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Albrecht Classen

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Humanities' Metaphysical Underpinnings of Late Frontier Scientific Research

Alcibiades Malapi-Nelson

Abstract: The behavior/structure methodological dichotomy as locus of scientific inquiry is closely related to the issue of modeling and theory change in scientific explanation. Given that the traditional tension between structure and behavior in scientific modeling is likely here to stay, considering the relevant precedents in the history of ideas could help us better understand this theoretical struggle. This better understanding might open up unforeseen possibilities and new instantiations, particularly in what concerns the proposed technological modification of the human condition. The sequential structure of this paper is twofold. The contribution of three philosophers better known in the humanities than in the study of science proper are laid out. The key theoretical notions interweaving the whole narrative are those of mechanization, constructability and simulation. They shall provide the conceptual bridge between these classical thinkers and the following section. Here, a panoramic view of three significant experimental approaches in contemporary scientific research is displayed, suggesting that their undisclosed ontological premises have deep roots in the Western tradition of the humanities. This ontological lock between core humanist ideals and late research in biology and nanoscience is ultimately suggested as responsible for pervasively altering what is canonically understood as "human".

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1. Philosophical Precedents for the Scientific (Explanatory) Notions of Modeling, Mechanism and Simulation

1.1. Duns Scotus: Continuum between Physical Entities and the Divine Being

After several centuries of having Aristotle's works unavailable to Europe, the twelfth century witnessed a revival of Aristotelian philosophy. After a millennium of a Christian philosophy largely based upon Platonism—inheriting at times its subsequent relative contempt for the physical realm—St. Thomas Aquinas, a member of the newly formed mendicant Order of St. Dominic, embarked upon the major task of relocating the fundamentals of Christianity upon the newly rediscovered Aristotelian writings. This displacement created waves of tension throughout Christendom. There were deep concerns regarding the outcome of combining the Christian faith with a philosophy which, even if acknowledging the existence of the Divine, it did it in a way that could forever remove it away from a human relational intimacy—Aristotle's god was not a personal god; even less one that would become man. Aquinas was eventually reivindicated by the Church, which three centuries later placed his *Summa Theologica* besides the Bible on the altar—the only book ever that enjoyed such honor—in the closing Mass for the Council of Trent, when it defined its position against the Protestant revolt.

One of the prominent figures who relentlessly attacked Aquinas' ideas at the time was Blessed Duns Scotus, a member of the order started by Saint Francis of Assisi. Both Doctors of the Catholic Church, (*Angelicus*—Aquinas—and *Subtilis*—Scotus) their orders were founded just a century apart. They embodied a profound reform of the Church at the time, accentuating poverty as a charisma, and it quickly grew large all over Europe. During the lifetime of both philosophers, the mendicant feature of both orders gave increasing space to an emphasis on education, eventually founding universities with their distinctive character. The famed rivalry between the Franciscans and the Dominicans (the first being somewhat prone to heresy and the second to orthodoxy) has arguably been somewhat exaggerated, although it is widely recognized that each order characterized the two major flavors of European universities for centuries to come—one under the light of an Aristotelian pre-Modern realism (Dominicans), the other under a more Platonic take on reality, with heavy leniencies towards mysticism (Franciscans) ([1], chapter 2).

Scotus was concerned about Aquinas' understanding of concepts when these would ultimately predicates of God (divine attributes). For Aquinas, when we speak of God as being good, we actually mean this "goodness" in an equivocal way, not in the same way in which we use it when we refer to, for example, humans. The goodness of God can be only analogically related to that of humans—or of creation, health, *etc.* Aquinas clearly emphasized the transcendent nature of God, and even if there are cues in nature that can eventually lead us to Him (as in his famed *Quinque Viae*), we ultimately know more about what He is not than what He is.

Scotus saw a problem right there. For him, negative knowledge was ultimately not knowledge at all. This was just the start of the danger that was to come after following Aristotle. He feared that if Aquinas had it his way, the human capability of reaching God would be truncated, and ultimately metaphysics might even cease to exist[1]. Furthermore, Aquinas would think of "eing" as not necessarily entailing "existence" (God *is*, more than merely *exists*, since "existence", being contingent, necessitates a "being" to give its very "existence" in the first place). For Scotus this equivocality could have a catastrophic effect, given the nature of human intelligence. The primal object of the human intellect is "being inasmuch as being" (*ens inquantum ens*). That entails that if something is, it will necessarily fall within the realm of the intelligible. There is no being without existence. To affirm the contrary would allow for the possibility of a being beyond intelligibility, which could lead to the denial of existence of the Ultimate Being. Hence for Scotus there is a semantic continuum in our predication of the attributes of a being—including God—for otherwise there could be the case of a being—including God—equivocally referred to, and thus removed beyond the grasp of our intellectual might. In his own words:

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[1] Scotus' concern antecedes Immanuel Kant's questioning of the possibility of metaphysics as a science by four centuries. Kant would later dispatch his famous ultimatum: "All metaphysicians are therefore solemnly and legally suspended from their occupations until they shall have satisfactorily answered the question: How are synthetic cognitions a priori possible?" ([2], Preamble: Section 5).

> And lest there be a dispute about the name "univocation", I designate that concept univocal which possesses sufficient unity in itself, so that to affirm or deny it of one and the same thing would be a contradiction. It also has sufficient unity to serve as the middle term of a syllogism, so that wherever two extremes are united by a middle term that is one in this way, we may conclude to the union of two extremes among themselves ([3], p. 20)[2].

For Scotus, in predicating, say the "cleanliness" of a man, we can refer to the moral aspect of his persona or to his physical, bodily realm—among other levels of qualified existence. So one can say that such man is clean and not clean, without committing contradiction, given that one is applying cleanliness to different aspects, and still maintaining the univocity of being (*univocatio entis*) regarding cleanliness. The meaning of the noun (or adjective) is the same for both cases, but the variation occurs in the way or degree in which this notion is applied. When thinking of God's attributes, "the extremes united by means of a middle term possessing such a unity are themselves united with each other", so that we say about Him as being good in an infinite way, but of creatures as being good in a finite, fallible way. The same is said of being: the radical opposite to nothingness is being—even if this being can be infinite (God) or finite (everything else). Regardless of the way in which being opposes to nothingness, it is the same notion of being at work here, either applied to God or His creatures. This ontological continuum[3] should warrant our finite capacity of reaching the Infinite One. After all, our knowledge would differ from the Creator's in a manner of degree, not kind—pace Thomas Aquinas. This Scotian ontological bridge established between the physical and the non-physical would re-emerge much later under a technological umbrella, as we shall see in part II.

1.2. Francis Bacon: Mechanical Arts against the Epistemic Darkness Set by Original Sin

The pervading notion in Christendom of humans having been conceived in the "image and likeness of God"[4], one of the tenets of faith that operated behind Scotus' attack of Aquinas, evolved in increasingly liberal ways the next two hundred years. The beginning of the sixteenth century signaled the formal (theoretical and then political) rebellion against the Church in Europe. Tradition has it that the *Ninety-Five Thesis on the Power and Efficacy of Indulgences*, was nailed on the front door of the castle church of Wittenberg, by the Augustinian priest Martin Luther in 1507. This revolt eventually amounted to the biggest breakaway in the body of Christianity after the Great Schism of the eleventh century. Five hundred years later, the Protestant "reform" commands

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2 *Ordinatio* I, distinctio. 3, part 1, quaestio. 2, numero 26.

3 Certainly the idea of a *continuum* as the default state of affairs of reality was already perused by the Ancient Greeks. In the realm of the inanimate, it was understood that *natura abhorret vacuum*. Among living entities, a careful continuity in "how rightly Nature orders generation in regular gradation" ([4], pp. II, 1) was recognized.

4 "God created man in his image; in the divine image he created him; male and female he created them" (Gen. 1:27, NAB).

much scholarship[5], it is not my intention to address it here. What is relevant, however, is the evolution of the notion of *imago Dei* within the ranks of those who fostered the Scientific Revolution.

Although a plethora of non-religious circumstances were leading to the historic event, the reformers' attack against the Church was symbolically triggered by the lack of clarification, on the part of the Church, regarding what is referred to in the English title of Luther's manifesto, namely, "the power and efficacy of indulgences"[6]. During the ensuing struggle between the reformers and Rome, the former gradually found scriptural passages that would allegedly justify their independence from the Hierarchy in particular and the Holy Orders[7] in general. The Hierarchy (conformed by the bishops, cardinals and patriarchs) is the only entity that can provide the sacrament of Holy Orders. Once a society gets rid of it, priests could not be ordained, and the rest of the sacraments, which priests have the mandate to deliver, cannot be provided. We would be in front of a sacrament-less Christianity, which is what the reformers were after—in order to render the Church effectively useless.

Martin Luther held a profoundly dark outlook regarding what remained of human nature after the Fall. Whereas for the Catholic Church this Fall deeply "corrupted" our nature, for Protestantism it irreparably "shattered" it. For Catholicism, this wounded nature could still be healed—via the sacraments—since the destruction was not complete. For Protestantism, we are so completely damned, that only Christ—and Him alone—can save us. However, our underlying nature remains ultimately broken. *Simul iustus ad pecator* (Simultaneusly justified and sinner) Luther would proclaim.

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[5] Arguably, Western civilization got wedged in such a way that it never healed. The instantiation of this division was eventually settled, embodied on the one side by those countries who remained faithful to Rome (mostly southern Europe) and on the other those who did not (Anglo-Saxony and northern Europe)—a cosmological split that was naturally extended to their respective colonies. Eisenstein reports this rift as follows:

> Sixteenth-century heresy and schism shattered Christendom so completely that even after religious warfare had ended, ecumenical movements led by men of good will could not put all the pieces together again. Not only were there too many splinter groups, separatists, and independent sects who regarded a central church government as incompatible with true faith; but the main lines of cleavage had been extended across continents and carried overseas along with Bibles and breviaries. Within a few generations, the gap between Protestant and Catholic had widened sufficiently to give rise to contrasting literary cultures and lifestyles. Long after Christian theology had ceased to provoke wars, Americans as well as Europeans were separated from each other by invisible barriers that are still with us today ([5], pp. 172–73).

[6] The actual title was *Disputatio pro declaratione virtutis indulgentiarum*.

[7] With the sacrament of Holy Orders one is "ordered" a presbyter (a priest), a deacon or a bishop. In the case of a priest, it institutes in that person *ad perpetuum* the capability of providing the other six sacraments. The provision of this one sacrament is reserved solely to the bishop. "Since the sacrament of Holy Orders is the sacrament of the apostolic ministry, it is for the bishops as the successors of the apostles to hand on the "gift of the Spirit", the "apostolic line". Validly ordained bishops, *i.e.*, those who are in the line of apostolic succession, validly confer the three degrees of the sacrament of Holy Orders" ([6], para. 1576).

This shift carried existential and epistemological issues. For fifteen centuries there was a relatively unbroken certainty that the seven sacraments were specifically instituted by Jesus Christ, for us to attain self-realization in this life and salvation in the next one. That was never denied by the earlier Eastern Christian split of the eleventh century—the mentioned Great Schism. The sacramental institution just "made sense", having in mind the inescapable catastrophe depicted in Genesis 3. Until we accept the redemption given by Christ, which is literally effectuated via the reception of the sacraments, the Great Fall inherently dooms human existence—including our epistemic capacities. Thus the human sacramental participation of divine grace allegedly heals our fallen nature—allowing us to return to the "essence of humanity," lost as a consequence of Original Sin.

Such was the Christian view of man until then. However, now, given the post-Reformation absence of sacraments, an anxious inquiry regarding the scope and limits of human capabilities quickly set in. *Prima facie*, given the absolutely totalizing nature of the Fall, any hopeful human endeavor is right from the start destined to crash. Specifically, accounts of the now lost Adamian wisdom, which enjoyed pre-Fall super-human intellectual and cognitive capabilities, begun to flourish. *Scriptura Sola*, now without the tutelary guidance of the Church and written in vernacular languages, allegedly gave accounts of the encyclopedic knowledge that Adam enjoyed, e.g., in calling creatures by their name. A veil of hopelessness seemed to rear its head for the possibilities of knowledge, and indeed for any significant outcome from human experience whatsoever [7].

The strongest voice that defied this looming prospect arguably was the one to which we attribute having theoretically fostered the Scientific Revolution: Francis Bacon. Immanuel Kant tellingly opened his *Critique of Pure Reason* with a quote from Baron Verulam (Bacon's honorific title). Kant does this in order to highlight Bacon's role in the *new science*, having "made the proposal that partly prompted this road's discovery, and partly—in so far as some were already on the trail of this discovery—invigorated it further" ([8], Bxii). Strong words that found echo in the copious amount of scholarship on this author, the alleged articulator of the scientific method for early Modern science. One aspect of Bacon's work, however, that has arguably received less attention, was the main reason behind the construction of the new science in the first place—namely, the retrieval of the lost epistemic capabilities that humans were endowed with in virtue of having being created in *imago Dei*[8].

Such relative absence in the scholarship is all the more surprising once we realize that "for Francis Bacon, the reform of learning was not a secular pursuit, but a divine mandate" ([9], p. 51). Indeed, Bacon did not mince words for clearly pointing out that Original Sin catastrophically affected man's intellectual capabilities, removing the mastery over nature that Adam once enjoyed. In *The New Organon*, he asserts that "[f]or man by the fall fell at the same from his state of innocence and from his dominion over creation" ([10], p. 189). The allusion to Genesis 3 is clear in his understanding of the dramatic loss we underwent due to Adam's fault. The Devil, represented in Genesis by a serpent,

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[8] Peter Harrison would extend the influence of the awareness of a doomed humanity *vis a vis* Original Sin beyond Bacon's motivations and into the very birth of Modern science, advancing that "the biblical narrative of the Fall played a far more direct role in the development of early Modern knowledge—both in England and on the Continent—than has often been assumed, and that competing strategies for the advancement of knowledge in the XVII century were closely related to different assessments of the Fall and of its impact upon the human mind" ([7], p. 240).

introduced darkness and confusion in the human mind forever. In *The Great Instauration*, the sharp decrease in our intellectual capabilities is sorely lamented by Bacon in a Trinitarian prayer, which asks for "illumination", one of the Gifts pertaining to the Holy Spirit: "Lastly, that knowledge being now discharged of that venom which the serpent infused into it, and which makes the mind of man to swell, we may not be wise above measure and sobriety, but cultivate truth in charity" ([11], p. 74). A grim depiction of our epistemic panorama is indeed laid out.

However, there is a way out from cognitive darkness. Again in the *New Organon*, after referring to both our losses of innocence and of mastery over nature triggered by Original Sin, Bacon gives a glimpse of hope: "Both of these losses, however, can even in this life be in some part repaired; the former by religion and faith, *the latter by arts and sciences*." ([10], p. 189). Our intellectual capacity is corrupted, that much is clear. Hence we need a way to put it in check, to rely on something solid. Reliance on our "natural lights" is out of the question, due to inherited state of contamination. The way to get rid of the "idols"[9] of the mind will thus entails a return to hard reality. However, not just in any way. The Greeks were faithful realists, but their appreciation of nature, even with powerful insights, did not produce growing knowledge. Their experience as great philosophers but not great scientists stands as a warning for us:

> Signs also are to be drawn from the increase and progress of systems and sciences. For what is founded on nature grows and increases; while what is founded on opinion varies but increases not. If, therefore, those doctrines had not plainly been like a plant torn up from its roots, but had remained attached to the womb of nature and continued to draw nourishment from her, that could never have come to pass which we have seen now for twice a thousand years; namely, that the sciences stand where they did and remain almost in the same condition, receiving no noticeable increase, but on the contrary, thriving most under their first founder, and then declining ([10], p. 113).

Thus there is an element missing. We have to indeed observe nature, but not as a passive gatherer, accumulating data and speculating about possible connections and causes, but rather making up situations that would force the studied objects to behave in such way that we could satisfy our previously construed questions. Immanuel Kant, who appropriately understood the Baconian dictum, captured well Bacon's suggestion for pressing nature, since Bacon himself was allegedly inspired by the torturous questioning of witnesses in court—which often provide surprising and fruitful outcomes. In the words of Kant, "reason must indeed approach nature in order to be instructed by it; yet it must do so not in the capacity of a pupil who lets the teacher tell him whatever the teacher wants, but in the capacity of an appointed judge who compels the witness to answer the questions that he puts to them" ([8], Bxiii).

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[9] Idols of the tribe (race), of the cave (individual), of the marketplace (language) and of the theatre (authority) ([10], pp. 95ff).

Making allusion to the Ancient Greeks one more time, this time specifically to Aristotle, Bacon pointed out the crucial difference it makes to "push" nature into fitting inquiring categories, declaring that "in the business of life, a man's disposition and the secret workings of his mind and affections are better discovered when he is in trouble than at other times, so likewise the secrets of nature reveal themselves more readily under the vexations of art than when they go their own way" ([10], p. 130). The Greek experience, in contrast…

> is the opposite of what happens with the *mechanical arts*, which are based on nature and the light of experience: they (as long as they find favor with people) continually thrive and grow, having a special kind of spirit in them, so that they are at first rough and ready, then manageable, from then onwards made smoothly convenient by use—and always growing ([10], p. 113).

One cannot help but stopping for a moment to admire the brilliance of the suggestion. Our fallible intellectual capabilities get anchored in physical substrata, but not imposing its faults nor letting itself be paved upon by nature's might. Instead, a reciprocal relation is formed, whose results let themselves get noticed by a growth of knowledge. When this constructive conflict is not present in the inquiry, the fate of the Greeks stands as a warning. The "mechanical arts" provide a key element of solidity, whose determinism (in so far as mechanical) acts as a reliable platform for our otherwise weakened reason to perform its questioning tasks. The notion of *experimentum crucis*, which constituted a methodological pillar for subsequent developments in science, was used as a basic element upon which much of scientific thinking regarding reliable parameters for experimentation was done. However, one could be misled regarding the ultimate aim of this historical progress if we would to take in consideration Bacon's primal reason behind his proposal to reshape scientific inquiry:

> [I]t is not the pleasure of curiosity, nor the quiet of resolution, nor the raising of the spirit, nor victory of wit, nor faculty of speech, nor lucre of profession, nor ambition of honour or fame, nor inablement for business, that are the true ends of knowledge; some of these being more worthy than other, though all inferior and degenerate: but it is a restitution and reinvesting (in great part) of man to the sovereignty and power (for whensoever he shall be able to call the creatures by their true names he shall again command them) which he had in his first state of creation ([12], p. 188).

