luciano Boschiero (edited by), *On the Purpose of a University Education*, Melbourne, Australian Scholarly Publishing, 2012, pp. 67 sq. Loup Verlet, *La Malle de Newton*, Paris, Gallimard, 1993. Cf. my review of the latter in *Cosmos and History: The Journal of Natural and Social Philosophy*, vol. 9, no. 2, 2013, pp. 223-230.

<sup>42</sup> Cf., e.g., Hadot’s *What Is Ancient Philosophy?* [1995]. Translated by Michael Chase, Harvard University Press, 2002.

driven by appetites, swapped Republic for Monarchy, degraded art to the level of amusement, and superseded pantheism (and the assumption of a self-organizing nature) by transcendentalism (together with creationism). Communitarianism and its communist agenda became impossibilities while private property, free market and greed were built-in feature of the nascent economics.

My point here is twofold: one, it is important to discriminate the first Renaissance, that was close enough to worship nature, and the second Renaissance, that condemned the spirituality of immanence and re-established the hierarchical power in society and Church by linking it to a god understood as a Babylonian despot. Two, the turning point between the two schools is neither scientific nor philosophical but political: the new ideas had to be stopped when they started to lead more and more to communist utopias.

### 3.2. THE SURVIVAL OF THE HIGH RENAISSANCE'S VALUES

The first (or "High") Renaissance did not, however, entirely vanish off the scene. Its ideals were kept alive by Pantheists, Freemasons and Republicans in a parallel movement that Margaret C. Jacob (1981) calls the Radical Enlightenment and that champions *Bildung* (meaning "education," "self-cultivation," "character-formation" and "culture"). At the turning-point of the two eras we find Isaac Newton (1642–1727) and John Toland (1670–1722).

#### 3.2.1. *Is. Newton*

Newton (*Philosophiae naturalis principia mathematica*, 1687) is a key-figure in the symbolic field as well: according to Keynes, who explored the unpublished works of Newton in the years 1942–1946, the most influential scientist was (also) an avid alchemist, "the last of the magicians."<sup>43</sup> Newton's alchemical research made him prone to embrace

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<sup>43</sup> "Newton was not the first of the age of reason. He was the last of the magicians, the last of the Babylonians and Sumerians, the last great mind which looked out on the visible and intellectual world with the same eyes as those who began to build our intellectual inheritance rather less than 10,000 years ago. [...] Why do I call him a magician? Because he looked on the whole universe and all that is in it as a riddle, as a secret which could be read by applying pure thought to certain evidence, certain mystic clues which God had laid about the world to allow a sort of philosopher's treasure hunt to the esoteric brotherhood. He believed that these clues were to be found partly in the evidence of the heavens and in the constitution of elements (and that is what gives the false suggestion of his being an experimental natural philosopher), but also partly in certain papers and traditions handed down by the brethren in an unbroken chain back to the original cryptic revelation in Babylonia. He regarded the universe as a cryptogram set by the Almighty—just as he himself wrapt the discovery of the calculus in a cryptogram when he communicated with Leibniz. By pure thought, by concentration of mind, the riddle, he believed, would be revealed to the initiate." (Keynes, John Maynard, "Newton, the man," in *The Royal Society*



pantheism and likely to belong to a fraternal organization or “secret society.” Two points are of importance here.

First, Newton’s lasting *metaphysics* was hermeticism and his immediate spiritual father Paracelsus (*De Generationibus Rerum Naturalium*, 1537). Hermetic philosophy is, to a significant extent, an animism and a pantheism. In the words of Hermes, as translated by Newton: “That which is below is like that which is above & that which is above is like that which is below to do the miracles of one only thing.”<sup>44</sup> This being specified, Newton’s later *physics* is more compatible with a pantheism, god being sort of the soul of the world, unfolding in the *sensorium divinis*.

Second, although little is known of Newton’s involvement in “secret societies,” he has been obviously in contact with the Rosicrucian movement and Freemasonry. Newton, who was a good friend of Désaguliers, the well-known founding father of modern Freemasonry, studied and wrote extensively upon the Temple of Solomon,<sup>45</sup> the rational interpretation of the Scriptures, alchemy and the other esoteric questions.

To oversimplify the history of these societies—each housing different traditions or “Obediences” and each having some deeper historical roots (with most of them actually claiming to go back to the Egyptian golden dawn)—one could say that the historical legacy framing Newton’s epoch runs like this: Alchemy / Hermeticism / Rosicrucianism / Freemasonry / Druidism.