The Protestant Reformation's role in the Scientific Revolution pivots around a concerted philosophical effort to overcome the epistemological crippling effects introduced by Original Sin—effects only brought to the fore after the epistemic "antidote" (the sacraments) were no longer available. Baron Verulam's intention behind his revolutionary proposal is laid out clearly: to employ the "new science" as the way out of the cognitive darkness inherited from our sinful first fathers. Bacon's longing for an Adamian nature that would excel in epistemic abilities—now lost—might finally find rest, thanks to the restitutional capabilities of the newly formed "mechanical arts". Experimentation that fostered a mechanical explanation became the hardcore signature of early Modern science—epitomized in the great names of Galileo, Newton, Boyle and even J. C. Maxwell

at some point[10]. However, the set of interrogations that would construct the backdrop for the devised experiment would all constitute, once the results are obtained, a model of a portion of reality—a phenomenon's identified patterns of reaction to our experimentation. The nature of this model generated itself inquiries, and its constitution, aims and even struggles were pondered in the centuries to come. The aspect of constructability that a mechanical model inherently possess would go on to inform realms that were perhaps not foreseen by Bacon himself—as we will see below. However, first, let us explore one more instance of the evolution of this "mechanical epistemology". This time it came from one of Bacon's most fervent admirers, two centuries later.

1.3. Giambatista Vico: Secular Creatio and Constructability as Criterion of Truth

Canonically known after *La Scienza Nuova* (a treatise on how to lead nations that was to be regarded later as the foundational text for philosophy of history), Giambattista Vico's early writings clearly indicated how dramatically important were Bacon's insights for his own era. In an autobiography where the Italian philosopher refers to himself in the third person, he speaks of his discovery of Bacon. He recounts that "from his *De augmentis scientiarum* Vico [himself] concluded that, as Plato is the prince of Greek wisdom, and the Greeks have no Tacitus, so Romans and Greeks alike have no Bacon" ([14], p. 139). Vico, himself a Catholic, castigated Baco's infamous vicious attacks against Rome, but trying to balance things out, he gave the hostile Anglican philosopher its fair due, saying of him that "without professional and sectarian bias, save for a few things which offend the Catholic religion, he did justice to all the sciences" ([14], p. 139). Indeed Vico acknowledged Bacon's original contribution to scientific methodology, which would itself later reverberate into an augmentation of empirical knowledge.

Vico's metaphysics, developed years before *La Scienza*—and upon which the latter was eventually based—had a strong philological accent. He advanced the argument that in the case of the Latin language, key linguistic terms had been formed out of philosophical insights rather than vulgar trades—indeed "derived from some inward learning rather than from the vernacular usage of the people" ([15], p. 37). Vico engaged into etymological archaeologies to bring into the open the deep meaning of certain metaphysically dense concepts. As a way of guiding examples, he brought up the verb *intelligere,* which means both "to read perfectly" and "to have plain knowledge"; the verb *cogitare*, which means "to think" and "to gather"; and the noun *ratio*, which means both the recognition of mathematical proportions and man's endowed reason. Most tellingly, *verum* and *factum* were at the time interchangeable (convertible), as it is shown in the Latin adagio *verum esse ipsum factum*: "the truth is what is made, itself"—or, the truth is precisely what is done[11]. This assertion carries some immediate epistemological and ontological consequences. For starters, the only one who can *fully know* is God, for He—and He alone—creates its own object of knowledge.

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[10] It is widely acknowledged that J. C. Maxwell held on to visually mechanical explanations of "action at a distance" in electromagnetism until the visual heuristics were no longer needed ([13], chapter 3).

[11] "For the Latins, *verum* (the true) and *factum* (what is made) are interchangeable, or to use the customary language of the Schools, they are convertible" ([15], p. 45).

Before casting Vico's etymology-based metaphysics under a negative light, one could be reminded that he is not alone in this understanding of divine knowledge as the only one which both perfectly knows something and creates precisely that "something" while knowing it. Indeed Vico's views on this are not dissimilar from that of probably the most representative philosopher of the Modern Era. Immanuel Kant, roughly a contemporary of Vico, had a very clearly exclusive adscription of the faculty of "intellectual intuition" to God alone. For Kant, we are endowed with "sensible intuition" (space and time being its pure forms); our faculty is passive, receiving raw sensible material from the thing as it is presented to us—all of which would construct the uniquely Kantian understanding of "experience", which then will be ordered by our intellect. This is within the core of the "Trascendental Aesthetic" in the *Critique of Pure Reason*. Our *intuitus derivativus* does not create the object of our intellect. In contrast, in the case of God's *intuitus originarious*, to think about something *is* to create that something:

> Our kind of intuition is called sensible because it is *not original*. *i.e.*, it is not such that through this intuition itself the existence of its object is given (the latter being a kind of intuition that, as far as we can see, can belong only to the original Being)…intellectual intuition seems to belong solely to the original Being, and never to a being that is dependent as regards both its existence and intuition (an intuition that determines that being's existence by reference to given objects) ([8], B72).

Vico's take on truth as convertible to that which is built, is mindful of Bacon's emphasis on our need for reliance on experimentation for extracting the answers from nature. However, the line of thought that goes from Vico's claim regarding the *verum factum* to Bacon's need for experimenting with reality needs some explanation. God knows everything totally and perfectly because all things that constitute this "everything" are already in Him; humans, on the other hand, are external to these things—we have a superficial grasp of them, since they are not internal to us:

> God reads all the elements of things whether inner or outer, because He contains and disposes them in order, whereas the human mind, because it is limited and external to everything else that is not itself, is confined to the outside edges of things only and, hence, can never gather them all together ([15], p. 46).

This nature of ultimate knowledge has a bearing on science "in general", namely, both for God and humans. Science is "knowledge of the genus or mode by which a thing is made; and by this very knowledge the mind makes the thing, because in knowing it puts together the elements of that thing" ([15], p. 46). Scientific knowledge, thus, implies a creative process. One knows in the very act of creating. Again, only God fully knows, because He creates. Having said that, there is a realm where we in fact fully know, creating the very object that we know: mathematics: "Just as he who occupies himself with geometry is, in his world of figures, a god (so to speak), so God Almighty is, in his world of spirits and bodies, a geometer (so to speak)" ([16], p. 66). It is in mathematical knowledge where we find the closest resemblance to divine cognition.

The situation is dramatically different when it comes to the understanding of the natural order, *i.e.*, knowledge of physical things. Here, once again, both God and humans possess science, but ours is essentially different from His. We drag an inherent stain in our scientific endeavors regarding the natural realm—namely, our lack of ability to "create" (available to God alone) and our subsequent need for abstraction. After all, "since human knowledge is purely abstractive, the more our sciences are immersed in bodily matter, the less certain they are" ([15], p. 52). So Vico confided the aspect we ought to emphasize while doing science in order to overcome this genetic limitation: "Just as divine truth is what God sets in order and creates in the act of knowing it, so human truth is what man puts together and makes in the act of knowing it" ([15], p. 46). Constructability—"putting together"—should be the first criterion of truth, and thus, of scientific success.

In this vein, Vico reminded us that "God knows all things because in Himself He contains the elements with which He puts all things together. Man, on the other hand, strives to know these things by a process of division" ([15], p. 48). This "process of division", quite literally fashions the essence of human science, which itself amounts to the "anatomy of nature's works" ([15], p. 48). This "anatomy" goes beyond a mere figure of speech: we need to dissect, *qua* physician, the elements of nature, and then *cognitively*—not *existentially*, which is only divinely feasible—recreate the object according to our inquiry. Thus, when Vico refers to "dissection", he is referring to experimentation! ([17], p. 103).

Vico's indebtedness to Bacon is more explicit when he makes allusion to an incipient Modern scientific method. He asserted that "hypothesis about the natural order are considered most illuminating and are accepted with the fullest consent of everyone, if we can base experiments on them, in which we make something similar to nature" ([15], p. 52). Considering the ingeniousness of Bacon's proposal pointed above—namely, by pressing nature to answer our own questions—we actually are anchoring ourselves in reality, not removing our minds from it. This critical reverence towards reality begets *wisdom*, which ultimately "in its broad sense is nothing but the science of making such use of things as their nature dictates" ([18], CXIV: 326). According to Vico, Bacon did nothing less than bridging our intellectual capacity with the natural world. However, it is Vico himself who carries the Baconian lesson to its fulfillment: the experimental reconstruction of a phenomenon under controlled conditions is just a first step towards the recreation of the object. True knowledge is acquired when the model becomes the modeled.

2. Undisclosed Ontological Commitments of Contemporary Scientific Modeling

2.1. Nanotechnology: Feasibility of the Viconian Re-Building of Reality

Duns Scotus proposed a "univocity of being" where our difference from the Divine would be one of quantity, not of quality. This view later morphed via Vico into the notion that true knowledge would imply the necessity of building. Kant himself asserted that God's intuitive knowledge—His equivalent of the kind of knowledge generated by our "pure intuitions of sensibility"—would necessarily imply creation. Moreover, Bacon gave back to us the confidence in the possibility of knowledge (lost after Original Sin) by means of experimentation and the "mechanical arts"—mechanistic modeling that arguably fostered the Scientific Revolution.

It is Vico who most clearly stated, regarding the essential reliance of knowledge upon the best possibly constructed model, that "Verum et factum convertuntur": The Truth and the Made converge—or in more colloquial language, "if you know it, build it". Of course, only a *Creator* could fully know its own *creation*. However, since the Scotian ethos defends that humans can epistemically share His Light in an infinitely lower but real degree, we can in principle also know under such light. This emphasis on constructability as criterion of truth (and also as part and parcel of a critique against a Cartesian epistemology), has inspired later thinkers more concerned with the tractability of physically embedded problems.

Vico's prescient *Verum Factum* seems to neatly link the *Univocatio Entis* and *Imago Dei* views into a zenith of knowledge attainment that drives an important aspect of contemporary scientific research. Vico's claim on the future "certain sciences" is telling: "The most certain sciences are those that wash away the blemish of their origin and that become similar to divine science through their creative activity in as much as in these sciences that which is true and that which is made are convertible" ([15], p. 52). It should thus not come as a surprise that one can find in contemporary times a cutting edge research laboratory named "The Giambattista Institute of Cybernetics and Applied Epistemology" in the Netherlands. In fact, the whole rise and demise of cybernetics[12] could be understood from the viewpoint of having suffered such fate due to the cybernetic legendary emphasis on "embodiment" as the core its scientific methodology—itself deeply rooted in the drive behind "Modern"[13] scientific practice. The tension between, on the one hand a theoretical structure *per se*, and on the other, the physical anchoring of such theory, gets all the more interesting once one notices how contemporary science still understands its explanatory task in fairly Modern terms—in other words, roughly mechanistically[14]. These values are indeed essential to the core of the Western tradition, as expressed in the longing for a divine knowledge that entails the possibility of radically transforming (modifying, fixing and improving) a creation given to us for our disposal—ourselves included. Such impetus for control and re-construction is ever more present with us, and in tangible ways.

In 1945, the Manhattan Project physicist Richard Feynman, better known later for his Nobel price research on quantum mechanics, refused a teaching invitation from Princeton University—despite having earned his doctorate from there in 1942. Instead, Feynman accepted a teaching position at CalTech, where he delivered a talk that would come down in history as the first addressing of the possibility of manipulating reality at a level where the transformation and recreation of objects becomes scientifically feasible. The one-time lecture, entitled "There's Plenty of Room at the Bottom" [22] remained, however, largely unknown, until Eric Drexler, a doctor in engineering from M.I.T., found it and subsequently published it almost three decades later, as part of his book *Engines of Creation:*

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[12] Cybernetics was an Anglo-American scientific movement alive in the 1940's and that lasted a decade. I am currently writing a dissertation on the possible reasons for its collapse. Cybernetics might have been the strong proxy between the humanistic advances laid out in the previous 3 Sections, and the later proposals in techno-scientific outlooks displayed below. Lack of space precludes me from further articulating this missing link. For a short introduction on cybernetics, see [19]. For a longer exposition on this scientific movement see [20].

[13] As opposed to "contemporary".

[14] Although this is bound to continue changing. See [21].

The Coming Era of Nanotechnology [23]. Although the term "nanotechnology" was previously coined a decade earlier by Norio Taniguchi (Tokio University of Science), it is after Drexler's book that the notion started to gain traction in the engineering and—later—in the science community. The journal *Nature* has now a permanent section dedicated to nanoscale[15] research.

Canonically, nanotechnology aims at the mechanical manipulation of matter at the molecular level—literally, atom by atom. Such level of reality is allegedly of utmost importance, since stuff can be still "classically" understood under a Newtonian light and rearranged without incurring in quantum indeterminacy[16]. Since a physical thing owes its nature to its particular atomic arrangement (one modifies this arrangement and ends up with another thing), the possibilities immediately foreseen are arguably flabbergasting. In principle, an eventual "molecular assembler" could transform any physical entity into another physical entity, by means of reordering its atomic structure. Such an envisioned feat would obviously transform the world as we know it in radical ways, replacing its economy, resetting global health, and trivializing some deep problems—such as the possibility of attaining intelligence and life artificially (now amenable of being duplicated and enhanced, instead of "found" or "created").

Even if by consensus the field still is in its infancy, the first decade of our century has witnessed some relatively important achievements, which keeps fostering interest in the field in a gradual but relentless way. Feynman's explicit proposal, even if only theoretical, tried to garner attention towards that "untreated" level of reality in the midst of the Cold War. He predicted that research performed at a nanoscale[17] would have as beneficiaries, among other fields, microscopy and computation. Indeed only 6 years later, in 1965, George Moore would be proclaiming what would be henceforth known as "Moore's Law": Every 18–24 months the amount of transistors that could fit in an integrated circuit would double. Thereafter, somewhat expectably, two cornerstones in nanotechnology occurred in a common area shared between computation and microscopy. In 1981 two IBM scientists constructed the first "scanning tunneling microscope", which allowed humans, for the first time, to actually see atoms separately. Eight years later, in 1989, another two IBM scientists rearranged 35 individual atoms at will, forming the logo "IBM". This last achievement properly showed that what nanotechnology was aiming for—the mechanical manipulation of individual atoms—seemed to be in fact feasible [24].

By the turn of the millennium, the U.S. National Nanotechnology Initiative was founded, receiving its first funding during the administration of President Bill Clinton. Quickly realizing nanoscience's potential for multilayered pervasive and disruptive consequences, in 2004 the European Union produced a document entitled *Towards a European Strategy for Nanotechnology* [25]. There the European community made clear its preferred emphasis on the possible benefits for society as a

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[15] One billionth of a meter.

[16] Quantum effects, however, are part and parcel of the whole nanoscale somewhat "exotic" halo. Existing within the threshold of 1–100 nm, the effects pertaining to the so called "quantum realm" are present, and thus, materials tend to behave in a way that is absent at the macro-level (e.g., and otherwise inert material becomes conductive, *etc*.). For an addressing of the quantum-related problems in nanoscale research, see Drexler's "An Open Letter to Richard Smalley" in ([23], Appendix).

[17] The prefix "nano-" for these matters was not yet coined at the time, so he did not use it.

whole—rather than on the human individual, as the American initiative would suggest. The same year, the United Kingdom's Royal Society released the report *Nanoscience and Nanotechnologies: Opportunities and Uncertainties* [26]. In this report Great Britain called for focusing on investigating the possible toxic side effects of doing research at the nanoscale. By 2005, further manipulation of individual atoms was accomplished, this time by means of constructing a nanoscale "car". A team lead by Professor James Tour (Rice University) put together four fullerenes[18] united by a "frame" composed of hydrogen molecules. The experiment was designed to find out in which way fullerenes move across materials. When the surface (the "road") got warmed up (e.g., to 200 degrees Celsius), the diminutive cars began to run over the road at relatively "high speed"[19]. The idea of a nano-machine, indeed proposed by Feynman as a future possibility, seemed to be closer to reality.

One needs to stop for a minute and consider the import of these advances. Indeed, they pertain to the very heart of scientific practice *tout court*. Vico's aim for an absolute recreation of the studied object (the model) as the only—or at least, the best—signature of true knowledge has certainly been at the heart of the scientific mind since the beginning of Modern Science. Indeed the case could be made that such aim *is* the essence of what is expected out of Bacon's *experimentum crucis*. Unfortunately, due to the very nature of reality—leave alone the nature of human cognition—all we could aimed for was the best possible description of a *behavior* manifested by a certain phenomenon or object. Furthermore, when the mapping of a complex system's behavior triggers an explosion of variables, the set up model seems to be facing imminent demise. There comes a point where the range of possible behaviors is just too immense to be captured and articulated. It would seem that at that moment, doing a piece by piece mapping of the structure of the complex object itself becomes more feasible. However, again, in light of the nature of reality and human cognition, this has shown to be a practically unattainable feat, due to the staggering complexity of its structure—which made scientists focus on behavior in the first place (e.g., behaviorism's reduction of the human person to a black box).[20] Ultimately, the endeavor for mapping and rebuilding the actual structure of an entity—a.k.a., attaining *truth*—was right from the start inherently beyond our reach.

But now, the epistemic hope of knowing the object in an almost divine way[21] seems to be amenable of physical realization. The Viconian horizon of literally re-creating our object of study as proof of true knowledge could finally be within reach. Taking us closer to attaining ultimate knowledge and control, the constructed model could become so close to the modeled object that any distinction would be rendered trivial. Vico's dictum of "if you know it, build it", seems to be close to actual instantiation at a qualitatively distinct level. After all, the famous—if unfulfilled—cybernetic dogma was that "the best material model for a cat is another, or preferably the same cat" ([30], p. 320). Reordering atoms one by one, indeed restructuring the very fabric of reality, would have sounded to Vico as the logical step towards the final understanding and mastery of nature.

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[18] A fullerene—or "buckyball"—is a spherical carbon molecule.