Nothing much is known of a fraternity of alchemists such as the Illuminati. In the West, Hermeticism endured mainly through Rosicrucianism. Rosicrucians are, so to speak, better known. Johann Valentin Andreae (1586–1654) is supposedly the author of the anonymous Manifestos first published in Germany—the *Fama Fratemitatis RC*

Newton Tercentenary Celebrations, 15-19 July 1946, Cambridge, At the University Press, 1947, pp. 27-34; reprinted in John Maynard Keynes, “Newton, the Man” in James R. Newman, *The World Of Mathematics. A small library of the literature of mathematics from A'h-mosé the Scribe to Albert Einstein*, New York, Simon and Schuster, 1956, pp. 277-285, here pp. 277-279. See Dobbs, Betty Jo Teeter, *The Foundations of Newton's Alchemy*, Cambridge, Cambridge University Press, 1975.

Cf. “I mean the inexpugnable belief that every detailed occurrence can be correlated with its antecedents in a perfectly definite manner, exemplifying general principles. Without this belief the incredible labours of scientists would be without hope. It is this instinctive conviction, vividly poised before the imagination, which is the motive power of research:—that there is a secret, a secret which can be unveiled.” (SMW 12)

<sup>44</sup> Newton’s translation of Hermes Trismegistus’s *Emerald Tablet*, often quoted as “As above, so below.” See his alchemical papers, currently housed in King’s College Library, Cambridge University. An additional argument would be needed in order to hierarchize hylozoism (matter alive), animism (spirited matter), panpsychism (mindful matter), and panexperientialism (it is a matter of degree).

<sup>45</sup> Keynes, John Maynard, “Newton, the man”, in *The Royal Society Newton Tercentenary Celebrations, 15-19 July 1946*, Cambridge, At the University Press, 1947, pp. 27-34; reprinted in James R. Newman, *The World Of Mathematics. A small library of the literature of mathematics from A'h-mosé the Scribe to Albert Einstein*, New York, Simon and Schuster, 1956, pp. 277-285, p. 281. See § 4.2.2.

(1614)<sup>46</sup> and the *Confessio Fraternitatis* (1615)<sup>47</sup>—and of the *Chymical Wedding* (1616)<sup>48</sup>. Newton was a likely member of the Brotherhood, together with famous scientists of the time: Bacon (*Natural History*, 1620–1626), Fludd (*Utriusque Cosmi Majoris scilicet et Minoris Metaphysica...*, 1619), Descartes (*Regule ad directionem Ingenii*, 1628), Pascal (*Les Provinciales*, 1657), Spinoza (*Tractatus theologico-politicus*, 1677), Leibniz (*Discours de métaphysique*, 1686). At least publicly, Rosicrucians did not share one single metaphysics, that spread from (pagan) pantheism to (Christian) theism, one could say from orthopraxy to orthodoxy.

But there was more than a Brotherhood: the Rose Cross Fraternity seems to have been built around an “Invisible College.”<sup>49</sup> More or less lyrical (and esoterical) descriptions thereof can be found in Andreae (*Christianopolis*, 1619), Bacon (*Nova Atlantis*, 1624),<sup>50</sup> Comenius (*Labyrint světa a ráj srdce*: the “Labyrinth of the World and Paradise of the Heart,” written in 1623 and published in 1631) and Robert Boyle (*Letters*, 1646).<sup>51</sup> In 1641, Comenius claims indeed: “There should be a College, or a sacred society, devoted to the common welfare of mankind, and held together by some laws and rules. A great need for the spread of light is that there should be a universal language which all can understand. The learned men of the new order will devote themselves to this problem. So will the light of the Gospel, as well as the light of learning, be spread throughout the world.”<sup>52</sup>

<sup>46</sup> *Fama fraternitatis Roseae Crucis oder Die Bruderschaft des Ordens der Rosenkreuzer: The Fame of the Brotherhood of RC*, 1614.

<sup>47</sup> *Confessio oder Bekenntnis der Societät und Bruderschaft Rosenkreuz: The Confession of the Brotherhood of RC*, 1615.

<sup>48</sup> *The Chymical Wedding of Christian Rosenkreutz (Chymische Hochzeit Christiani Rosencreutz anno 1459)*, 1616. On all this, see Yates, Frances Amelia, *The Rosicrucian Enlightenment*, London - Boston, Routledge and Kegan Paul, 1972.

<sup>49</sup> The frontispiece of Yates (*The Rosicrucian Enlightenment*) features “The Invisible College of the Rose Cross Fraternity, 1618.”

<sup>50</sup> Bacon is obviously inspired by More’s *Utopia* (1516). “Thus, though the name Rose Cross is nowhere mentioned by Bacon in the *New Atlantis*, it is abundantly clear that he knew the Rose Cross fiction and was adapting it to his own parable. *New Atlantis* was governed by R.C. Brothers, invisibly travelling as ‘merchants of light’ in the outside world from their invisible college or centre, now called Salomon’s House, and following the rules of the R.C. Fraternity, to heal the sick free of charge, to wear no special dress.” (Yates, *The Rosicrucian Enlightenment*, 166)

<sup>51</sup> Boyle mentions in letters of 1646 and 1647 such an “Invisible College.” (Yates, *The Rosicrucian Enlightenment*, p. 235)

<sup>52</sup> Comenius, *The Way of Light*, written 1641, published in Amsterdam in 1668, quoted in Yates, *The Rosicrucian Enlightenment*, p. 231.