[19] However, the "nanocar" lacked an engine, and thus, it was not a car in the full sense of the word (a.k.a., a machine with four wheels, self-propelled by a motor) [27].

[20] This dichotomy was an important source of tension for cybernetics. It might have in fact collaborated towards cybernetics' ultimate demise. See [28,29].

[21] After all the thrust behind the Scientific Revolution, as indicated in the section pertaining to Francis Bacon).

Furthermore, the possibility of building nanomachines arguably surpasses Vico's "verum factum" stance, connecting it with the profoundly ambitious Baconian project—project that was recognized and praised by Vico himself. Not only could objects be partitioned atom by atom, but these parts can be so well rearranged that a working *machine* could arise. After all, that is what we see that living organisms are conformed of: Countless nanomachines working in perfect synchronicity, making up what is regarded as a living system. In fact, the summatory of such realities constitutes the totality of biology. At this point, the distinction between the natural and the artificial has already collapsed. The reckoning of the building blocks of reality subsequently allows for the manipulation and arrangement of them all the way to a living mechanical process. In nanoscience, both the organic and inorganic are *equally* dissected, treated and put together at will.

Currently operating scientific epistemologies stemming from this development might profoundly affect our overall outlook regarding life, as the following section will show.

2.2. Synthetic Biology: Accomplishment of the Baconian Machinization[22] of Nature

Scientists of the above mentioned Nanotechnology Initiative have been noticing that most biological processes indeed happen at the nano level of reality. As examples, the width of the strand of the DNA helix is around 2 nm; the average size of a virus is 40 nm; a small bacteria's size is 200 nm; and so on. The legacy inherited from the Scientific Revolution gradually deemed "natural" occurrences as mechanical in nature—to the chagrin of those who saw a machine and a living system as being fundamentally at odds[23]. For instance, cybernetics took the mechanistic understanding of life to its ultimate workable and theoretical extreme. As such, it gave examples in nature that speak of clever mechanisms that must be underpinned by neatly working machinery. In cybernetic parlance, if nature was capable of accomplishing such a feat, we should logically be able to do it as well, since a machine by definition deems its type of materiality (or even lack thereof) as irrelevant, relying strictly on its determinate behavior[24]. One classically mechanistic case in biology occurring at the sub-cellular level is that of the ribosome, which strikingly resembles a factory assembly line—and which gains with this the strange "honor" of being referred to as a "molecular assembler" ([23], Chapter 1).

Biologists have in later years expressed interest in another instance in nature that offers an even more striking example of machinery functioning at a nano-level. The bacterial flagellum has been of

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[22] I use "machinization" instead of "mechanization" in order to put emphasis on the ontology of the object *qua* machine, instead of its process or behavior—without saying that they are unrelated.

[23] The attempt of denial of a machine-organism isomorphism within the last century was largely nested upon the alleged fact that a living organism can self-organize (to achieve biological homeostasis with its environment and survive) whereas a machine cannot. In face of this, the cyberneticist William Ross Ashby embarked upon the project of elaborating a more sophisticated and complete notion of a machine. This enriched notion can indeed show powers of self-organization. Thus the bridge between the living and the non-living (which behaves as living) was stablished: Machines could be alive. In fact, they always were—in nature—but we did not notice it until recently. For Ashby's treatment of self-organization in machines, see [31,32].

[24] For cybernetics' addressing of the question regarding the nature of a machine in general, see [33]. For incipient attempts at understanding the nature of a machine (mainly stemming from efforts to articulate the nature of an algorithm) see [34,35].

interest to biologists, philosophers and even theologians for several reciprocally intertwined reasons, which could all be put under one conceptual umbrella. If rigorously situated in a historical context, the attraction exerted in the scientific community by this organism's feature is indeed expectable. What is curious is that, beyond scientists, some of the people behind this interest come from unlikely flanks. Thanks to the progress in crystallography and nano-photography, we are now able to see as part of the organism what could only be referred to as an "off-board" motor. The flagellum itself, a tube 20 nm wide, is attached to a complex array of amino acids that make up a structure that not only *resembles* an engine, but also seems to *be* an engine. One can identify pistons, camshaft, levers and an axle. The rotation produced (which allows the flagellum to act as a propeller) is analogous to the motion found in an engine, pistons moving an axle via the camshaft, which in turn makes an exterior propeller quickly turn. Endowed with this acquired motility, the bacteria can freely navigate through a liquid environment. The system seems to so neatly have found a way to achieve locomotion in a thoroughly mechanical way, that Keiichi Namba, from the Graduate School of Frontier Biosciences at Osaka University (and a world's leading authority in bacterial flagellum studies), asserts that

> The structural designs and functional mechanisms to be revealed in the complex machinery of the bacterial flagellum could provide many novel technologies that would become a basis for future nanotechnology, from which we should be able to find many useful applications [36].

Once we have identified a naturally assembled motor, we have found the proof that nano-motors are in fact possible. Nature seems now further disenchanted from any surrounding aura of mystery, thoroughly mechanized all the way down. For starters, once we recognize self-motion in an entity, we can enrich a view that understandably prefers to focus on structure of the object (as seen above), considering now the object's behavior in a rather complementary manner. This behavior will no longer be modeled having "blacked out" the structure that is producing it. Instead, it will have a clear correspondence relation with the underlying structure. Indeed, we are facing something deeper than just a biomimetic venue for future nanoscale research.

There are several issues to consider starting with the adjudication itself of the notion of "machine" to the mechanism connected to the flagellum. At earlier times, when pictures of the structure were substantially blurred, there was debate regarding the possibility of committing an anthropomorphisation of whatever we were seeing. After William Paley, we are uneasily aware of the consequences of finding and proclaiming real machinery in nature [37]. However, when the images got strikingly clear, mastering the complete atomic structure of the area responsible for the bacterial motility, little doubt remained regarding whether or not we were witnessing an actual natural motor. We indeed are[25]. And that created another set of considerations.

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[25] Professor Namba does not hesitate in identifying in such a mechanism an actual engine: "The bacterial flagellum is a rotary nanomachine that spins at hundreds of revolutions per second driven by the electrochemical potential difference across the cytoplasmic membrane" ([38], p. 417).

It would seem that an evolutionary account of how the amino acid "pieces" of this engine are put together would not be satisfactory. Moreover, this evolutionary blind-spot allegedly happens at two-levels. At first glance, it would seem that, since we are talking about after all a machine, we should be willing to accept some entailments. One of them is the claimed fact that a machine is constituted by "parts", and these parts cannot submit to an explanation dependent on evolution and genetic mutation as a whole. These pieces should have always existed as such, without evolutionary change. If the latter would be the case (if a piece would "change") then it would not fit into the motor and would render it useless –similarly to what occurs when a gear changes its shape and ruins an engine. This observation would seem to trump the way in which evolution works.

What is behind this line of discourse is the falsificationist goal of finding an evolutionary niche which could not be explained away by "natural selection"—thus defeating Charles Darwin in his own turf, given that he famously conceded that "[i]f it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down" ([39], p. 146).

An answer to this raised observation has certainly emerged. There are instances where bacteria show the lack of some amino acids ("pieces") in the equivalent area that interfaces more directly with its environment. The bacteria that caused the bubonic plague, for instance, have their flagella attached to the body but not through a rotor. Instead it is stiff and fixed, serving as a needle—through which the bacteria transmit the contagious agent. This occurrence should point to a horizon where evolution can still play the ultimate explanatory role. In this case it would be doing it by somehow getting rid (supposedly via genetic mutation) of certain pieces of the "engine", in order to provide another role in the survival of the entity. However, such counterargument also has a rebuttal. It would seem that the bacterial motility system of a rotary flagellum is older than its fixed counterpart, hence rendering the latter as an unlikely ancestor. To which it is still answered that the flagellum's ancestor might have been completely extinguished, without trace. The discussion goes on.

Some "Intelligent Design" theorists exploit this issue as a workhorse against what they refer to as a scientific tyranny of sorts exercised by Neo-Darwinism[26] in American academia. Intelligent Design (ID), according to its proponents, is a valid scientific alternative to the Neo-Darwinian widely adopted standpoint. ID claims the allegedly verifiable fact that "design" (that which could only have been accomplished by an intelligent agency) is present in nature by default. It was always the case, the defenders would say, but now we get to see it clearer thanks to technological progress that furthered science—such as crystallography—and not just via philosophical reasoning[27]. They would stop short of saying what kind of intelligence they are referring to, but since most of them seem to be practicing Protestant science professors[28], those who dispute this view –usually atheist philosophers[29] and Catholic scientists[30]—accuse them of attempting to smuggle religious "creationism" into the realm

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[26] Or the New Synthesis: Darwinian evolution later improved with Gregor Mendel's theory of genetic mutation.

[27] E.g., As in St. Thomas Aquinas' fifth way within the *Quinque Viae* ([40], Part I, Question 2, Article 3).

[28] E.g., William Dembski and Jonathan Welsh.

[29] E.g., Daniel Dennett and Richard Dawkins.

[30] E.g., Kenneth Miller and George Coyne, S.J.

of scientific discourse[31]. At this point (when the religious convictions of those engaged in the debate are brought to the fore), a sort of justified *ad hominem* fallacy is invoked, and the whole environment of discourse morphs into what is known as the not so surreptitiously ongoing "Culture Wars"[32]. It is in this context that ID advocates denounce the said "tyranny" of neo-Darwinism, which allegedly monopolizes academic environments in meta-scientific (even political) ways, securing a pre-epistemic (anti-religious) and epistemic (atheist) attitude in culture and society.

To be sure, it is not the first time in history that a religious motivation attempts to defeat a certain scientific view due to the supposed negative consequences that the latter would entail. Jesuit mathematicians (e.g., Giovanni Saccheri) were drawn towards the possibility of finding a geometry that would *not* be Euclidean, in order to dismantle both the *Critique of Pure Reason*'s Transcendental Aesthetic and the *Prolegomena*, so that Immanuel Kant's challenge to metaphysics would get eroded. In similar fashion, ID supporters tend to be particularly prone to find instances of machinery in nature, in order to advance their claims regarding the presence of "design" in the natural world. Allegedly, as indicated above, a machine by definition is constituted in such way (not only in its being deterministic, but also in its being inherently constituted by an array of parts) that it defies "natural selection", thus obtaining for us a sort of reverse-Turing test for nature. If a natural entity cannot be accounted for by evolution—as it is the case with a machine—then it has to be designed.

The debate continues, and it may not show signs of receding any time soon. Without attempting to reduce, minimize or dismiss it, one could argue that deep divergences regarding the different conceptualizations of notions such as "creation", "design", and most importantly, "machine" rest at the core of the conflict. Be as it may, one feature particularly relevant for this section stands out. Of

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[31] The Catholic Church's Magisterium has repeatedly referred to neo-Darwinism as more than "just a hypothesis". In 1996 John Paul II said while addressing the Pontifical Academy of Sciences:

> Taking into account the state of scientific research at the time as well as of the requirements of theology, the Encyclical *Humani Generis* considered the doctrine of "evolutionism" a serious hypothesis, worthy of investigation and in-depth study equal to that of the opposing hypothesis… Today, almost half a century after the publication of the Encyclical, new knowledge has led to the recognition of more than one hypothesis in the theory of evolution. It is indeed remarkable that this theory has been progressively accepted by researchers, following a series of discoveries in various fields of knowledge. The convergence, neither sought nor fabricated, of the results of work that was conducted independently is in itself a significant argument in favour of this theory ([41], para. 4).

Cardinal Joseph Ratzinger (later Benedict XVI), then Prefect of the Sacred Congregation for the Doctrine of the Faith, ratified in 2004 a document drafted by the International Theological Commission that read:

> Since it has been demonstrated that all living organisms on earth are genetically related, it is virtually certain that all living organisms have descended from this first organism. Converging evidence from many studies in the physical and biological sciences furnishes mounting support for some theory of evolution to account for the development and diversification of life on earth ([42], para. 63).

Regarding the last Pope, Francis (and the Catholic Tradition's position) the Editorial of the journal *Nature* had this to say on the matter:

> …what is clear is that, contrary to widespread belief, the modern Catholic Church is science-friendly and Pope Francis will no doubt continue, and perhaps deepen, that tradition. The Church's strong support for Darwinian evolution, for example, contrasts sharply with the backwards unscientific belief in creationism of many US evangelicals and lawmakers—a concept that Pope Benedict XVI rightly criticized in 2007 as "absurd" [43].

[32] For an extensive coverage of the issue, see [44,45].

all the people involved in this debate[33], nobody seems to have a problem with one premise which, in the past, would have likely stopped the dialogue in its tracks. Everyone seems to take for granted that what we have before our eyes is, beyond any reasonable doubt, a machine. From a cybernetic lecture of reality, there is considerable import in this assertion—or realization. Facing the bacterial flagellum, whatever vitalist or exceptionalist remnants of a metaphysic tradition that were seemingly still at work in the most materialists thinkers at the time of cybernetics (mid-twentieth century), seem to be extinct towards the second decade of the twenty-first century. The metaphysical safety-bumpers seem to have worn off. Probably just a few of us today would go through any pain in acknowledging that what we are witnessing is *both* a product of nature *and* a machine. A fully natural and fully machinal entity[34]. This is probably the most typically cybernetic feature of all the ones we have—somewhat unwittingly—inherited from cybernetics proper[35].

The Baconian mechanical arts that were to rescue mankind from the damning epistemic darkness set in by Original Sin—and which mechanized the physical universe after the subsequently triggered Scientific Revolution—seem to have indeed provided successful explanatory *mechanisms*. To the extent in which biology is being physicalized, it was just a matter of time until the separating line between the artificial and the natural became blurred—via the articulate consideration of what a machine essentially is. As long as we have a scientific method in place with verifiable outcomes (*experimentum crucis*) towards augmentation of knowledge—and we do—Bacon would have likely approved.

However, the Culture Wars ironically give us still another opportunity to witness novel approaches in scientific modeling—besides the Baconian radical mechanization towards intentional modification. The all-important issue of simulation in science will be shown as logically emerging from the sometimes practically impossible frameworks that scientific experimentation requires. Its validity as a modeling methodology occurred within an important turn of events within the ongoing Culture Wars. This is the topic of the last section.

2.3. Simulation as Reality: Setting a Scotian Continnum between Immateriality and Physicality

During the fall of 2004, the public school of the town of Dover, Pennsylvania, introduced a new biology textbook [50] where Neo-Darwinian evolution was presented alongside an "Intelligent Design" alternative account. Following a mandate from the school committee, a statement had to be

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[33] Against ID: Kenneth Miller, Robert Pennock, Michael Ruse. For ID: Michael Behe, William Dembski, Steve Fuller and Jerry Fodor (the last one more anti-Darwin than pro-ID, although he has written in ID blogs).

[34] Ray Kurzweil, National Medal of Technology and Innovation laureate and Google's current director of engineering, advocates for a preparation towards an inescapable future where humans and machines will be completely merged, rendering any meaningful distinction impossible—even discriminatory. Fuller calls this stance the "cybernetic" view of the future of humanity, seeing an understanding of anthropology as artificial theology. (See ([46], Chapter 1) and ([47], Chapter 1)). However, a truly cybernetic view would refer to man in a *present* stage, and in an obvious way, as just another instance of a typical machine.

[35] Fully fleshing out the lineage between cybernetics and current scientific disciplines would entail a pain-staking articulation that remains to be done. The closer attempt is probably Margaret Boden's two volume work [48]. Jean-Pierre Dupuy's book [20] attempts to unveil some of the cybernetic ancestral features of contemporary disciplines, but according to Gualtiero Picinini, he falls short of completing the task [49].

read out loud by the biology teacher, referring clearly to the existence of both accounts, so that the student could evaluate and decide on its own. By next fall, a number of concerned teachers and parents had presented a law-suit against the school. The plaintiff sustained that such "strategy" was in fact introducing religion in science class at a public high school. What occurred next signaled the last chapter in the conflict that emerged several times out of the idiosyncratically American "separation of church and state".

Expert witnesses were called to testify. Several of those mentioned above were called up to testify on the subject[36]. It soon became clear that what was at stake was the American legal take on the very identity of science. The religious motivations behind the Scientific Revolution—event that could be understood, as per Francis Bacon, as a tension within Christianity in order to overcome a "genetic" ignorance set off by Original Sin[37]—were brought to the fore. The methodology of science, the so-called "scientific method" took precedence. ID supporters claimed that Intelligent Design had a valid space in the scientific discourse based upon this very method. They denied the interference of any preconceived theological element, relying instead in methodological deduction after a hypothesis and subsequent induction following the evidence. In this context, instances such as the bacterial flagellum above mentioned were presented in detail, allegedly demonstrating in purely scientific fashion that there is evidence in nature for the existence of "irreducibly complex" machines—dynamical arrays whose perfectly fitting internal parts cannot be accounted for by evolution. As seen in the preceding section, these parts needed to have been "intelligently designed" to fit each other and function in tandem.

There was critical reaction against ID, signaling the alleged undisclosed feature indicated above—a secularly masked creationism. However, soon it became apparent that "evolution" had to be treated under the same judging scope. The taken for granted scandalously undeniable evidence for the truth of evolution had to be shown. How do we know, with the sharp certainty that only science could provide, that evolution is true? After all, ID was being attacked from those very grounds. Accordingly, U.S. District Judge John E. Jones, a Republican Christian, asked for the same sort of evidence that evolution advocates were claiming ID cannot produce.

Since ID theorists almost make a living out of reciting by heart the claimed Darwinian flaws, evolution's blind spots were so severely criticized that its advocates at some point indeed struggled. Robert Pennock, a philosopher of science and expert witness in the trial for the side of evolution, came up with an alleged proof that neo-Darwinian evolution is not just "a theory", namely, perfectly falsifiable and hence amenable of being discarded and superseded[38].

Avida[39] is a computer program that generates an "evolutionary" environment *in silico*. More specifically, the program is designed to create and maintain entities that compete for resources. Each

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[36] Previous note on the principal figures in the Culture Wars debate.

[37] Section 2.

[38] The perceived exchangeability between the notions of "hypothesis" and "theory" seems to occur mainly in the English language. The statement of evolution as being "just a hypothesis" would in any case make more sense. Evolution as "just a theory" can be translated to evolution as "just a *tested hypothesis*"—the canonical definition of theory—which would be of course problematic.