### 3.2.2. *J. Toland*

Toland was present at the creation of the Grand Lodge of England in 1717, which consisted of the federation of existing lodges.<sup>53</sup> For the sake of symbols, one can claim that the Rosicrucian Fraternity was created in 1616 and Freemasonry in 1717. In the meantime, the “The Royal Society of London for Improving Natural Knowledge” was founded in 1660. The argument is thus the following: with the creation of the Royal Society, culture and symbolism were segregated from science and society. On the one hand, philosophers *lato sensu* who were eager to improve natural knowledge, to grow spiritually and to transform society, gathered in Freemasonic (esoterical) brotherhoods while scientists *stricto sensu* converged in the Royal (exoterical) Society to promote “Physico-Mathematical Experimental Learning” and social (essentially material) progress. Before 1660, the two streams were joined in an “Invisible College” of sorts, as Newton’s—or Johann Wolfgang von Goethe’s (1749–1832)—research, life and publications amply testify.

Until the XVIIth century there has thus been a considerable overlap of scholars and topics between these visible and invisible colleges. Toland was absent from the scientific scene but instrumental in the creation of two culturally important societies: Freemasonry and (neo-)Druidism. The roles of Jean Désaguliers (1683–1744) and James Anderson (c. 1679–1739) to organize and unify Freemasonry in 1717 with the founding of the Grand Lodge in London is well known. But scholars are often unaware of Toland’s role and especially of his influence on neo-Druidism. Besides this practical legacy, the enduring importance of Toland is to be found in a theoretical venture : pantheist philosophy. As a matter of fact, Toland progressively introduces the concept of pantheism at the turn of the century.

In *Christianity Not Mysterious* (1696), he makes the case with Spinoza and Locke for a rational reading of the Scriptures: one should not worship a mysterious god but intelligible nature.

In the *Letters to Serena* (1704), written in the wake of his meditation of Fontenelle (*Entretiens sur la pluralité des mondes*, 1686) and Bruno (*Spaccio della bestia trionfante*, 1584), Toland is not yet a pantheist—god is immaterial and separated from the universe god pilots—but all the premises are there: the rationalization of natural philosophy (esp. in the fifth Letter), hylozoism and transmigration.<sup>54</sup>

<sup>53</sup> “Among the very few early known facts is the date at which Elias Ashmole was admitted to a masonic lodge. Ashmole records in his diary that he was admitted to a masonic lodge at Warrington in Lancashire on 16 October 1646. The lodge was already in existence; it was not founded by Ashmole. He gives the names of some other persons who were admitted to it at the same time, one of them being his cousin, Henry Manwaring, who was a Roundhead.” (Yates, *The Rosicrucian Enlightenment*, 266)

<sup>54</sup> “Man’s body and soul undergo metempsychosis; when we die we only ‘cease to be what we formerly were, so to be born is to begin to be something which we were not before’.” (Toland, *Letters to Serena*, V)

The concept of pantheism itself sprang a year later, in *Socinianism Truly Stated, by a pantheist* (1705). Although Toland is actually the first to use the term “pantheist,” he is neither the first pantheist nor the creator of the concept of “pantheism.” Parmenides seems to have been the first Western pantheist (Vth century BCE)<sup>55</sup> while Joseph Raphson (*De Spatio Reali*, 1697) coined the term under the spell of Bruno (*De innumerabilibus, immenso, et infigurabili*, 1591) and Spinoza (*Éthique*, posthumus, 1677).<sup>56</sup>

According to Jacob (1981), Toland’s *Pantheisticon* (originally published in Latin in 1720 and anonymously translated in English in 1751, with specific reference to Freemasonry in the margin of the text) is a key work to explain the spread of speculative Freemasonry across Europe: through its publication and through the proto-masonic “Knights of Jubilation,” Toland was the central purveyor of English heterodox ideas onto the continent. The *Pantheisticon* institutes philosophically and liturgically a “highly heretical pantheism.”<sup>57</sup>

Philosophically, it is a “New Fellowship” inspired directly and indirectly (through Joseph Raphson and Henry More<sup>58</sup>) by Bruno—but also modifying Bruno with Spinoza. On the one hand, Toland argues for a process pluralism in which only parts matter;<sup>59</sup> on the other, he argues for a strict monism.<sup>60</sup> The Whole is one but infinite

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D’Holbach has translated the *Letters* in 1768 and Diderot draws from them in his *Principes philosophiques sur la matière et le mouvement* (written in 1771 and published in 1791). In England, poets such as James Thomson and Wordsworth claim to have been inspired by Toland.