[39] For an explanation co-written by Pennock of the role of Avida in scientific methodology, see [51].

has its own memory allocation and virtual central processing unit (CPU), and they are protected from each other. They have to evolve in such way that they can gain access to time with the main CPU. These digital entities have the capacity to modify (re-program) themselves, in order to reach a better fit for survival—not completely unlike sophisticated computer viruses that fight for their "lives" in domestic computing environments. In Pennock's words, "it is clear that natural selection can be perfectly instantiated in A-life systems" ([52], p. 37). In case there is any doubt still lingering so as to how to understand these words, he asserted that "this is not a simulation" of evolution. Rather, it is an "instance" of it. The program—or what it purported to show—did convince the judge[40]. Thus the court declared evolution as a *fact*. Materiality was not deemed necessary to accept the truism of evolution. Pennock further affirmed that:

> While it is true that evolution of carbon-based organisms is the prototype of the concept, this historical fact is not a sufficient reason to limit its scope. Why be carbon-centric? It is the patterns of causal interactions that are relevant, not the particular *material substrate*. …the material substrate of the Darwinian processes should be *irrelevant* to whether we recognize something as an instance of Darwin's evolutionary mechanism ([52], p. 32).

Thus even if the witnessed "evolution" happened entirely inside a machine, one nevertheless can claim now to have "proof"—at least in the eyes of the judge—that evolution is, plainly and simply, true. Facing an instance of the awkward relation between scientific practice and institutionality, one could object that a legal decision cannot make, let alone rule, science. This objection could recognize in this court ruling, at most, a geo-culturally limited change of attitude regarding what is real and what it is not in its own legal environment. Now virtual realities count as legal facts. However, once we factor in Pennock's statements, we can readily notice that this epistemological ethos has a theoretical and empirical background that goes way beyond contemporary legalisms—in fact, it is increasingly shared by salient scientific enterprises. Indeed Pennock is by no means isolated in advancing these views –and the judge probably knew that much. Some recent examples are relevant.

In 2006, a group of scientists lead by Klaus Schulten (University of Illinois at Urbana) simulated an entire virus, modeling it atom by atom. Unsurprisingly, the study was published in the journal *Structure*. The satellite tobacco mosaic virus, one of the smallest in nature, had its approximately one million atoms "recreated" simultaneously. It required the sheer computing capability of one of the most powerful machines on the planet, the National Center for Supercomputing Applications. Still, it took 100 days to bring up to "life" only 50 nanoseconds of the "virtual" virus [53]. Later on in 2012, Markus Covert (Stanford University) and his team recreated a complete organism—a bacterium[41]. This unicellular entity, the *Mycoplasma genitalia*, is the living being with the smallest genetic footprint: 525 genes. Remarkably, this time the entity, recreated *in silico*, underwent a reproductive

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[40] To be sure, the ID side (the defendants) lost the case not only due to this finding. An early draft of the controversial textbook was found, and in it, it was shown that the word "creationism" was scratched and replaced with "intelligent design" on top. This was enough evidence to show, for the judge, that religion was being smuggled into science class in a public school, thereby violating the constitutional separation between church and state in that country.

[41] It is traditionally understood that a virus does not qualify as a "complete" organism, given that it needs a host to survive. In fact, debates regarding its status as a "living" entity pivot upon this very issue.

process. Serving as a witness to the kind of progress that computation can develop in just 6 years, this time the virtual entity lasted 10 h: The actual time the modeled entity takes to reproduce, and remarkably, the time the constructed model took to do it as well. The constructed model and the modeled organism were operationally identical, all the way down to their atomic existence. For attaining this, a cluster of 128 powerful computers interconnected were required. It was the first time a complete organism has been entirely reproduced inside a virtual environment [54].

In all fairness to cybernetics, these scientific accomplishments were the stuff that made up the cybernetitians' dreams—albeit unaccomplishable at their time, due to the lack of technological advancement in what regards manipulation of materials[42]. However, cybernetics' penchant for actual (physical) model building[43], at least theoretically, was not entirely new—as we have seen in Section 3. Although it became right from the start a sort of defining feature for the cybernetic enterprise, the recreation of a studied object has deep roots in the Western tradition of philosophy, arguably reaching a peak with Vico's dictum for interchangeability between object and model as an insurmountable footprint of truth. However, the tension between the mandate for material model construction and the seemingly perennial temptation for abandoning all grips with physical reality since Plato, might have proven to be deeper and more pervading—and might had spelled, *at the time*[44], the demise of the cybernetic project.

It is ironic that a model existent solely in virtual reality would come to undermine the survival of Intelligent Design, since "ID clearly descends from the Franciscan side in accepting a univocal account of language" ([1], p. 107). Indeed it was the Franciscan Duns Scotus who established a type of strong relation between physical entities and disembodied realms. This connection found echo in Newton's idea of having access to God's mind. Reacting against Original Sin's epistemic darkness via Bacon's mechanical arts, we can recover that Adamian divinely infused knowledge, instantiated in the only possible way that can show its divine origin: the radical (re)creation of objects—as Vico foresaw. This closes the Scotian circle, where the attributes of humans and those of God are different in degree, not in kind. This dynamic might entail a new context of thinking about the status of what we understand as a human entity. Specifically, a synthetic biology spearheaded by a profoundly mechanistic view of life—where the distinction between the natural and the artificial is blurred—might have found a renewed strength thanks to the promises of a fundamental restructuring of nature via nano-science.

3. Concluding Remarks

Whatever outcome may arrive regarding the status of "the human" from this deep restructuring of the technological impetus, it would be useful to realize that the allegedly ideas driving these late scientific foresights and technological goals are not radically new—at least in spirit. Francis Bacon

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[42] In fact this very issue, shifting from behavior to structure in scientific modeling, caused deep internal tensions within cybernetics, as indicated above [28,29].

[43] Famous—even "media-friendly"—cybernetic autonomous machines were Claude Shannon's "rats", Grey Walter "tortoises" and Ross Ashby's "homeostat" [55].

[44] Late 1950s.

launched a mechanization of reality—successfully implemented by Isaac Newton—which shaped the way in which natural phenomena are scientifically dissected and systematized via an inter-operatively successful corpus of "explanatory mechanisms". For Giambattista Vico the ultimate signature for true knowledge becomes the capacity to literally build the object of knowledge, and so the total mechanization of explainable phenomena had to eventually—but necessarily—occur. Nature becomes understandable due to its mechanical essence. Moreover, machine, by definition, can be tinkered with, fixed and improved: Man can indeed be closer to its own potential. After all, as Scotian philosophy would suggest with reasonable stretch, divine qualities were always present in us to some degree. The angelic features dormant in us might gradually—but finally—come to fruition. Indeed the intellectual tendency for disengagement from physical substrata towards an immaterial, "cleaner" and universal reality has been with us since Ancient Greece. It would seem that the force transcending embodiment towards non-materiality is finally allowing for a purification of the best possible mold. Once that abstracted containment is filled up, it can be re-instantiated in physical reality—thus radically modifying it.

To repeat, this hub of technological outlooks might have important implications for the Western notion of what it means to be a human being. It is no wonder that mega-projects such as the so-called Nano-Bio-Info-Cogno (NBIC) Convergence[45], exploiting the possibilities opened up by methodologies of bio-mechanization, virtual simulation and nano-construction, have high hopes for an upcoming Renaissance 2.0 of sorts[46]. A scientifically viable instantiation of a collective hope for a positively transhumanist [58] future seems to be in the making, regardless of whether the approach for its

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[45] This was a coordinated effort launched in 2000 to synchronize current developments in sciences and technologies towards a unified vision that would allow for the possibility of a qualitative leap in the human experience:

> The phrase "convergent technologies" refers to the synergistic combination of four major "NBIC" (nano-bio-info-cogno) provinces of science and technology, each of which is currently progressing at a rapid rate: (a) nanoscience and nanotechnology; (b) biotechnology and biomedicine, including genetic engineering; (c) information technology, including advanced computing and communications; and (d) cognitive science, including cognitive neuroscience ([56], pp. 1–2).

Correspondingly, a summarizing motto found in its founding document reads:

> If the Cognitive Scientists can think it,
> the Nano people can build it,
> the Bio people can implement it, and
> the IT people can monitor and control it ([56], p. 13).

[46] Expressing a concern not dissimilar with cybernetic's own during the 1940s ([57], pp. 2–3), a preoccupation with the wide separation existing between different areas of scientific research was expressed. The countervailing epistemic position would be that of a renaissance man (*i.e.*, the polymath Leonardo Da Vinci). Accordingly, a new, unifying view is proposed:

> We stand at the threshold of a *new renaissance* in science and technology, based on a comprehensive understanding of the structure and behavior of matter from the nanoscale up to the most complex system yet discovered, the human brain…Developments in systems approaches, mathematics, and computation in conjunction with NBIC allow us *for the first time* to understand the natural world, human society, and scientific research as closely coupled complex, hierarchical systems. At this moment in the evolution of technical achievement, improvement of human performance through integration of technologies becomes possible ([56], p. 2. Emphasis added).

implementation takes a high-risk stance[47] or one that advocates precaution.[48]. This dynamism of mechanization, purified abstraction and ulterior re-instantiation might indeed hold the key for our biological survival *vis a vis* a potentially radical ecological change—even if in the process the very notion of "human" gets trivialized all the way into oblivion.

The awareness that "human nature"—whatever we understand by it—would indeed not survive the advance of science is a common sentiment among scholars in the last decades. As if we would have to give up on our philosophy in order to preserve our biology. If we remind them that the very forces behind these pervasive technological disruptions are deeply rooted into what prominent humanists proposed between the thirteenth and sixteenth centuries, the context for understanding this progress can be geared towards a more enriched and embedded approach—even if what we obtain as an outcome is beyond recognition. Having in consideration the metaphysical tenets behind these disruptive technologies could further foster their advancement, correspondingly cultivating the awareness that there is a hopeful, transcendent, notion of what it entails to be human—which inspired these Medieval and early Modern intellectual forces in the first place. The difference is that now we might be witnessing the beginning of the technological feasibility for this "next" human. It would then seem then that the relevance of the humanities should be considered of utmost importance when facing indeed a new way of human existence: As a "biological citizen", aware of its "neurochemical self", and displaying "somatic expertise" with its own "biocapital"[49]. Indeed, the renewed fostering of the humanities might be necessary for our very survival. If one is to thoroughly articulate the underlying humanistic impetus behind pervasively disruptive technologies, the input of the humanities could not only let itself be felt, but indeed guide the late scientific ethos towards human alteration into self-critical flourishing.

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Conflicts of Interest

The author declares no conflict of interest.

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[47] As the founding, American document would suggest [56].

[48] As the document produced by the European Union in response would propose [59]. For an account of the difference between the American and the European views on NBIC, see [60]. The Canadian stance was aligned with its American neighbor's [61].

[49] See chapters 5, 7 and the Afterword of [62].

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The Encounter of Nursing and the Clinical Humanities: Nursing Education and the Spirit of Healing

An-bang Yu

Abstract: Practicing the clinical humanities requires throwing oneself into the unpredictable locus of suffering, where one is unable to infer the actual situation of the other, a process which fosters self-disclosure. By using the term "clinical humanities" we are attempting to free the humanities and social sciences from their self-imposed boundaries which have brought them to their current dispirited condition. Bringing the depth of the humanities and social sciences into the clinical field in the service of relieving suffering and setting up a humanities support network will help the humanities renew itself by listening attentively to the great amount of suffering in the world. Conceived in this way, the clinical humanities has its own methodology and way of generating insight, and also has a unique contribution to make to the amelioration of suffering in all its forms. In moving beyond their current condition and into the clinical field, the humanities and social sciences take on a new conceptual framework and a distinctive rhythm. From this perspective, the encounter between nursing and the clinical humanities might be seen as the unlikely meeting of fundamentally different and incompatible fields. Indeed, the humanities and social sciences may seem quite alien to nursing and clinical practice. In this paper I explore diverse aspects of the clinical humanities and how they can be applied to nursing and nursing education. I also investigate some innovative perspectives on healing and the clinical humanities and the implications they have for nursing and nursing education.

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1. Defining the Clinical Humanities

After being defeated by the Communists in the long-running Chinese Civil War, the government of the ROC (Republic of China) retreated to Taiwan in 1949 and made the island its redoubt while preparing to retake the mainland. Thanks to the political and military support of the United States (U.S.), as guaranteed in the Sino-American Mutual Defense Treaty, the ROC government succeeded in retaining possession of Taiwan, which was seen by the U.S. as a key buffer state in its efforts to contain the spread of communism. Over the following decades Taiwan was under martial law, and with substantial U.S. assistance entered into a period of rapid industrialization and Westernization. As elsewhere in the developing world, however, U.S. aid was contingent on the implementation of economic reforms along American lines. At the same time, the neo-liberal perspectives of the U.S. came to have a major impact on all aspects of life in Taiwan, a process sometimes referred to as "neo-imperialism". Thus it comes as no surprise that Taiwan's system of higher education is very much modeled on that of the U.S.

This is especially true in the case of medical education. Indeed, in present-day Taiwan there exists practically no alternative to the Euro-American approach, in which medicine is seen as a branch of the biological sciences. This has had a major influence on the medical culture of contemporary Taiwan, such that the traditional Chinese understanding of health and illness, as well as the wide variety of healing practices based thereupon (spiritual healing, *qigong*, *etc.*), are by and large rejected by the mainstream medical establishment as "superstitions" or "quackery". One notable exception is the recent addition of traditional Chinese medicine to the types of treatment covered by Taiwan's national health insurance program. Being based on the rationality of the natural sciences, the Western medical model attempts to objectify and universalize illness, diagnosis, and treatment, with the result that such subjective factors as the affective states and emotional intelligence of nursing staff is seen as irrelevant or even intrusive. Such a state of affairs has given rise to a medical system characterized by materialistic values and hampered by a sense of alienation on the part of patients and medical professionals.

The helping professions in contemporary Taiwanese society, including nursing and clinical counseling, are becoming increasingly specialized and compartmentalized, such that the meaning of "professional" has come to refer to a person who has acquired a highly specialized set of skills which can quickly bring about objectively verifiable results. In comparison with the holistic view of health and wellbeing in traditional Chinese medicine, such an approach is seriously lacking in cultural depth. Indeed, Western medicine adopts the "fast food" approach to health care, and it seems that today's national health care systems treat health as just another commodity. It is equally apparent that in Taiwan the humanities and social sciences are becoming increasingly isolated and superfluous due to their general lack of interest in facing the fundamental issues of human suffering.

In response to this situation, in the spring of 2009 a team of scholars in Taiwan headed by Professor Der-heuy Yee set up the Clinical Humanities Research Center (CHRC) and set about investigating the interface between medicine and the humanities and the application of the results to clinical practice [2]. The central idea of the clinical humanities is that health care is a key issue which has spiritual implications in all spheres of life. In this context the term "clinical" refers to the relief of human suffering by entering into the site of suffering. The clinical humanities strives to appropriately apply the insights of both the humanities and social sciences—including such seemingly unrelated fields as the fine arts, philosophy, literature, history, anthropology, psychology, and religion—to the understanding and alleviation of suffering.

By using the term "clinical humanities" we are attempting to free the humanities and social sciences from their self-imposed boundaries which have brought them to their current dispirited condition. Bringing the depth of the humanities and social sciences into the clinical field in the service of relieving suffering and setting up a humanities support network will help the humanities renew itself by listening attentively to the suffering in the world. Conceived in this way, the clinical humanities has its own methodology and way of generating insight, and also has a unique contribution to make to the amelioration of suffering in all its forms.

In this paper I present the central concerns of the clinical humanities from the ontological and epistemological perspectives, with a particular emphasis on how this emerging field can serve to increase the depth and breadth of our understanding of suffering and healing. One of the key

purposes of the clinical humanities is to give more attention to the dynamic and transformative nature of the "place of suffering". Inasmuch as the place of suffering is characterized by the flow and transformation of energy, the clinical humanities aims to function as a catalyst of healing. The main approach is to integrate and apply the perspectives of the humanities and social sciences to gaining a deeper, more comprehensive, and practical understanding of the abundant information which exists at the site of suffering. Such insight can then be applied to the formulation of techniques which have the capacity to bring about healing and transformation. Far from being an abstract concept or a simplistic model of cause and effect, above all the clinical humanities aims to bring about practical results [3].

In the clinical humanities the term "suffering" refers to not only mental and physical suffering, but also to all types of "social suffering", including racism, sexism, and poverty. Likewise, the term "healing encounter" refers to the spontaneous healing which can result in the context of genuine and caring human interaction.

Seeing that human suffering always occurs within a particular cultural milieu, our understanding of suffering and its treatment must necessarily be indigenized. For this reason the CHRC has been utilizing the concepts of ethos and the ethical act to develop various indigenized techniques for treating both mental and physical suffering. Such an approach stands in stark contrast to that of contemporary mainstream psychiatry, which is based on the concepts of normality and deviance, and which tends to use invasive measures intended to bring about quick results. In the clinical humanities, however, everyday life and the "body space" are taken as the "site of healing", and the healing techniques utilized are gentle and culturally sensitive.

Based on the results of our research, we are now endeavoring to deepen and expand our understanding of suffering and healing, and to popularize the concepts of "lifeworld" and the clinical humanities. In addition to bringing the humanities and social sciences back into the everyday world, the clinical humanities can serve as a foundation for medical education and indigenized clinical counseling, a foundation which is very different than the currently favored one based on empirical science. Moreover, the clinical humanities transcends the limited perspectives built into the approach to health and wellbeing currently used in mainstream medical treatment and clinical and counseling psychology. Thus the clinical humanities can be seen as a way of bringing diversity to both clinical psychology and nursing education [3].

One of the main objectives of the clinical humanities is to establish an alternative foundation for the development of indigenous clinical and counseling psychology, cultural healing, and medical care. The underlying principle of the clinical humanities is that all forms of suffering—mental, physical, emotional, or existential—arise in a specific sociocultural context, and must be understood in relation to this context. This is why indigenized versions of the helping professions are shifting away from pathology and towards an ethicized social practice.