<sup>55</sup> Unvers éternel, inengendré, incorruptible, immobile ; “tout entier à la fois” (Parménide, DK B viii)

<sup>56</sup> “Joseph Raphson (c. 1648–1715) was a staunch supporter of Newton’s claim, and not that of Gottfried Leibniz, to be the sole inventor of calculus. Raphson coined the word pantheism, in his interpretation of Spinoza, *De Spatio Reali*, published in 1697, where it may have been found by John Toland, who called Raphson’s work “ingenious”. Raphson begins by making a distinction between atheistic **panhylists** (pan ‘all’ and hyle ‘wood, matter’), who believe everything derives from matter, and **pantheists** who believe in “a certain universal substance, material as well as intelligent, that fashions all things that exist out of its own essence”. Raphson further believed the universe to be immeasurable in respect to a human’s capacity of understanding, and that humans will never be able to comprehend it.” ([https://en.wikipedia.org/wiki/Joseph\\_Raphson](https://en.wikipedia.org/wiki/Joseph_Raphson)) —Cf. Ann Thomson, *Bodies of Thought: Science, Religion, and the Soul in the Early Enlightenment*, 2008, p. 54.

<sup>57</sup> Jacob, Margaret C., *Living the Enlightenment: Freemasonry and Politics in Eighteenth-Century Europe*, New York / Oxford, Oxford University Press, 1991.

<sup>58</sup> Henry More, *Enchiridium Metaphysicum*, 1679 : “For this infinite and immobile extension will be seen to be not something merely real [...] but something divine after we shall have enumerated those divine names or titles which suit it exactly, [...] Of which kind are those which follow, which metaphysicians attribute to First Being. Such as one, simple, immobile, eternal, complete, independent, existing from itself, subsisting by itself, incorruptible, necessary, immense, uncreated, uncircumscribed, incomprehensible, omnipresent, incorporeal, permeating and encompassing everything, being by essence, being by Act, pure Act.” (More 1995 ed., p. 57)

<sup>59</sup> “All Things [...] are in Motion.” (P 21)

and in process; worlds become and perish but the Whole remains. Both claims are possible together thanks to his hylozoism, that is akin to Newton's alchemical animism of the years 1670.

Liturgically, the *Pantheisticon* is purported to describe the ritualistic invocation of nature taking place during the meetings of his "Socratic Brotherhood." Toland provides a "New Regulation" for the "societies of the learned" (or "Socratic societies") inspired by Socrates, Horace, Cato and Cicero. His "sodalitas socratica" is reminiscent of masonic ritual, perhaps with more affect: "The Sun is my Father, the Earth my Mother, the World's my Country, and all Men are my Relations." (P 33) Curiously, Toland still used the male pronoun to speak of "god."<sup>61</sup>

In continuity with these works, Toland also fostered the rebirth of Druidism. The *Pantheisticon* only briefly evoked the Pythagoreanism of the Druids (p. 95), but it seems that Toland saw his *History of the Celtic Religion and Learning Containing an Account of the Druids* (1726) as his life's work. If the book was already foreseen in the years 1690 when he met in Oxford the Free-mason and druid John Aubrey (1626–1697),<sup>62</sup> Toland has thus worked on it for almost forty years. Here also the book is weaved around two threads: on the one hand, to promote the true religion—pantheism—that he has found, despite the clergy, under the historical strata of Christianity; and, on the other hand, to build a genuinely democratical political identity. These two threads share one same concern: the secular and dogmatic power of the clergy, that is entirely devoted to prevent both the emergence of a natural religion and of a democracy. Even druids are chasticized.<sup>63</sup> Subsidiarily, Toland depicts Ireland as the homeland of Celtic civilization.<sup>64</sup>

<sup>60</sup> "All Things are from the Whole, and the Whole is from all things. » (P 15) « All Things in the World are One. And one is All in all Things." (P 70)

<sup>61</sup> "President: Keep off the prophane People.

Response: The Coast is clear, the Doors are shut, all's safe.

President: All Things in the World are One. And one is All in all Things.

Response: What's All in all Things is GOD, Eternal and Immense, Neither begotten, nor ever to perish.

President: In **him** we live, we move, and exit.

Response: Every Thing is sprung from **him**, And shall be reunited to **him**, He himself being the Beginning, and the End of all things. » (P63 sq., ici 70-71)

or

President: Make sure that vulgar laymen are far away. (P63 sq., ici 70)

Response: The doors are locked, we are in safety.

President: All things in the world are One, and One in All in all things.

Response: What is all in all things is God, and God is eternal, has not been created, and will never die."

<sup>62</sup> Aubrey was seemingly the first to argue for the druidic nature of Stonehenge and Avebury henge (see his *Templa druidum*, 1649).

<sup>63</sup> "Toland transformed the apparently virtuous druids—and by analogy the Christian clerics—into hoaxers and defrauders of their laity. Toland evidenced such shoddy and cynical practices by referring to

Some complain that the book is not the product of an original research;<sup>65</sup> the fact remains that Toland is a founding father of neo-druidism. The second figure of importance will emerge only later: Edward Williams, better known by his bardic name Iolo Morgannwg (1747–1826), author of the *Poems Lyrical and Pastoral* (1794).

### 3.3. PANTHEISM (OR NATURE ENTHUSIASM)

The First—or “High”—Renaissance was pagan and revolutionary. It was shot through and through with a democratic ideal tied to an ontology of immanence.

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the deceit of a concealed rope to move stones in a parody of supernatural interventionist justice. By this pretended miracle they condemn'd of perjury, or acquitted, as their interest or their affection led them: and often brought criminals to confess, what could no other way be extorted from them. So prevalent is the horror of Superstition in some cases, which led many people to fancy ... that it might be a useful cheat to society, not considering that in other cases (incomparably more numerous and important) it is most detrimental, pernicious and destructive, being solely useful to the Priests that have the management of it; while it not only disturbs or distresses society, but very oft en confounds and finally overturns it, of which History abounds with examples. This passage transformed the Druids into mere magic-sharpers; deceiving the laity with tricks of perception and hidden mechanical devices [...].” (Brown, Michael, *A Political Biography of John Toland*, London, Pickering & Chatto, 2012, p. 141) “The Druids and the priests ultimately only used their learning to confuse and deceive their flocks.” (Brown, Michael, *A Political Biography of John Toland*, p. 144) “Writers like William Blake explicitly used Toland’s work on Druids as a source for indicting Christian priestcraft.” (Champion, Justin, *Republican Learning John Toland and the Crisis of Christian Culture*, p. 226)

<sup>64</sup> “In the papers left upon Toland’s death, and subsequently published by Pierre Des Maizeaux, was his major life project. Projected as early as his time in Oxford in the early 1690s, *A Specimen of the Critical History of the Celtic Religion and Learning* [...]. Rejecting the uncomplimentary image of Ireland that had germinated in the British understanding of the past, largely drawn from Roman sources that thought of the Celts as barbarous and ungovernable. Instead Toland was determined to depict Ireland as the bastion of Celtic civilization that had extended through the British Isles and which could stand up to the close judgemental examination of its gainsayers. Far from being barbaric, it was a couth, cultured world that had benefited from a religious faith that rejected mystery and instead celebrated the power of nature. Toland drew on archaeological evidence [...].” (Brown, Michael, *A Political Biography of John Toland*, pp. 139-140) “The careful reconstruction of an ancient Celtic Christianity in *Nazarenus* [1718] was calculated to condemn all forms of deviation from this pure (un-priestly, un-sacramental) model. [...] Toland’s interest in the learning of Celtic antiquity is less evidence of his ‘Irish’ cultural commitments rather than another instrument in his intellectual project of refining the politics of religion from clerical corruption.” (Champion, Justin, *Republican Learning John Toland and the Crisis of Christian Culture*, p. 218)

<sup>65</sup> « Despite Toland’s own claims to having undertaken ‘original’ research (even fieldwork), a close reading of the work indicates it is mainly from literary sources (in particular books that he owned himself), and very few others, that he put together his account of Celtic learning and the history of the Druids. These materials were orthodox, uncontroversial, and indeed, generally pious in intention. » (Champion, Justin, *Republican Learning John Toland and the Crisis of Christian Culture*, p. 219)

“Nature enthusiasm” (Gare’s expression<sup>66</sup>) and pantheism were, with the return to the culture of classical antiquity, its main traits.

From the scholarly perspective of the history of ideas, pantheism is the key to all the doors we have encountered so far. Freemasonry has had a more enduring influence than Druidism or any other form of initiatory brotherhood. Because of his twin interest in Freemasonry and Druidism, Toland is a major figure in effecting the synthesis of *civic humanism* (a typical Freemasonic issue) with *nature enthusiasm* (the Druidic signature). The druidic worldview is historically polytheistic but it can be interpreted as a pantheism.<sup>67</sup> Where does Whitehead theory of symbolism actually stand with that regard?