2. Towards a Medical Ethics Embedded in the Lifeworld

The "comprehensive care of body and mind" have already become buzz words in mainstream medicine. Yet, without a deep grounding in the humanities, so-called holistic body-mind treatment is merely another slogan. From the perspective of palliative care, such a grounding includes sensitivity

to such issues as ethics, religious sentiments, and bereavement. These issues require a depth of understanding which is far greater than that required for daily life, and thorough familiarity with them is essential for anyone working in the clinical humanities. This is the starting point for a medical ethics embedded in the lifeworld.

When we point out this lack of human sensitivity in the field of medical care, some may object that this is simply the current state of affairs in Taiwan, and that the same situation prevails in all medical settings. However, our purpose here is not to compare the strong and weak points of the various treatment settings in Taiwan. Rather, we want to emphasize the human sensitivity which can be brought to bear on the issues of illness and death in different modes of providing care. One of the most trenchant objections to the current paradigm of medical treatment is that, in its over-emphasis on the elimination of symptoms, it also eliminates the lifeworld of the patient. In such a view, the modern medical profession transforms "suffering" into mere "symptoms", in the process banishing the emotional element of illness and masking its true nature. Illness is necessarily an emotional experience [4], and what sort of emotions we produce lies in the depth of our human sensitivity.

In the words of Gong [5]:

> Illness is an experience, not scientific knowledge. In approaching illness as it is actually experienced, we need to temporarily put aside the direct use of literal language and concepts in order to avoid narrowing the horizon; we also need to maintain a high degree of sensitivity towards the patient's latent life narrative, and inquire into the structure of the patient's inclination.

Gong [5] quotes S. Kay Toombs decisive words:

> In facing the most important ethical questions and carrying out open and intimate dialogue, an individual shifts his attention from direct involvement with worldly entanglements to his deepest inner emotions, in the process experiencing what to him has ultimate meaning.

As a scholar of rare and severe illnesses, Toombs speaks about suffering in a very personal voice, helping philosophy to occupy an increasingly prominent position in the discussion of medical treatment. Senior psychiatrist Arthur Kleinman[1] goes even further in the reflections he presents in *What Really Matters: Living a Moral Life amidst Uncertainty and Danger*, where he attempts to increase our understanding of psychiatry and apply its insights to the troubled moral life of contemporary society [6]. These are some of the more prominent voices calling into question the dominant paradigm in contemporary medicine and nursing care, especially its over-emphasis on the elimination of symptoms.

In the course of our teaching, research, and clinical experience, we gradually came to wonder whether it would be feasible to introduce the humanities into the alleviation of suffering, and whether the humanities could expand beyond its traditional confines and into the field of caregiving. At the

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[1] Kleinman founded the Medical Anthropology Department at Harvard University, and beginning in the 1960s has done research in Taiwan on mental illness and spirit mediums.

same time, the humanities and social sciences can develop a new way of thinking which is situational and indigenized, and which has clinical applicability.

The CHRC brings together local and foreign scholars working in the humanities (e.g., art, philosophy, Sinology, literature, history, and religion) and the social sciences (e.g., cultural psychiatry, cultural psychology, psychotherapy, clinical psychology, medical anthropology, medical sociology, nursing, and social work). Our long-term goal is to form an interdisciplinary research network with the mission of exploring the accessibility and significance of the clinical humanities by organizing study groups, workshops, training camps, and academic forums which examine a variety of new approaches to the humanities and social sciences, as well as the possibility of designing an integrated program in the clinical humanities.

3. The Clinical Humanities Research Center

Based on the above considerations, in the summer of 2009 we officially established the CHRC, with Professor Der-heuy Yee (Graduate Institute of Religion and the Humanities, Ciji University) as the director, and Professor An-bang Yu (Institute of Ethnology, Academia Sinica) as the executive director. Based at the College of Humanities and Social Sciences of Ciji (Tzu Chi) University in Hualien, the center serves as a platform for incorporating the humanities and social sciences into medical and nursing treatment in a comprehensive manner. Because they are deeply involved with ethical, interpersonal, socioeconomic, and psychological issues, the humanities and social sciences have a natural role to play in the healing arts. Concretely speaking, our plan is to develop an interdisciplinary academic network of professors and other professionals with extensive related experience in order to achieve the following goals: (1) the development and elucidation of core concepts and key terminology, as well as the classification of the categories, extent, and applicability of the clinical humanities; (2) assisting participating professors in establishing related courses and organizing educational workshops for the collective development of teaching materials; (3) organizing workshops for the discussion of possible cooperative research projects and objectives; and (4) drafting the curricula for several short-term classes and making these available to the members of various academic societies.

In our view, practicing the clinical humanities requires throwing oneself into the unpredictable locus of suffering, where one is unable to infer the actual situation of the other, a process which fosters self-disclosure. By using the term “clinical humanities” we are attempting to free the humanities from its self-imposed boundaries which have brought it to its current dispirited condition. Bringing the depth of the humanities into the clinical field in the service of relieving suffering and setting up a humanities support network will help the humanities renew itself by listening attentively to the suffering in the world. Conceived in this way, the clinical humanities has its own methodology and way of generating insight, and also has a unique contribution to make to the amelioration of suffering in all its forms [2,7]. Before proceeding, it is necessary to elaborate on the meaning of healing.

In the view of Thomas Csordas [8] healing is not so much the elimination of illness, as a transformation in the person, in which the body arrives at a new understanding and enters into another reality. What is meant here by “body” is not merely the physical body, but may refer to any realm of experience, including religious, emotional, aesthetic, linguistic, historical, or political. For example,

faith healing comes about through one's relationship with God, by making a meaningful connection with the sacred. The end result is a transformational experience which has a profound effect on the person's body, mind, and spirit [9].

According to Henri Bergson's theory of immanence, healing is a type of inherent transformation, the occurrence of which is quite unpredictable. And when healing does occur, it happens at various speeds, yet it can become a continuous state. Moreover, this process freely extends from moment to moment, and is beyond the control and comprehension of the ego, just as one's thoughts freely flow through time. From this perspective, healing is an immanent phenomenon, and its essential nature is time. In this sense, healing is a type of freedom [10,11].

An additional goal of the CHRC is to integrate the clinical humanities into both teaching and research. This includes helping teachers to seamlessly integrate the clinical humanities into their courses and introduce their students to such topics as impermanence and awareness of the body. The CHRC is especially concerned with the learning which takes place in the course of meeting suffering, and how to deepen this learning in clinical practice in order to gain a diverse perspective on key ethical issues.

One of the basic functions of the CHRC is the formulation of a practical development plan for the localization and regionalization of education, research, and clinical work. Here, "localization" means the seamless linking up of the work of the CHRC with the lifeworld of teachers and students, in order to bring about the integration of theory and practice in the clinical humanities. "Regionalization" means taking the "site of suffering" as the social category, and linking up those working in different areas into a diverse network of healing resources in order to create a healing community of learning, resource sharing, and mutual support. This would include: (1) setting up experimental healing communities in various disciplines for the purpose of training in the theory and practice of the clinical humanities; (2) compiling and distributing writings based on personal experience of natural disasters, illness, and personal hardship; and (3) putting theory into practice by extending classroom learning into real-life situations.

In the past the humanities and social sciences have been tightly encapsulated within their own academic boundaries, remaining aloof from the many changes in perspective brought about by post-modernism. It is quite clear that a post-modern approach to the humanities and social sciences includes a blurring of traditional academic borders, in accordance with the trend of fluid boundaries between academic disciplines. Although at present a number of disciplines in the humanities and social sciences have begun to venture into related areas, they tend to do so in a tentative and limited manner. Indeed, effective interdisciplinary work can generate a new domain of knowledge and open up new realms of possibility.

4. The Encounter of Nursing and the Clinical Humanities

At the beginning of 2010 Professor Pei-fan Mu of National Yangming University's School of Nursing began to participate in a variety of activities organized by the CHRC. At this time she expressed her concerns about the current predicaments facing nursing education and research, as well as her interest in applying the perspective of the clinical humanities to effecting reforms in nursing education. As a result, in the spring semester of 2010 Mu added an elective course titled

"Nursing Humanities" to the M.A. and Ph.D. curriculums of Yangming's Institute of Clinical and Community Nursing. This short-term course focuses on the application of the humanities to various methodological and epistemological issues in nursing, as well as effective ways for nursing professionals to increase their knowledge and understanding of the clinical humanities [12].

Formulated in accordance with the overall aims of Yangming's School of Nursing, the Nursing Humanities course covers the following topics: (1) the meaning and practical importance of the nursing humanities; (2) the educational goals of the "Nursing and the Clinical Humanities" module at Yangming; (3) the humanities techniques of narration and introspection; (4) using narration and introspection to explore various clinical issues in the nursing humanities; (5) ethics in theory and practice; (6) case studies which illustrate ethical issues in nursing; and (7) the interpersonal relationship between nurse and patient, doctor and nurse, nurse and nurse, *etc*. [13]. In short, the basic approach of the Nursing Humanities course is to use lectures and discussions to familiarize participants with the fundamental concepts and techniques of the clinical humanities, why they are important, and how to apply them to their own work.

Mu's ([12], p. 5) perspective on the Nursing and the Clinical Humanities module is made evident in the following extract from the introduction to the module:

> The Nursing and the Clinical Humanities module being held by National Yangming University's School of Nursing was designed by the school's faculty and students in collaboration with scholars in the humanities. It can be seen as a milestone in the introduction of the clinical humanities into the curriculum of the School of Nursing. In January 2010 we began holding a series of seminars and workshops for nursing instructors and scholars specializing in various areas of the humanities. The instructors shared their ideas about educational goals in nursing and how the clinical humanities might be used to bring about various improvements in nursing education. For their part, the humanities scholars shared their ideas on how their respective disciplines can be applied to health care and how we understand illness and disease. The nursing instructors also reflected on the best ways to integrate the nursing humanities into nursing education, how to apply concepts in the humanities to nursing education, and what the nursing humanities looks like in actual practice.

The Nursing and the Clinical Humanities module consists of four courses covering five themes: psychoanalysis and humanistic care; inquiry in the clinical humanities (readings in illness and ethnography); Western philosophy and humanistic care; art and humanistic care; and humanistic care in the helping professions. The main learning goals of the module are as follows: (1) to understand the various concepts, theories, and research methods used in the humanities and social sciences which have a bearing on caregiving, and how they can be applied to the relief of suffering; (2) to inquire into the meaning of the nursing humanities and become familiar with practical and effective techniques for relieving suffering; (3) to learn how to apply various ideas and methods from the humanities and social sciences to gaining insight into the experience of health, illness, and suffering; and (4) to learn how to gain insight from clinical experience, learn through self-inquiry, and understand the heuristic approach to nursing theory.

The main topics covered in each of the five themes included in the module are as follows:

(1) *Psychoanalysis and humanistic care*. This theme covers the history of psychoanalysis from Sigmund Freud to Jacques Lacan; linguistic analysis as it pertains to the etiology of illness; theories on human behavior; how the study of such pathological conditions as aphasia and hysteria led to the development of such concepts as the "organ of the soul" and the "apparatus of the soul"; the relationship between dreams, memory, and amnesia; and psychological defense mechanisms [14].

(2) *Inquiry in the clinical humanities* (readings in illness and ethnography). The focus of this theme is ethnographic writings on illness, including how writing can be used to reflect on illness; the position of illness in culture; the relationship between bodily experience and caregiving; and the relationship between the experience of being ill, illness narratives, and psychological healing [15]. In addition, this theme covers how bodily experience, metaphors for illness, and writing on illness are culturally mediated, leading the ethnographer to see certain phenomena, but not others [16]. Finally, the interdisciplinary approach of the clinical humanities is used to inquire into the future direction of the nursing humanities [2,12].

(3) *Western philosophy and humanistic care*. This theme includes inquiry into such Aristotelian ideas as beauty, goodness, love, and freedom; key concepts in existential philosophy, such as Kant's ideas on free will, Nietzsche's "will to power", Kierkegaard's ideas on existentialism, and neo-Aristotelian thought. Also covered are Hannah Arendt's ideas on movement and thought; responsibility and judgment; the relationship between conscience and freedom; and the meaning of action, laboring, and making—all of which have a bearing on how value judgments apply to the nursing profession. This theme also covers how Heidegger's concepts of *sein* and *dasein* relate to Confucian, Daoist, and Buddhist thought, with respect to ethics and the difficulties which arise in clinical settings. Finally, considerable emphasis is placed on the ethics and duties of caregiving.

(4) *Art and humanistic care*. This theme covers the theories on aesthetics of such Western philosophers as Descartes, Kant, and Heidegger; the intersubjective relationship between the artist and his or her art; and the influence artistic creation has on caregiving. In addition, based on personal experience in community building and organizing spaces for public art, the lecturer discusses how a space is laid out influences artistic activity and our relationship with objects. Also covered in this theme are how the characteristic features of traditional Chinese gardens and temples reflect the designer's views on nature and space, and the practical implications this has for humanistic care.

(5) *Humanistic care in the helping professions*. In this theme the perspective of Western aesthetics is adopted to show how the helping professions can be seen as an art form, and how the caregiver can be seen as an artist rather than an instrument. From the perspective of aesthetics, the interpersonal experience which arises in the context of caregiving can be understood as the medium for creating art. Furthermore, the site of caregiving can be seen as a humanities space full of symbolic meaning, the changes in which the caregiver needs to respond to in an appropriate manner so as to make caregiving an aesthetic experience.

In order to increase the quality of the Nursing and the Clinical Humanities module, the instructors have adopted a flexible and exploratory approach to the course content and how they present it. Thus

the emphasis is not so much on the various concepts and theories in different areas of the humanities, as on how the learning experience can raise meaningful questions and lead to a loosening of certain rigid and entrenched views and practices in the nursing profession. Indeed, such an experimental course opens up a discursive space conducive to free inquiry, self-inquiry, and taking a fresh look at the key issues in the nursing profession.

For example, one of the central ethical concepts of the nursing humanities is what Emmanuel Lévinas calls the attitude of "for others". Caregiving consists of not merely practical care, but also requires providing emotional and spiritual support. In the course of providing practical care for patients, many of whom may have difficulty accepting their condition, a nurse is constantly confronted with the grim realities of birth, aging, illness, and death, and may thus find it difficult to maintain a positive and supportive attitude. Physical suffering is an inescapable fact of life. Thus, despite our best intentions, we don't have the ability to "become others"; the best we can do is adopt the attitude of "for others" [17–19].

Yang ([17], p. 12) also points out:

> Whereas Lévinas starts from the ethical viewpoint of "responsibility" to describe the subject of suffering, Pierre Klossowski [20] starts from the ethical viewpoint of "volition" in an attempt to describe the possibility of another type of subjective existence. For Klossowski, responsibility leaps over will; that is to say that our ethical relationship with others is not merely taking an attitude of "for others", but also entails actively aspiring to "become others". In other words, if in the present moment I forget that I am taking care of another person, in that moment I am having the kind of experience Nietzsche spoke of as deliberately blurring the boundary between self and other. But what sort of self-image did Nietzsche have in mind? And who is this person who will appear someday [21]. For this reason, Lévinas takes Nietzsche's "vision" and "prévision" as referring to the appearance of someone whose arrival we have been looking forward to.

In sum, in the process of caring for patients, by fully identifying with the patient and entering into the patient's experience, and then applying the attitude which arises therefrom to the process of providing practical caregiving, a nurse can engage in what Klossowski and Nietzsche call "life as the application of art" and "practicing beauty" ([17], p. 13). At the same time, we need to ask just what this type of approach to nursing care signifies in terms of the nurse's perception of the patient. This is a key issue and needs to be addressed from the perspective of phenomenology. Due to limitations of space and the need to remain focused on the main topic of this paper, this subject will have to be taken up in a future paper.

Based on the feedback provided in a focus-group discussion, the students in the Nursing Humanities course derived the following benefits: (a) They learned that the basic approach of the nursing humanities is to cultivate self-understanding and then extend this into the lifeworld of the patient; (b) They gained an understanding of the perspectives, concepts, central values, and practices in the humanities; (c) They learned how the perspective of the humanities can bring about innovation in the nursing profession; (d) They learned how to internalize and apply the humanities perspective to education and clinical work in nursing; (e) They gained an increase in self-awareness and

maturity; (f) They learned that neglecting to take the patient's mental state into account makes caregiving more difficult and less effective; (g) They learned how interaction with colleagues can turn nursing work into an aesthetic experience, and also increase one's understanding of and appreciation for the value of nursing; and (h) They came to appreciate the value of innovative nursing techniques and integrating the humanities into nursing [12].

5. Nursing Revisited

Putting the spirit of healing into actual practice in nursing education requires inquiry into the clinical significance of nursing and healing. As for course design, this needs to be carried out with sensitivity to the needs of the human spirit. The Nursing and the Clinical Humanities module described above presents the perspectives of various disciplines in the humanities and social sciences, and how they can be applied to such issues as caregiving, ethics, and health. Making use of fieldwork and discussion, as well as the central ideas and research methods used in the humanities and social sciences, we can see how each discipline has its own vision of care and compassion, and how these can be skillfully applied to nursing. This approach also generates new ways of understanding the clinical humanities, health, and healing. This module also emphasizes making use of the students' clinical experience to probe into the meaning of nursing and healing, so as to generate practical insight into the nursing humanities and elucidate how this cutting-edge discipline can contribute to the future development of the nursing field.

From the standpoint of the philosophy of science Mu, ([12], pp. 9–10) states:

> As for epistemology, in nursing knowledge develops out of clinical experience and the actual process of caring for patients. How to understand the patient's life experience and current condition, and then apply this understanding to the caregiving process and the development of new measures and techniques—this is the long-term vision of the nursing humanities. This is a developmental process based on discussion, review, and refinement of the close relationship which exists between the humanities and nursing. In this process of interdisciplinary interaction and refinement, the ongoing task is to adapt the knowledge and concepts of the humanities and apply them to the creation of an innovative and patient-centered approach to nursing.