*Symbolism* (1927) does not evoke, even *obiter scriptum*, God or the divine. In *Religion and the Making*, published a year earlier (1926), “God” is one of the three “formative elements” (still implicit in *Science and the Modern World*): creativity or *substantial activity*, eternal objects or *pure possibilities*, and God or the *Principle of Concretion*. The *Timaeus*’ categories are obviously still haunting his mind, which means, everything else being equal, that he argues for a Great Architect of the Universe, the very conceptual entity that Kant had destroyed in his 1781 “On the impossibility of a cosmological proof of God” (CPR A603/B631 sq.):<sup>68</sup> “the proof could only establish a highest architect of the world, who would be always limited by the suitability of the material on which he works, but not a creator of the world, to whose idea everything is subject” (CPR A627/B655). (The practical necessity for a belief in God in demonstrated his *Critique of Practical Reason*, 1788.)

Why not ask also what *Religion and the Making* (1926) has to say about symbolism? In that work, we find symbolism, together with myths, rituals and drugs, as key-words to describe primitive religions.<sup>69</sup> It basically claims that primitive cultures’s animism and

<sup>66</sup> Arran Gare, “Reviving the Radical Enlightenment: Process Philosophy and the Struggle for Democracy,” op. cit.

<sup>67</sup> Toland is not mentioned in Hartshorne, Charles and Reese, William L. (editors), *Philosophers Speak of God*, Chicago & London, The University of Chicago Press, 1953.

<sup>68</sup> Immanuel Kant, *The Critique of Pure Reason*, Translated and Edited by Paul Guyer and Allen W. Wood, Cambridge University Press, 1998.

<sup>69</sup> “Luckily the range of drugs at the command of primitive races was limited. But there is ample evidence of the religious use of drugs in conjunction with the religious use of ritual. For example Athenæus tells us that among the Persians it was the religious duty of the King, once a year, at some stated festival in honour of Mithras, to appear in the temple intoxicated. A relic of the religious awe at intoxication is the use of wine in the Communion service. It is an example of the upward trend of ritual by which a widespread association of thought is elevated into a great symbolism, divested of its primitive grossness. In this primitive phase of religion, dominated by ritual and emotion, we are dealing with essentially social phenomena. Ritual is more impressive, and emotion more active, when a whole society is concerned in the same ritual and the same emotion.” (RM 22)

pantheism are unfortunate traces of the incoherent worldviews of uncolonized nations (read: “first nations,” “indigenous societies,” “aboriginals,” and “animal communities”).<sup>70</sup>

Symbols have always been instrumental in religious matters. Whitehead’s project is of course to extract them from their mythological matrix but his theology is not a pantheism. As Hartshorne claims, a cogent interpretation is panentheism. My own reading brings *Process and Reality* (1929) together with the “Gott und Gottheit” dialectic of Eckhart, while being compatible with the more daring “Immortality” (1941), does not support a pantheistic reading but rather a pancreativism.

#### 3.4. *Republicanism (Civic Humanism)*

“Civic humanism” is a Florentine variant of republicanism originated in the *Quattrocento* and indicating active, participatory, patriotic citizenship as well as the matching ethos and educational ideal. (Baron, 1955 & Pocock, 1975)<sup>71</sup>

We have already underlined that the First Renaissance was pagan and revolutionary. Whitehead was neither. Symbols in politics seem to be for him inconvenient stubborn facts, inherited from the Dark Ages,<sup>72</sup> necessarily unchanging in principle but possibly so in their contingent forms,<sup>73</sup> and instrumental in enforcing conformism<sup>74</sup> (the very antidote of reformism).

Russell was far more daring on these issues. Whitehead’s bibliography as well as his actual political commitment display five major tensions with Russell’s. It is well known that Whitehead considered a matter of intellectual honesty to denounce

<sup>70</sup> “Then rituals and emotions and myths reciprocally interact; and the myths have various grades of relationship to actual fact, and have various grades of symbolic truth as being representative of large ideas only to be apprehended in some parable. Also in some cases the myth precedes the ritual. But there is the general fact that ritualism precedes mythology. For we can observe ritualism even among animals, and presumably they are destitute of a mythology.” (RM 25)

<sup>71</sup> Baron, Hans, *The Crisis of the Early Italian Renaissance: Civic Humanism and republican Liberty in an Age of Classicism and Tyranny*, Princeton, Princeton University Press, 1955; J. G. A Pocock, *The Machiavellian Moment Florentine Political Thought and the Atlantic Republican Tradition*, Princeton University Press, 1975. I quote Moulakis, Athanasios, “Civic Humanism”, *The Stanford Encyclopedia of Philosophy* (Winter 2011 Edition), Edward N. Zalta (ed.),

URL = <<http://plato.stanford.edu/archives/win2011/entries/humanism-civic/>>.

<sup>72</sup> “You abolish the etiquette of a royal court, with its suggestion of personal subordination, but at official receptions you ceremonially shake the hand of the Governor of your State.” (S 62)

<sup>73</sup> “The art of free society consists first in the maintenance of the symbolic code; and secondly in fearlessness of revision, to secure that the code serves those purposes which satisfy an enlightened reason. Those societies which cannot combine reverence to their symbols with freedom of revision, must ultimately decay either from anarchy, or from the slow atrophy of a life stifled by useless shadows.” (S 88)

<sup>74</sup> “When we examine how a society bends its individual members to function in conformity with its needs, we discover that one important operative agency is our vast system of inherited symbolism.” (S 73)



Russell's attitude with regard to the concepts created in PNK and to furthermore refuse his careless remarks on the subject.<sup>75</sup> Epistemologically, there was a gap between the two philosophers, as exemplified in the well-known quote "You think the world is what it looks in fine weather at noon day ; I think it is what it seems like in the early morning when one first wakes from deep sleep." (Russell 1956, 39) On religious matters also, the two men were at odds: "Whitehead's theological opinions were not orthodox, but something of the vicarage atmosphere remained in his ways of feeling and came out in his later philosophical writings." (Russell 1961, 189) Politically, Russell was a Republican of sorts and Whitehead obviously happy with constitutional Monarchy.<sup>76</sup> Last but not the least, pacifism was taken very seriously by Russell, who was dismissed from Trinity in 1916 and suffered six months of imprisonment in 1918, while Whitehead was chanting the virtues of the just war. (Russell 1961, 188)

### 3.5. FREEMASONRY (DISCRETE FRATERNITY)

In sum, Whitehead's theory of symbolism is delineated from an epistemological perspective and ends up in a fully fledged ontology. This ontology is for sure "pre-Kantian" (PR xi) and it offers an important venue to rethink Modernity but, besides the relevance of Romanticism, amply testified for in SMW, it appears to be more in the continuation of the counter-Renaissance—the second or "Moderate Enlightenment"—than of the Renaissance itself. Are we condemned to murder to dissect?

Margaret Jacob's enquiry (1981), although it is not aimed at providing a criteriology, offers a strong argument that explains, e.g., how some scholars can publicly pretend to be Whiteheadians while actually supporting Hartshorne's "Neoclassical Metaphysics," and, as a matter of fact, tolerating *in private* only Thomism (or a mild process version thereof).

In his 1927 lectures, the British philosopher chooses to go beyond the traditional use and interpretation of symbols, a standpoint that was perhaps only justified by his willingness to provide a first overview of the ontology he was brooding on, and that

<sup>75</sup> "Before the war started, Whitehead had made some notes on our knowledge of the external world and I had written a book on this subject in which I made use with due acknowledgement of ideas that Whitehead had passed on to me. The above letter shows that it had vexed him. In fact, it put an end to our collaboration." (Russell 1968, 78) At a more existential level, Russell was struck by the Bloomsbury spirit—so much so that he was likely to have started a love affair with Evelyn Whitehead. For his part, Whitehead was far more conventional in his marital commitment.

<sup>76</sup> "I was taught a kind of theoretic republicanism which was prepared to tolerate a monarch so long as he recognized that he was an employee of the people and subject to dismissal if he proved unsatisfactory. My grandfather, who was no respecter of persons, used to explain this point of view to Queen Victoria, and she was not altogether sympathetic." (*Portraits from Memory and Other Essays*, p. 2)

factually downplays the traditional use of symbolism in culture *lato sensu*. We have already underlined that Whitehead could not deny the perennial symbolic features of our culture, but besides the following quote, there is nothing in his corpus that leads to think that the Freemasonic ideal, that basically amounts to *Quattrocento's* humanism, was alive in his philosophy:

“When the public ceremonial of the State has been reduced to the barest simplicity, private clubs and associations at once commence to reconstitute symbolic actions. [...] The function of these elements is to be definite, manageable, reproducible, and also to be charged with their own emotional efficacy: symbolic transference invests their correlative meanings with some or all of these attributes of the symbols, and thereby lifts the meanings into an intensity of definite effectiveness — as elements in knowledge, emotion, and purpose,— an effectiveness which the meanings may, or may not, deserve on their own account. The object of symbolism is the enhancement of the importance of what is symbolized.” (S 62-63)

In the context of the industrial revolution and its aftermath, individuation, solidarity and culture are unhinged—hence the cultural importance of Freemasonry: “I would call ‘Masonic’ any group that, within a society evolving from a community into a civilisation, moving from personal to contractual relations, with strong and deepening division of labour, with class oppositions, lacking ideological and ethical unity, tries to create a meeting place where (without modifying these productive as well as destructive trends) a situation is established transcending impersonal relationships, ideological, professional and, to a limited extent, also class separations.”<sup>77</sup>