In this manifesto-like summary, Mu aptly elucidates the essential meaning of both the clinical humanities and the nursing humanities. Yet, if we understand the clinical and nursing humanities as requiring an extraordinary degree of character development, and see extensive knowledge of the humanities as a prerequisite for adopting this approach, we would be setting our sights unrealistically high. For, in light of the actual working conditions which currently prevail in the nursing field—overworked nurses who have little authority in the medical hierarchy—we have to avoid having unrealistic expectations of what nurses can and should do.

For example, in addition to primary prevention, the most effective way to reduce the overall cost of medical care is to effectively bring volunteer caregivers (those who have an "ethical connection" with the patient, *i.e.*, family, friends, neighbors, volunteers, *etc.*) into all levels of the caregiving process. Moreover, as medical ethics becomes increasingly focused on the wellbeing of the patient, more

attention is being given to the healing relationship itself. Thus, making nursing care more person-centered and indigenized gives the patient a sense of not only being cured, but also being "cared for" [22].

Concretely speaking, in "ethical nursing care", affective awareness and empathy are used to quell chaotic thought patterns. The emphasis is on a clear understanding of ethics and ethical relations. As for methodology, "ethical nursing care" relies on the patient's personal life experience to generate self-awareness. The nurse is not so much a guide, as a provider of moral support, creating an open space conducive to the unfolding of the patient's inner world [3,22].

In the words of [23] Shen (2010):

> At the heart of the clinical humanities is a thorough rethinking of the body-mind discourse. In psychoanalysis the body and mind are seen as an inseparable unity, and only with this recognition can we see the great significance the humanities has for clinical practice... The clinical humanities gives primary importance to re-opening the discussion of the body-mind issue and is premised on re-examining their interrelationship… In the psychoanalytic view, illness involves not only physical pain, but also entails linguistic, social, and cultural suffering. This implies that the humanities can help us deepen our understanding of the healing relationship and the metaphors for pain, and can also serve as an important and direct therapeutic tool.

Thus the aim of this paper is to use the perspective of the clinical humanities to examine various facets of the nursing humanities. In sum, the nursing humanities is an extension of the practicality of humanism, confirmed and implemented through "questioning, subversion, and reform" [24]. As Szymborska ([25]) puts it, "Any knowledge that doesn't lead to new questions quickly dies out: it fails to maintain the temperature required for sustaining life."

In regards to nursing education, Tsai ([26], p. 5) has pointed out that "The heart of nursing is knowing how to care for others. This type of knowledge is different than that of science. The latter is guided by results, while the former is guided by ethics." In my view, the Western approach to nursing based on empirical science and the approach of the nursing humanities based on ethical and cultural considerations are complementary rather than antagonistic. Professional nursing education needs to include both perspectives. In the current situation, this means making a place in nursing education for alternative medicine and the clinical humanities.

6. Conclusions

The encounter between nursing and the clinical humanities might be seen as the unlikely meeting of fundamentally different and incompatible fields. Indeed, the humanities and social sciences may seem quite alien to nursing and clinical practice. In the words of Yee [27]:

> In the professional life of the nurse, the unknown is of utmost importance. On the one hand, it challenges the nurse to transcend his or her inherent self-limitations; on the other hand, it provides him or her with a point of entry into self-inquiry. But even though introspection requires transcending these inherent limitations, they can also be made the object of inquiry and introspection. This entails using the unknown as a

> medium for bringing these inherent limitations into relief, thereby clearly revealing their problematic nature, which in turn becomes the object of further inquiry.

Going a step further, we can examine the relationship between nursing and the clinical humanities by referring to Arendt's ideas on action, thinking, responsibility, and judgment [28]. In the words of Wang ([29], p. 1):

> Thinking is invisible, but judgment is visible. Genuine thinking is life itself; it's an essential element of life. For Arendt, inasmuch as life is a process, it consists not of the results of thought, but of the process of thought. Yet, thoughts can become manifest by being expressed through judgment; thus judgment is the concrete expression of thought. Therefore, the reality of a thought is necessarily founded on judgment… Judgment means making a choice about something in the future; it doesn't mean merely making an appraisal of something that has already happened. Judgment is a part of conscience.

Indeed, conscience and the innate sense of right and wrong lead to the question of moral responsibility. In this connection Tsai ([30], p. 13) states, "Arendt interprets morality from the perspectives of self-examination (especially self-dialogue) and the manifestation of one's innate sense of right and wrong." As for Arendt's conception of legal responsibility, Tsai ([30], p. 13) states, "Moral responsibility doesn't involve an individual's transgressions or criminal activity towards others; rather, it's a matter of personal integrity and consistency, including the purity of one's motivations."

Of particular relevance to the clinical humanities are the paired concepts of action-thinking and responsibility-judgment. In particular, when using the concepts and spirit of the humanities to reflect upon nursing practice and education, it's worth looking closely at how these two pairs of concepts can be edifying for nurses and caregivers. Wang ([29], p. 2) asserts:

> If we understand the humanities to be about people, since thinking is an essential element of human life, then thinking and the clinical humanities are inseparably related. If we understand the humanities to be about mind or spirit, since thinking is the core of mental and spiritual life, then this also manifests the relationship between thinking and the clinical humanities.

The nurse-patient relationship is a type of intersubjective healing relationship, an opportunity for transformation which links up the intrinsic process of being and becoming for nurse and patient alike. Genuine healing takes place in the process of self-transformation, an inner process which manifests outwardly. As participant, companion, and catalyst, the nurse plays an essential role in the healing process.

Arendt astutely points out a universal crisis in the modern world resulting from the loss of our ability to understand and reconstruct the experiential freedom, authority, and political engagement we once had. The atrophy of this key ability reaches its climax in extreme dehumanization and objectification ([31], pp. 301–02).

Inasmuch as judgment is the concrete expression of thinking, the actuality of nursing and the clinical humanities has to be established in judgment. Remaining constantly vigilant as to the possible problems that may arise in the nursing profession in the future, as well as cultivating

practical foresight, are both part of putting the clinical humanities into practice. Healing is a process in which the healing relationship facilitates an expansion of the patient's awareness and energy, thereby bringing about wholeness, balance, and transformation. Further, healing is a process in which the cultivation of human affinity and sensibility engenders a sense of rest, relief, and ease in body, mind, and spirit. The healing moment occurs in the intersubjective process, and entails a transformation of one's psychological state and mental activity, which in turn brings a sense of comfort, renewed interpersonal activity, and renewed order and harmony in one's engagement with society.

Gao ([31], p. 313) asserts that in Arendt's view:

> A self completely outside the network of interpersonal relationships can't possibly exist. In *The Human Condition* [32] she states that an individual has various roles to play, and in the course of living and acting in the world, meaning and interpersonal understanding are generated solely through dialogue with others and with oneself.

Thus, with respect to the fortuitous encounter between the clinical humanities and education in the nursing humanities, putting theory into actual practice will be the primary challenge of all those working in this emerging discipline in the future.

Encounter, always manifesting with a certain apprehension.

Departing, so as to arrive at some exceedingly distant place.

A place bound by memory…

Conflicts of Interest

The author declares no conflict of interest.

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The New Humanities Project—Reports from Interdisciplinarity

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Abstract: New Humanities is an international research and teaching project promoted by an interdisciplinary group of people from five different faculties and departments based at the University of Roma Tre. Initially set up as a forum for academic dialogue between the humanities and the sciences (including social sciences), the project became a transition space and platform for experiencing new research methodologies and teaching curricula that would question the present epistemological order of the European university system. In order to develop this approach, we have organized our work around a number of interdisciplinary clusters, each describing an epistemological node. In this paper we will discuss five interconnected case studies that emerged from an active collaboration between scientists and humanists. The first node, *Protocols of Vision*, investigates the cognitive nature of sensory perception and the different forms of knowledge it produces—empirical, artistic, and scientific. *Memory*: *Mathematics*, *Computer Science*, *and Literature* recapitulates many of the different threads in these discussions by exploring the interdependencies between the various kinds of memory: from external to subjective memory, from storage tools and techniques of self-construction to the invariance of mathematical structures. The third node, *Signs and Bodies between Digital and Gendering*, reflects on the problematic relationship between digital media and literary and linguistic gendering. *Narrative Identity*: *Nature*, *Ontogeny and Psychopathology* critically re-examines the main concepts and theories concerning the nature, ontogeny, and pathologies of the autobiographical self or narrative identity. Finally, the last node, *Contribution of Quantum Physics to the Idea of Consciousness* is a cross-cultural investigation into the phenomenon of consciousness tackled from the points of view of quantum field theory and ancient Indian philosophy.

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1. Introduction

"All the so-called visual media turn out, on closer inspection, to involve the other senses (especially touch and hearing). All media are, from the standpoint of sensory modality, 'mixed media'. The obviousness of this raises two questions: (1) why do we persist in talking about some media as if they were exclusively visual? Is this just a shorthand for talking about visual predominance? […] (2) Why does it matter what we call 'visual media'? Why should we care about straightening out this confusion? What is at stake?" [1].

This passage is taken from W. J. T. Mitchell's essay *There Are No Visual Media*, important not only in terms of media theory, but also because the reasoning at work here can be applied to the order

of *savoirs* too. The practices of knowledge are always trans-disciplinary in the sense that they involve contexts, methods, and instruments institutionally assigned to different disciplines. Academic disciplines, in the last thirty or forty years, have been changing their self-representation, showing less cohesion and a tendency to move from the notions of "discipline" and "canon" to practices based on collaboration around problems, *i.e.*, "in clusters that may be too short-lived to be institutionalized into departments or programs or to be given lasting disciplinary labels" ([2], p. 819).

In dealing with what appears to be obvious, and increasingly so, certain questions keep coming up, and we should welcome them: why do we continue to conceal this obviousness? Why do we persist in speaking of clear-cut disciplines, albeit indirectly (while actually yearning for interdisciplinary practices)?

The same aspect applies to, and especially so, the well-known distinction between the so-called two cultures, between humanities and sciences (a dichotomy that later degenerated into biased expressions such as "soft and hard sciences", *etc.*). It is a distinction that became institutionalized in the late 19th century with the creation of two orders of knowledge to maintain a clear separation. One of the intellectual figures behind this operation was Wilhelm Dilthey. Distinguishing between *Naturwissenschaften*, *i.e.*, the natural sciences and *Geisteswissenschaften*, the science of the spirit or humanistic sciences, he established an essential difference between two objects and two methods that in fact have nothing, which is clearly distinguishable [3].

Dilthey sees the object of humanistic sciences—man and his historical-social environment—as basically defined by its historicity and their knowledge modality by a hermeneutic process of comprehension, a *Verstehen*, *i.e.*, a process of construction of sense and significance in which subjectivity is allowed to participate. Comprehension takes place via an active projection of one's own experience and leads to a restructuring of the Self. The other, the extraneous, is *understood* (in the sense of Latin *cum-prehendere*, "to seize"), *i.e.*, inserted and made to act in its own space and time.

The natural sciences are just the opposite. Here, we do not have construction, just the discovery of a given reality, the natural, and its laws. Their mode of knowledge is an *Erklären*, an explanation of that which, in nature, is given and has only to be clarified. Natural phenomena are explained when they reflect a general law, understood as eternally valid. This is the ideal of an objective knowledge, which would like to abstract from subjectivity and temporality, which postulates a neutrality of the subject of knowledge as well as an immutability of the object. It is the attempt to create a territory of knowledge detached from temporality and subjectivity, and freed of the struggles of hermeneutic understanding as to legitimate only an interpretation, which presents itself as a scientifically given reality.

This "fiction" started tottering some time ago. For some time we have known that hermeneutics cannot be confined to the examination of cultural phenomena, that even the data we retrieve from nature imply an interpretation, that no object can be freed of temporality and the localized nature of knowledge, no examination can be considered irrespective of the analysis of subjects of knowledge and the conditions of its production, representation, circulation, and reception. That no perspective is exempt from the hermeneutic circle, that every piece of data, everything, every observation is always linked to a pre-comprehension. This is also true—Dilthey had already said this—for the natural sciences too. Though not embracing necessarily a post-modern vision, it would appear difficult to release data

from their interpretation. It is just this—and not just today—that humanistic knowledge insists upon recalling. And it is just for this reason that it is in crisis and under attack [4], deprived of its legitimacy precisely because it endangers this old distinction, which holds its critical capacity in check. Thus, the distinction between scientific and humanistic knowledge still remains active; it is still to be deconstructed via cognitive practices, which draw the most radical consequences from the wavering of this distinction.

New Humanities is an international research project, which has been created to work in this direction. Thus, not a reflection upon the crisis or sense of regret about an asset legitimized by the powers of the past, but a new research model and, as a result, an educational one—*a new epistemic for a new paideia*. And the construction of this new cultural code cannot be considered irrespective of the establishment of new relations not only between areas of knowledge but between the people and the different cultures of the planet. There is nothing here about new ideas. Though in the West we have preferred to ignore them, there have always existed educational experiments, which have tried to draw the best from different traditions. In the last century the Nobel prize winner Rabindranath Tagore founded Visva-Bharati [5] (Visva means "union", and Bharat is India), a new concept of university founded on certain key principles, among which the equal dignity of cultures and religions in the world, interdisciplinarity and the idea that teacher and student decide together the time and pace of their education [6].

We mention this institution (Nobel prize winner Amartya Sen was among his pupils) because our project originated with the collaboration of a group of researchers, teachers, and students of Roma Tre who wished to interpret the "crisis" of the humanities like a phase of regeneration and passage towards a new form of human science which should: (1) acknowledge the interconnections between disciplines and actively recognize that "scientific practices are modeled through notions such as networks, assemblages, experimental systems, trading zones, and so on" ([2], p. 819); (2) take up once more the dialogue between sciences of nature and those of culture which had slackened and was then interrupted from the 17th century on, so as to go beyond their distinction; (3) absorb analytically and systematically the epistemic leap imposed by the digital transformation of data, knowledge and identities in a heated analytical dialogue with those technologies which have re-defined research and representation methodologies in all fields. We are aware that in setting up this agenda we were not alone but had illustrious predecessors. However, a detailed discussion on the epistemological and historical aspects of interdisciplinarity was well beyond the scope of this paper. It is worth remembering that interdisciplinary work has encountered historically a number of practical and theoretical obstacles: from epistemic barriers (involving "incompatible styles of thought, research traditions, techniques, and language that are difficult to translate across disciplinary domains" ([7], p. 47) to evaluation criteria and tenure anxiety, from the lower academic status of interdisciplinary journals to institutional, administrative and departmental drawbacks, *etc.*

New Humanities has tried to bypass some of these problems by organizing clusters around specific research themes from which we selected the present five reports. We hope the differences in style, length, and content of these reports will be justified by the heterogeneity of the case studies and the events from which they originated. In the last two years the research group has organized about fifteen seminars, meetings, conferences, and book presentations on seven clusters in which the

research was originally structured. Physics and sociology, biology and philosophy, mathematics and literary criticism, computer science and history of art, are some of the areas, which have engaged in dialogue and have been reshuffled, exploring unexpected connections or rediscovering old relations. That does not necessarily mean that the knowledge and approaches presented are completely new or revolutionary [8]; indeed some aspects under discussion in the essay are well established in their disciplinary contexts. The sequence of the five reports does not follow the original chronological order, but it lays down a research path which we think has a main theme, that of rethinking the relation and dialogue between body and mind, between perception and consciousness. In the background we find the question of the digital transformation of knowledge and cultural and cognitive representations, a common ground for all the contributions. We hope our selection will demonstrate that these challenges cannot be met by single discipline alone.

Clusters edited by Ugo Fracassa and Teresa Numerico are dedicated respectively to the problem of vision and that of memory, both involving a background of algorithms and digital representations. Following this, we have the cluster edited by Laura Fortini on the questions, which the digital raises about bodies and the signs which represent them, and the text on narrative identity authored by Massimo Marraffa. The last assemblage, edited by Domenico Fiormonte, Michele Lucantoni, and Mauro Bergonzi, is the longest and probably the most challenging, as authors tried to set up a dialogue between distant fields in the attempt to build a cross-cultural perspective on consciousness. We are convinced that this brief core sampling in the activity of New Humanities presents trans-disciplinary transfers and reflections that reveal, ever more fully, the transience of the confines between nature and culture, natural sciences and humanities, producing a decentralization of the single disciplines. Knowledge no longer appears fragmented in distinct and separate territories, but transforms into a large inter-connective network, which constantly repositions its nodes. The challenge today is to imagine new models to connect cognitive horizons and production modalities of knowledge, which are with increasingly more insistence, breaking the boundaries of the single disciplines in which they have been confined. According to the Ancient Indian wisdom (not "philosophy" in the Western sense), "innovating means to expand our consciousness of what reality is and has never ceased to be" ([9], p. 18). This is an interesting "extracting", not-accumulative idea of progress (expanding consciousness, not accumulating books or building monuments, *etc.*) that may help us also to think about scholarship, and science in general, in a new way.

2. Seeing, Knowing, Recognizing: Protocols of Vision in Science, Art, and Life

The seminar "Protocols of Vision", organized at the University of Roma Tre on 15 March 2013, dealt with questions concerning the cognitive nature of sensorial perception and the different forms of consciousness—empirical, artistic, scientific—which might be the outcome. In particular, thanks to the contributions of three scholars, Michele Rucci (Boston University), Lucia Foglia (McGill University), and Ugo Fracassa (Roma Tre), from different disciplines (computer science, philosophy and literary theory) the idea that there exists a simple "seeing" is challenged. The three approaches converge ultimately upon the case study provided by the famous portrait *The Afghan Girl* by the American photographer Steve McCurry for the "National Geographic" in 1984. To consider the

knowledge-recognition dialectic in the light of visual perception it seemed it might be useful to focus on the point at which visual perception and esthetic experience converge.

Artificial intelligence systems are now able to emulate the logical-deductive processes that are characteristic of humans. Examples range from the IBM computer that beat the chess champion Garry Kasparov in 1997, to programs now available on any smartphone. However, similar progress has not occurred in the field of visual perception. What are the principles hidden by biological vision systems that have not allowed their replication in machines?

Perception, like other vital functions, in man, has much more sophisticated procedures than those in other living species, though the functional objectives remain the same, vision for example. Such complexities are not to be explained by the structure of the sensory system, which is at times more developed in other living organisms than in humans. It derives from the filtration of the perceptions at the level of a nervous system that does not limit itself to accepting them as they are when it receives them.