From the perspective of the history of ideas, Freemasonry has had a more enduring influence than any other form of initiatory brotherhood. Pantheism and Freemasonry can be found amongst pre-Kantians like Gotthold Lessing (*Der Freigeist*, 1749) (who was both pantheist and Freemason) and Johann Herder (*Vom Erkennen und Empfinden der menschlichen Seele*, 1778) (who was both). Enlightenment flowered in the thought of Immanuel Kant (who was nevertheless neither a pantheist nor a Freemason), of his students—Johann G. Fichte (who was both), Karl Krause (pantheist and Freemason)—, of the Post-Kantian scholars—Goethe (pantheist and Freemason), Friedrich Schelling, Hegel, Friedrich Schleiermacher, Wilhelm and Alexander von Humboldt—, and later of Oxford’s British Idealists inspired by T. H. Green. Remember also Voltaire... the list is very long of these thinkers who were initiated and understood the “Great Architect of the Universe” to be actually nothing else than Nature. They basically all conceived “*Bildung* as enculturing people to realise

<sup>77</sup> Leo Apostel, *Freemasonry. A Philosophical Essay. Leerstoel Theodore Verhaegen 1984–1985*, Bruxelles, Vrije Universiteit Brussel, Centrum voor de Studie van de Verlichting en van het vrije denken, 1985,

their potential to be free, to recognise each others' freedom and to discover and realise their vocation to advance freedom."<sup>78</sup> Of course, one has to provide the metaphysical means to match up the ethical goals: hence, according to Schelling himself, nature is process-like, i.e., intrinsically creative and open to human beings's creativity.

#### 4. Conclusion

The paper has sought to introduce to the general context of Whitehead's theory of symbolism, to its peculiar features springing from the necessity to give an ontological answer to an epistemological puzzle, and to the cash value of that theory in the areas that are traditionally concerned with symbolism and actually rejected by Whitehead. By ignoring pantheism, republicanism and, to a lesser extent, the symbolic legacy safeguarded in Freemasonry, Whitehead has generalized symbolism in a remarkably *scientific* manner—but he has also turned his back to the first Renaissance, the very one that he incidentally praises in his discussion of the Romantics...

What is the value of symbolism for he who is neither a pantheist, a republican or a freemason? It is ontological. To repeat: symbolism constitutes for Whitehead an epistemological problem and (at least) since Plato we know that no genuine epistemology can make the economy of an excursion into the ontological field to establish itself coherently.

What happens when Whitehead decides to “throw a match into the powder magazine” (CN 29)? The “plenum of organisms” (S 23) that is disclosed in presentational immediacy and felt in causal efficacy is properly theorized only in the mereotopology of the Gifford Lectures. In that work, PNK's *epistemological* relation of extension operating on the domain of events (itself heir of his earlier relation  $E_s$ , called 's-inclusion', “which in its formal properties is analogous to the relation of whole to part”)<sup>79</sup> is morphed into the *ontological* relation of extensive connexion operating on the domain of regions, thereby transforming events into historical routes of occasions of experience (cf., e.g., PR 80). In other words, to understand PR's ontology, the reader needs to acknowledge that Whitehead's vision springs from the synergy that is intended between the genetic (P. III) and morphological/coordinate (P. IV) analyses. Only the activation of the togetherness between genetic and coordinate analyses, concrescence and transition, existence and being, becoming and perishing, actuality and potentiality, subjectivity and objectivity, present and past, qualities and quantities, makes us truly Whiteheadian...

<sup>78</sup> Luciano Boschiero (edited by), *On the Purpose of a University Education*, Melbourne, Australian Scholarly Publishing, 2012, p. 78.

<sup>79</sup> Alfred North Whitehead, “La Théorie Relationniste de l'Espace” [Paris, Congress on mathematical philosophy, April 1914], *Revue de Métaphysique et de Morale*, vol. XXIII, Paris, 1916, pp. 423-454.

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## ABBREVIATIONS

- AE** *The Aims of Education*, 1929 (Free Press, 1967).  
**AI** *Adventures of Ideas*, 1933 (Free Press, 1967).  
**CN** *The Concept of Nature*, 1920 (Cambridge, 1964).  
**D** Lucien Price, *Dialogues*, 1954 (Mentor Book, 1956).  
**ESP** *Essays in Science and Philosophy*, Philosophical Library, 1947.  
**FR** *The Function of Reason*, 1929 (Beacon Press, 1958).  
**MT** *Modes of Thought*, 1938 (Free Press, 1968).  
**OT** *The Organisation of Thought*, Williams and Norgate, 1917.  
**PNK** *Principles of Natural Knowledge*, 1919/1925 (Dover, 1982).  
**PR** *Process and Reality*, 1929 (Free Press Corr. Edition, 1978).  
**RM** *Religion in the Making*, Macmillan, 1926.  
**S** *Symbolism, Its Meaning and Effect*, Macmillan, 1927.  
**SMW** *Science and the Modern World*, 1925 (Free Press, 1967).