In humans, sensory information processing displays characteristics that seem unique: it does not involve the nervous system alone, and information dependent upon the body and its interactions with the environment play a guiding role. Sensory information processing is also affected by personal constructs, learning history, and exposure to particular cultural stimuli. Though these influences do not cancel out the salience and richness of the incoming sensory stimuli, they do have an impact, to a great extent, upon how neural information processing is achieved. Rather than being a mere description of a "given", perception always unfolds within a particular frame of reference and involves skills and knowledge that go beyond the mere reception of an external stimulus. We cannot really say that the objects we see are "facts", given, once and for all, as they are mentally constituted within the theoretical framework that expresses them.

The ways in which we perceptually experience the world pose a challenge to the notions of "pure perception" and "informational encapsulation". After all, it is the very organization of the visual areas that allows for numerous feed-forward and back projections and the existence of a cross-talk between cortical and non-cortical regions which shapes and modulates how information is processed. Thus, understanding the nature of perception means going beyond the neural activation of specific visual areas, and taking into account the non-visual information that modulates how perception is achieved. In other words, a visual system does not function independently of the individual who embodies it, and it cannot be taken to be isolated from cognition and action. Therefore, each result of our perception requires us to take into account our individual, "egological" coordinates, *i.e.*, the information, attitudes, and tendencies that the individual possesses on the basis of his previous experiences and the history of his mind.

Culture too, understood as a set containing knowledge, beliefs, norms, and values, may affect the way perception is achieved (in terms of accuracy and speed). Empirical evidence in support of cultural variation has shown, for example, that North-American populations tend to display more attention to focal objects and their features and neglect or ignore the interdependence existing between a given object and its surrounding context, thus deploying a holistic processing style. In closing, what we visually perceive is, on the one hand, what our visual system allows us to see,

and on the other, what we "can" actually see relative to the non-visual information that interferes with and modulates sensory information processing.

In 1986, Carlo Ginzburg recalled in a well-known essay, that the eye "is more sensitive to the (perhaps marginal) differences between human beings than those between rocks and leaves" ([10], p. 123): for those wondering about mental, emotional, and cultural interferences in vision, the photographic portrait of Sharbat Gula, now a planetary icon of alterity at the end of the last century ([11], p. 3) might now be worthy of an in-depth study. Once more in the news, with the recent Italian exhibitions (in Perugia, Rome, and Genoa) the famous picture by the American photographer encourages reflection about the influence on the act of seeing of culturally acquired mental factors—including a certain post-colonial and gender deformation [12]—and raises specific questions about the burden of these factors on the formation of each specific perception. Gula was photographed again seventeen years after the first photograph and her life (and body) had changed entirely. She was identified thanks to the Iris Scan (an algorithm patented by John Daugman, professor of Computer Vision at Cambridge [13]), a practice that denies the most common and typically human practice of recognition. Finally, in a similar perceptive adventure, the esthetic vision of the portrait intervenes, an experience thanks to which it seems we can re-read the entire Afghan Girl affair as a symptom of a true "western prosopagnosia" [14].

3. Signs and Bodies between Digital and Gendering

In this section we summarize the seminar that took place at Roma Tre on 13 May 2013 and coordinated by Laura Fortini. The participants were Silvia Contarini, professor and co-director of the Department of Italian Studies at the University of Paris Ouest Nanterre La Defense, Tiziana Terranova, associate professor of Sociology of Communication at the University of Naples "L'Orientale", and Teresa Numerico, philosopher of science of the research group New Humanities.

In the 1970s a feminist literary criticism appeared which spent a long period of time, discussing *sessuazione* [15] of language in literary texts, getting involved in particular with gender connotations of the sign. In a memorable meeting, which took place in Urbino in 1983 [16], Nancy Huston, Patrizia Magli, Rosi Braidotti Susan Rubin Suleiman, Nancy Miller, and others discussed the possibility of positioning sexual difference within the system of signification. In later years in Italy the discussion continued, with, among others, Patriza Violi's study concerning the relation between language and sexual difference [17]. However, from the 1990s on, the increasingly elaborate presence of writing on line seems to have concealed *sessuazione* of the body in the literary text, if not in the form itself of semiotic construction. The arrival of gender and queer studies too, has led to serious doubts about the nature/nurture binomial, analyzed by Donna Haraway [18] and Judith Butler [19], among others.

In Italy, feminist literary criticism has not become part of the academic and cultural mainstream, despite the clear crisis in Italian literary criticism, which is by now encountering, at least as far as traditional assumptions are concerned, obvious difficulties in determination. What exactly is critical activity today and how should it be defined? Even though the object of critical practice changes each time—the literary text for example—what does not seem to change is the status of criticism and thus its epistemological crisis.

On their way out—fortunately—are those national paradigms still propped up by questions about mother tongue languages, these too however, deeply challenged by migrant literature. What seems also outdated is linear, consecutive historiography, given the difficulty of elaborating it according to paradigms that cannot easily be shared by multiple and relative territorial geographies and chronologies. And it seems equally outdated to apply the concept of literariness to hybrid and undetermined textual forms—unless we go back to subjective aesthetic judgment. Thus, it is difficult to find some horizon of sense, not so much for literature, which lives its own life independently of any theoretical background, but for literary criticism understood as human science.

Contiguity with the human is in fact misleading. If the postulate is that literature and criticism are necessary because they constitute ethical and moral horizons for the human, with respect to other sciences, the question of the human becomes difficult to define. What do we call the animal relation forms like those described by biologists [20] just as affective, just as relational, just as capable of emotional learning as the human? Compared to these, the human shapes up as one element at work in the science of consciousness, for which we might rather suggest the term "arts of consciousness": complex constructions of the modes of consciousness, constantly moving, dynamic, undergoing continuous definition and redefinition of their own critical strategies.

The connection between body signs and *sessuazione* seems crucial in this context in questioning and deconstructing a cultural panorama which, up to the 1900s, defined itself as universal and monologic, abstract, and apparently objective, in other words patriarchal and which no longer represents itself as such; the risk is being labeled as responding to a tradition and a symbolic horizon now behind us. However, that which seemed to correspond to a certain reality, or the body, or rather the bodies of women and men, with the advent of technologies, appears increasingly more uncertain and difficult to determine; like textual bodies of writing [21,22] which seem, digitally, to lose material consistency, lose a certain authorial value as a possible collocation.

Thanks to the Internet, both bodies and texts seem more uncertain and at the same time widespread, in molecular fashion. However, this is an element of disorientation and also has propositional force, if we take into account the difficulty those who write online have, in achieving certainty, as indicated by Tiziana Terranova, who, first with *Corpi nella rete* [23], and a careful analysis of the micro-politics of information [24] has reflected upon the need to "think simultaneously the singular and the varied, the common and the unique" ([24], p. 11).

With these considerations in mind, what consistency has the question of *sessuazione* of language and literature? Teresa Numerico [25,26] has pointed out that already in 1991 Evelyn Fox Keller had noted the risk, for example, in representing life as a machine: the elimination of the parturient female in the technology of reproduction ([27], p. 179).

Here, Silvia Contarini has put the axiomatic association "women and maternity" to the test, at the center of the current debate about assisted reproduction, with respect to the futurist texts of the 1910s and 1920s [28]. Futurist authors anticipate the fear of machines incarnated in possible future worlds in which we will not need women to be born: these images are useful for deconstructing apocalyptic scenarios in which we see the intervention of machines in the reproductive possibilities of the human race. What is different is the way this comes over in texts written by women, both futurist and contemporaries, even at a distance of a century. On the one hand we have a hypothetical

and futuristic representation of possible emancipation from a tiring maternal role, as in the case of the futurist Rosa Rosà (1918) [29]. On the other, the reality of a complex relation with machines, like in *Lo spazio bianco* by Valeria Parrella [30], a novel dedicated to a premature birth and the complex relation a mother mantains with the incubator bringing her daughter up.

Looking at the results of the seminar as a whole, we could say that the digital dimension challenges bodies and signs with an intense post-human potential [31]. If the digital defines itself as the place where texts do not have body, either textual or material, and bodies themselves seem to lose certain connotations, literature, online or on paper, seems to maintain the capacity for *naming*—of use in an attempt at defining uncertain, but also interesting, shifts in the confines of our present. Forerunners in questions relative to the human and the post-human are writers like Clarice Lispector and her excellent story *The Passion according to GH* (1964) [32], which has meant so much in the sphere of feminist thought because of its reflections on links with the animal world [33–35]. Or a text like *L'iguana* by Anna Maria Ortese (1965) [36], which investigates the obscure and uncertain confines with something seemingly as unlike man as can be imagined, *i.e.*, an iguana. Which means that, basically, paraphrasing Gertrude Stein, a sign is a sign is a sign, whose corporeal articulation—gendered, human, post-human online or on paper—is an active, unavoidable component of this present time.

4. Memory Construction: Invariants, Variability, and Media [37]

This contribution summarizes the work of the seminar "Memory: mathematics, computer science, literature", held on 20 November 2013 at the University of Roma Tre. Participants were Giuseppe Longo (Centre national de la recherche scientifique-Paris) Francesco Fiorentino (Roma Tre), and the coordinator Teresa Numerico. The idea behind the meeting was an examination of the practices of memory in different disciplines, in the knowledge that it is the way the "data" are organized that affects what the outcomes of the cognitive process will be [38]. Furthermore, the representation of memory and its role in consciousness affects the perception of the historicity of scientific practices, as well as the variability of possible outcomes. Therefore, this section will reflect upon the practices and policies of construction of sense through memory, in different disciplines and in relation to the uses of conservation mediums and the transmission of consciousness.

In order to address memory from this broad and complex perspective, we involved scholars from different fields, such as philosophy, literary theory, biology, computer science, theory of perception, history, *etc.* Of course each of these areas contributed to the discourse with its research agenda and theoretical views, and our aim could not be to merge or reduce them to a common denominator. Perhaps the only justification for this experimental approach was that we all know that memory, as a fundamental element for the construction of consciousness and for the reproduction of the living being, can be many different things. It has different meanings, places, mediums, practices. So the techniques used to study the ways it manifests itself and acts in different spheres of knowledge are different but so too are the political uses we make of it. Therefore, it is crucial to elaborate a critical analysis of the interdependencies between external memory and subjective memory, archiving tools and techniques of the construction of the self, with a multiplicity of contexts and the discovery of invariances.

According to Giuseppe Longo [39,40] memory is constitutive of mathematics too, which can be defined as the science, which deals with the invariance of structures and establishes which transformations preserve it. Memory, as an essential part of anticipation, constitutes the maintenance of invariance of action. Anticipation extracts the invariant character of memory from a changing context with the aim of preserving the possibility of next action. Such a contextual meaning establishes the conceptual constructions of mathematics not in isolation with respect to other forms of consciousness but by attributing to the first a maximum practical and historical stability. The recognition of the invariance of mathematical structures in the fluidity of processes has therefore a mythopoeic nature. That is to say, mathematics can be associated with the myth in that it too is capable of bringing together the fact of being in this world (physical) and the capacity for human communication. The construction of invariances however requires the use of a particular type of memory.

The mathematical invariance exists only as an intentional construction. In this sense a perfect memory as a digital database cannot construct any invariant characteristics. The productive capacity of recall is the present reactivation of mnestic content, which Edelman [41] describes as a situation in which "the brain repositions itself in a living state" in the act of remembering [40]. The machine, with its perfect "memory" can, at most, help to engage in proof-checking but in no sense does it work on the activation of original demonstrations. Only animal memory and human deliberative capacity have the chance to construct proof which can demand the introduction of new concepts and structures which transcend the use of rules in a formal system. The only indispensable assumption to obtain interesting, creative responses is the active capacity to invent the present and construct connections between the structures of human memory [42,43].

Longo thus shows how memory is the basis of the construction of invariance in mathematics. In this perspective, even an abstract science like mathematics has a clearly historical consistency since knowledge is constructed via the intentional, creative, and deliberative acts of a community. Such are mnemonic acts too.

Therefore, we cannot avoid getting to grips with the reorganization of memory produced by the new use of this term in the sphere of the digital revolution. Human memory is multi-faceted and multiform [44] and cannot be compared to digital memory. However, it is clear that the use of the same term to indicate two very distinct concepts has had an influence on the redefinition of the so-called "family similarities" which contribute to the construction of rules for the use of the term. So it seems also useful to reflect on the genealogical effects produced by the use of this term in the digital machines field and the role of a linguistic habit on the semantic transformations of the initial term [45].

Personal memory is associative and reconstructive, imaginary, constantly active and dynamic. Totally unlike the rigidity of electronic memory, which conserves every bit in an exact, inscrutable mapping. The concept of memory in the two devices has a clearly different significance. Human memory seems difficult to control, precisely because it is impenetrable, indeterminate, and at the same time extremely fragile. As Wendy Chun suggests, "the memory of the machine is at the same time incredibly precise and absolutely unstable from a technical point of view" ([46], p. 140). The opposite of human memory, extremely solid and tirelessly deceiving. In short, the differences could not be bigger, but

we are by now used to considering digital memory as the best replacement of human memories. The desire to stabilize the hardware leads the project to construct digital memory, metaphorically, so that it can contain and reproduce that which it contains ([46], p. 139). The political idea behind the digital is the stabilization of the datum, the petrification of memory in data, which are represented as objective, neutral, elementary. "Raw data is an oxymoron" says the title of an interesting collection of essays [47] in which the fictional nature of the raw datum is stressed.

"Facebook's job is to improve how the world communicates", says Zuckerberg. Projects like Wikipedia or Google Books aim at restoring human knowledge conserved in books (Google Books), and in the heads of the experts (Wikipedia). Google Scholar sets out to organize scientific knowledge and make it universally accessible, and the scope of Google is "to organize the world's information and make it universally accessible and useful" [48].

In all these money-making projects, as in other public ones [49] it is possible to see the myth of exhaustiveness of knowledge and the archiving of information as a "total experience". But archives always exist as partial and violent institutions and the present constitutes itself in opposition to these, as Derrida sustains in *Archive Fever*: "The archive takes place at the place of originary and structural breakdown of the said memory. There is no archive without a place of consignation, without a technique of repetition, and without a certain exteriority. No archive without outside" ([50], p. 11).

It is therefore impossible to replace the function of recall and the reconstruction of the past in memory with that of archiving without losing the function itself of archiving. Without memory, without an outside, even the archive declines and above all loses its exteriority form, from which it should be able to escape, which gives sense and at the same time can be transformed and recomposed into an ever newer sense.

If libraries, archives, repositories of scientific articles, personal diaries and descriptions of collective adventures are all consigned and imprisoned in a cloud of data (never mind if open or closed), how do we subvert the archive and construct the history of society and knowledge? The Cloud, a shared space but also private, where collectively we save our contents, is a perfect example of the collapse of memory, archive and that set of rules which interpret the information, giving them a sense.

As if the theme of archiving policy did not exist, as if we might exteriorize the support and conserve intact the practices of reminiscence, strengthening them efficiently without transforming them.

If the operation of sorting out data becomes the interpretation *tout court* of sense, if no datum is able to escape the extraction of meaning activated by the algorithm thought up for the machine, then the crucial political question is: how can we activate the dynamics of transformations in interpretation? No human interpreter can compete with the "interpretative" potential of the machine and no operation of extraction of meaning of data can ever be critically checked [51]. Google Glass is another example of the transformative perspective of memory and consequently of knowledge adopted by web companies. The promise (or the illusion) of a new form of perception, a new form of vision that will allow the "glasses" to see what the user sees, and to offer an interpretation or support for an understanding of the actual vision. The offer of a unique, coherent, effective interpretation of data by a proprietary and opaque device could change irreversibly the way we interpret and understand our present and anticipate our future. The risk of the device however is not just to fall short of user

expectations—after all a minor problem. The real risk is that Google Glass will alter our perception and understanding of the idea of the interpretation of the world around us, even when it fails. In fact, the more it fails the more its influence can alter the human idea of understanding and interpreting signs, events, and objects around us.

But history and criticism originate with the polysemic dynamics and variability of concepts and texts, like the variability of genes which allow us a selection and conservation of the species, together with the variability of environments and reactions to them, which allows the epigenesis of those traits, which are more suitable for survival [20]. It is memory in its creativity and variability, which guarantees the process of history. Memory is saved only if it erases, only if it extracts its own pathway to sense from the sea of data in which it navigates. Human memory is very selective: it is capable of preserving and organizing memories, by forgetting.

If the archive is universal and the answers to every question are univocal, if there is no distance between private memory and public archive, if all we know we find in the same tested sources which distil overall shared knowledge, then the dream of variability and multiplicity at the heart of the hypertextuality becomes only an illusory myth and the net is lost in the delirium of omnipotence of algorithms of ranking and sorting out of data, the fruit of machine-learning techniques.

And yet, when memory becomes public practice it is always political, even though in managing the construction of objectivity there are now complex devices made up of the interaction between human beings and machines of which we lose awareness in a game of cross-references and reflections which never seem to have an end. In this assemblage—as visible as it is opaque—personal and collective traces are activated in the comings and goings of cross-references, which transform our relation with ourselves and with our machines for memory.

The question still awaiting a response concerns the possibility of effective action of empowerment produced by extroflection and then collectivization of memory. No mediatic device is ever neutral with respect to the organization and the content itself, which is traversed by them. Once more, this is a remediation [52], but what is alive and what is dead after the migration is accomplished.

The mediums determine and organize memory and its practices, the collective and even more so the personal. Each dominant medium with its codes imposes itself as a metaphor of memory. The ever-present danger is that a medium might restrain and regiment memory as imaginative capacity, which constructs knowledge about the past, necessary for the present. The danger is already to be seen in Plato's *Phaedrus,* which opposed memory understood as storehouse of data and memory as process of reminiscence, which is always creative [53]. Plato warned that external memories could work as deactivators of the capacity for anamnesis. This is a reminiscence, which is accomplished through the activity of a subject interacting with another subject in a maieutic process.

It is not by chance that Plato formulated his critique of writing in a written text, mobilized the inter-textual vocation of literary writing against the fixity of the textual support to transform it into a stimulus, to the extent that it draws the reader towards a memory which is outside it, in the interaction—implicit or explicit—with other texts.

However, this implies a writing practice which awakens the awareness of its limits to make possible the anamnesis of what is inaccessible for the writing medium itself, its code, its possibility of representation.

Every medium has a potentially critical attitude and is capable of subverting the uses it is put to, the practices it is implied in. And yet the medium is never neutral. The uses of a medium are not free: they are determined, envisaged, directed by the technical structure of the medium itself. However, they are not fixed. There is a negotiation with the medium's technical possibilities. The medium becomes transcendible when the experience of its mediality is produced, *i.e.*, the limits which it imposes on the representation and that which it excludes. The experience of mediality is always experience of what is not graspable by the medium and by its code and this is why it does not become part of memory handed down. But every medium has within itself the potentiality of letting us know at least the lack of what it can no longer hold on to.

Today, this possibility seems more than ever threatened by digital media, which, in the exhibition of an ever-present, accessible totality, obscure every absence. Everything is consigned, also in the sense of immobilized, imprisoned in the registers of conservation and retransmitted as raw data. The capacity to forget and select the information to which we wish to attribute sense, is nullified. And yet the transience of the support constitutes a serious risk for the duration of this total conservation.

Therefore, more than ever we need to activate critical practices, which reveal the hidden gaps like the outside of the archive, necessary so that memory can construct vital variation. It is necessary to preserve the creative original action of the memory as a faculty of the imagination and the present, which, albeit in the sphere of regulated procedures and precise bonds, does not remain subordinate to the presumed neutrality and objectivity of the datum codified in the devices of conservation and transmission of consciousness.

In conclusion, the work of this cluster aimed at singling out, critically, the practices of obfuscation of memory policies in action in the use of certain devices and discovering how to escape from their totalizing nature. The objective is still to preserve the historical, temporal, and contingent nature of cognitive choices so as to protect their reversibility and variability. To this end, it would seem crucial to recognize memory as a selective faculty which acts in the present, erasing more than it conserves, maintaining the awareness of the ever-more precarious, unstable value of its outcomes.

5. Narrative Identity: Nature, Ontogeny, and Psychopathology

The aim of the research cluster "Narrative Identity: Nature, Ontogeny, and Psychopathology" was to critically re-examine the main concepts and theories concerning the nature, ontogeny, and pathologies of the construct of narrative identity, and in such a way, to provide researchers from different areas with a forum for exploring this many-sided subject. What follows is a theoretical and empirical framework within which the interdisciplinary team of speakers, Gianluca Barbieri (University of Parma), Erica Cosentino (University of Calabria), Francesco Ferretti (University of Roma Tre), Pietro Perconti (University of Messina), Dolores Rollo (University of Parma), investigated these issues during a seminar we organized at the University of Roma Tre in December 2012. This framework consisted of a developmental story about how self-consciousness, conceived of as a cognitively demanding form of consciousness ("narrative identity"), emerges by drawing on literatures in cognitive sciences, dynamic psychology, text linguistics, and the philosophy of mind.

The ordinary term "consciousness" conflates two quite different kinds of psychological functions. First, consciousness is a state of vigilance, *i.e.*, the agent's being actively present to the

world: this is a matter of forming first-order representations of states of affairs, which may function to guide the agent's behavior. Second, consciousness is self-consciousness, *i.e.*, the agent's being present to herself: this is a matter of being in a higher-order mental state, namely a representational state that has a first-order representation as its object. Studies in cognitive ethology and developmental psychology seem to show that animals and infants under one year of age are conscious in the first-order sense of being conscious: they are able to automatically and pre-reflexively form a series of representations of states of affairs and operational plans of action, and hence to interact with persons and things in a flexible but not self-conscious manner.

Only some species take a step beyond the basic interactive monitoring of the environment that characterizes the simple, primary consciousness of all animals. They attain self-consciousness, and this in at least two different senses.

Great apes like chimpanzees, and in our species infants from 15–18 months of age, can be said to reach a state in which they are able to make a clear distinction between their own physical bodies and the surrounding environment. More precisely, they first become capable of physical self-monitoring, *i.e.*, focusing attention on the material agent as the physical executor of actions; and then their bodily self-monitoring comes to completion as the objectification of their own bodies (Merleau-Ponty's *corps propre*), and thus as a full-fledged bodily self-awareness [54].

In its simplest form, then, the description of the self is a description of physical identity. At an early stage the bodily self-consciousness is likely to be structured by a non-verbal and analogic representation of the (physical) self; but very soon it begins to be mediated by the verbal exchange with the caregiver. In other words, in our species the "chimpanzee-style", purely bodily self-consciousness is almost immediately outstripped and encompassed by a form of descriptive self-consciousness that is strictly linked to linguistic tools and social cognition mechanisms. Here begins the process leading to self-consciousness as introspective recognition of the presence of the virtual inner space of the mind, separated from the other two primary experiential spaces (corporeal and extracorporeal). This is the foundation of human consciousness in the Lockean sense of the term: self-consciousness as personal identity.

This psychological and introspective self-description is likely to take shape in the act of turning on oneself the capacity to mind-read other people; and this is likely to occur around the age of 3–4 years and in an interpersonal context, viz. in a relationship with the caregiver that is made of words, descriptions, designations, evaluations of the person. Through the dialogue with the caregiver (and then with other social partners) the 3–4 year child constructs itself by constructing its own identity, both objective (for others) and subjective (for itself). And following G. H. Mead's well-known lesson, we are able to say that the identity-for-itself largely derives from the identity-for-others; viz. we see ourselves, and define ourselves, in the first place introjecting the way in which others see and define us [55].

This transition from a bodily and social identity to an introspective one is not an all-or-nothing issue: it gradually takes place in an interplay of mind-reading [56] and linguistic-narrative capacities modulated by socio-cultural variables [57,58]. The child who at 3–4 years of age turns his third person mind-reading capacities upon himself under the influence of caregivers' mind-related talk, at around 4–5 years of age begins to grasp his subjective identity as rationalized in terms of

autobiography. This is "narrative identity", *i.e.*, a cognitive structure that can provide the jumble of autobiographical memories "with some semblance of unity, purpose, and meaning" ([59], p. 527). Research findings show that the complexity and coherence of this structure increase during adolescence until early adulthood [60]. This raises the question of what kind of narrativism is involved here [61].

In this process of narrative self-construction there is an essential psychodynamic ingredient. Dynamic psychology and developmental psychology tell us that affective growth and the construction of identity cannot be separated; the description of the self that from 2–3 years of age the child feverishly pursues is an "accepting description", *i.e.*, a description that is indissolubly cognitive (as definition of self) and emotional-affective (as acceptance of self). In brief, the child needs a clear and consistent capacity to describe itself, fully legitimized by the caregiver and socially valid. On the other hand, this will continue to be the case during the entire cycle of life: the construction of an affective life will always be intimately connected to the construction of a well-defined and interpersonally valid identity [62].

We believe the main result of the research cluster, which is continuing to develop its ideas, was to highlight the need for a synthesis of different perspectives on self-consciousness as narrative self. In the current debate the theme of self-consciousness tends to be approached with a limited focus; and hence the different facets of self-consciousness (its non-conceptual *versus* higher-level forms, or its inter-subjective and temporal aspects) remain relatively isolated [63]. We, at the Rome seminar, made an effort to make up for this thematic isolation and achieve a more integrated view, putting together perspectives that are usually kept separate. So the contributions were informed by philosophy of mind, cognitive sciences, text linguistics, but were also receptive to some aspects of psychoanalysis in an attempt to get the most out of the psychodynamic notion of a defense mechanism.

6. The Contribution of Quantum Physics to the Idea of Consciousness: A Culturally In-Between Hypothesis [64]

We are presenting here a summary of the main contributions to the seminar which took place at Roma Tre on the 18 September 2103 with the participation of Emilio Del Gudice, quantum phycisist (Istituto di Fotonica e Nanotecnologie—Milan), Massimo Marraffa (Roma Tre), philosopher of science and historian of psychology, Mauro Bergonzi (University of Naples, "L'Orientale"), historian of Indian religions and philosophies, and Michele Lucantoni (Roma Tre), philosopher of biology. Unlike the other reports in this collection, the complex nature of the topic did not allow us to write an individual summary. The objective of the seminar was to initiate a dialogue, not to construct a consistent discourse which would necessarily have brought about an improper amalgamation of ideas and disciplines which are significantly different, as well as distant, over time and space. The intention behind the project was to examine the idea of consciousness, which emerges from a number of Emilio del Giudice's writings. This idea was then associated with the model of consciousness elaborated by the quantum phycisist Amit Goswami (see Michele Lucantoni's conclusions) who explores in detail the links between quantum mechanics and ancient Indian sapiential thought, especially the advaita-vedānta school (one of the six *darshanas* or theoretical-interpretative systems which derive from the Veda, considered "orthodox" by Hinduism). The two physicists start off differently, but come to the same deep ontology: a unique universal consciousness. We have

decided to connect Goswami and Del Giudice by involving Mauro Bergonzi, a scholar of the Vedanta philosophical tradition, in order to explore the connections between Quantum Physics and the Non-dualist Indian Thought [65].

So, where does consciousness reside? What does that which Francis Crick defined "the last great mystery of science" consist of [66]? And above all who will have the last word about that personal experience which seems to contain the whole universe? The basic assumption, shared by all the participants, is that since any appeal to quantitative criteria would inevitably fail, a plurality of voices might be the only plausible, desirable way to approach the "truth" concerning consciousness. In this exploration we will discover that the thousand-year old path, which unites the two parallel quantum edges is the non-dualist sapiential thought conserved in the vedic *Upaniṣads*. These ancient Indian spiritual, philosophical, and mystical writings seem to have foreseen, at the dawn of every gnosiology, the most profound aspects of the relation between consciousness and reality.

6.1. Quantum Field Theory and the Physics of Living Matter: A Hypothesis on Physical Phenomena

Let's start with a metaphor about the development of science in recent millennia. The metaphor consists of a comparison between this development and that of a child when someone gives him a toy. Science is the child and the toy is nature. At the beginning the child plays by following the instructions, then if he is smart enough, the child wants to know what it is like inside and breaks it. Once the toy has been smashed into hundreds of pieces, most of the time the child stays there looking at it. There is also the chance that the child will try to re-assemble it, giving him a toy, which is like the other one because it is made up of the same pieces. So there are three phases of approaching the toy, which correspond exactly to the three stages of science. At the beginning, human beings looked around nature and began to make catalogues, a list of all that exists—a gigantic challenge. It is necessary to establish correlations empirically, which is hardly a simple task. For example, the stroke of genius in understanding how babies are born: establish a correlation between a sexual act taking place one day and the birth of a baby nine months later is by no means a trivial matter—it means following a long distance concatenation of cause and effect.

The first stage in science is by no means a simple one and in fact it has taken millennia—just think of the time spent grasping the irregularities of all celestial motion. This phase lasted, at least in the western world, up to the Renaissance. After the Renaissance, another approach took shape, which consisted of chopping nature up into tiny pieces. Clearly, nature dismantled is no longer nature: dismantling nature is an act of death, you kill the living being to see what's inside—death as an essential part of life. We discovered that the living being is made up of cells, which are in turn made up of nucleus and cytoplasm. Then molecules arrived, atoms, protons and electrons, then quarks—no longer to be broken down—in an organism formed as a "matrioshka". We now find ourselves on the threshold of the third phase, which involves recomposing it all and seeing how it holds together.

Quantum mechanics was born exactly 113 years ago. What is the difference between quantum physics and classical physics? How did we come to recognize that classical physics was not enough to explain certain phenomena? The criterion consists of taking the reasoning behind previous physics to extreme consequences. This is why theoretical physics is important: with rigorous logic

we can derive all the consequences of principles. When we enter a blind alley we are forced to begin a conceptual revolution. Quantum mechanics thus originates with a logical crisis in classical physics. We see that it is wrong to consider bodies as inert and separate, that they can receive energy only, exclusively, from the interaction with other bodies. Therefore we have a spontaneous fluctuation of all bodies in connection with their interaction with the vacuum and since the vacuum is everywhere, this is an interaction we cannot avoid. Thus, if this is the case, it means we cannot make use of an isolated body, the principle, which is behind the conceptualization of classical physics.

Nobody can any longer be isolated because thanks to its fluctuations in the vacuum it is constantly communicating with other bodies, there is always an interaction. For almost a century, this result—which is a revolution in thinking—has gone unobserved and has been hidden behind the idea of the existence of paradoxes, interpretations, which attributed to the observer and his interaction, the reason behind the spontaneous fluctuability of bodies. The observer, perturbing: the atom is small, the observer is large, the latter cannot do otherwise—he perturbs. However, macroscopic quantum systems like superconductors have been discovered. I might have a superconductor cable a hundred miles long and the size ratios invert (the observer becomes microscopic). Thus, we do not have interaction with the observer, but rather an interaction with the vacuum in which the body is exposed to the fluctuations of all the other bodies of the universe. We are approaching our conclusion.

To sum up, from a formal point of view, the results of quantum mechanics we should recall Bell's theorem: he was a physicist who posited in terms of formal logic the outcomes of quantum mechanics. He maintains: "The following set of three statements is logically incompatible, so one of the three just has to go: (1) physical reality is described by quantum mechanics; (2) physical reality is susceptible to an objective description—in that it is independent of the observer; (3) physical reality is describable as a set of localized events in space and time. These three statements cannot, all three, stay together" [67].

Einstein, who is one of the fathers of quantum mechanics and predicted the connections formalized by Bell, was of course a brilliant scientist but he did not go that far ahead. For Einstein, reality had to be objective and at the same time localizable [68]. He was ironic about the fact that if, in order to understand an object it is also necessary to know what is happening in the constellation Andromeda, then science is over. Science becomes possible only when it can localize objects: he was solidly bound to objectivity. His statement implied the falsity of quantum mechanics, which becomes only an approximation to reality, while awaiting a truer theory.

So Einstein's party, which remains a minority, brings down the first of the three statements. Niels Bohr and the entire Copenhagen school, which dominated 20th century physics, brings down the second statement concerning objectivity. He argued that since quantum mechanics is true and remains a problem of localizability, one would say that objects, even before they are localized, produce these incredible fluctuations which lead to indeterminism [69]. Suppose I have a boat and I do not want to admit the relation with far-off maritime motions, I can declare that sometimes the boat itself produces rash movements. This is a form of blindness because it takes account of apparent objectivity but does not go very far. It is David Bohm who drops the third statement. And he argued that it is not true that we can conceive of reality as a set of separate objects [70]. This is

the most important point. Given the fluctuation of every body, the body produces an electromagnetic potential, which travels afar and connects the other bodies. The fluctuation of a body is immediately communicated to other bodies, which produce a sort of collective dance. Naturally the extent of these oscillations can vary in size so that the experimental consequences can also be small, because they are covered by environmental factors, which is why at times classical physics, especially when it works at high temperatures, clearly represents reality without appealing to quantum mechanics because the fluctuations produced by the thermal agitation impact are large enough to cover micro-fluctuation. If, however, one works at low temperatures, these micro-fluctuations re-emerge and are observable—the reason why quantum mechanics was discovered at low temperatures.

Once we understand the mechanism, we can make the following concluding statement. It is possible that the different fluctuations of the different bodies reach harmonization, so that a collective movement is created which magnifies the fluctuation as a whole. Just suppose I have a group of singers, each one produces a whisper in *phase* (*i.e.*, mutually synchronized) one with the other: in the end a huge concert emerges. The important thing is to put one's own fluctuations into phase.

Here, energy is of little importance. Energy exits as a final result. What is important is the rhythm, the phase, which does not have an energetic content. If the elements in a system are in phase, this can work with infinitesimal energy consumption. This is the principle difference between computer and brain. The computer is made of objects, which are not in phase so that every element of the computer, to do something, has to spend energy. However, if we used the game of spontaneous fluctuations—which cost nothing because they are produced naturally—and we managed to pilot them so as to produce a symphony in phase, what would emerge would be music and not the usual noise of discordance. This is what really happens. We have seen that liquid water naturally emits a sound, which has the structure of a musical score. This is the physical basis, which allows us to understand how the matter, at a certain degree of development, produces a psyche. What is a psyche if not a *logos*? And what is a *logos* if not a set of harmonized fluctuations which produce meaning?

6.2. Indian Non-Dualist Thought and Philosophical Implications of Quantum Physics

Indian non-dualism and some of the philosophical implications of Quantum Physics discussed in this cluster seem to share the view that reality is an *indivisible whole*, while the perception of *separate* entities is just a mental construct without any cogent ontological foundation (including the idea of an individual "ego" dwelling "within" a single body/mind).

On the other hand, *consciousness as such* (not to be confused with its incidental "contents", like perceptions, sensations or thoughts) is a basic principle which cannot be consistently explained as the end result of any physical or mental cause, since no "explanation" or "cause" could appear without consciousness *already* being there as a precondition. So consciousness is an irreducible reality *prior* to any perception, sensation or thought. Its evidence is doubtless, for at any time anybody can verify with absolute certainty (through one's own direct experience) that he/she exists and is aware.

Therefore, since all phenomena can be perceived, known or explained *if and only if* consciousness is already there, it is impossible to regard consciousness as the end product of any other phenomenon without bumping into an epistemological paradox.

Moreover, according to non-dualism, "consciousness" and "world" are just two different *descriptions* of one and the same indivisible reality (respectively in terms of the "first" or of the "third" person), while the alleged separation between "subject" and "object" is nothing but an illusory mental construct. This stance could encourage new perspectives in the current philosophical debate engendered by the amazing discoveries in the fields of Quantum Physics and Cognitive Sciences.

The Sanskrit word *advaita* means "non-dualism" and points to the simple fact that in reality separation does not exist: there are differences, endless differences, but no actual separation. If the universe is a consistent totality, how does the perception of separate entities arise?

In perception, through names and concepts, we organize sense data in patterns that we recognize as separate objects (houses, cars, trees, and so forth). According to philosophers like Kant and Wittgenstein, empirical data are mainly constructed by way of conceptual thought and language. Benjamin Lee Whorf pointed out how the grammatical structure of our mother tongue radically influences the act of perception itself: through the naming process we arbitrarily engender an illusory segmentation of the unified universe into a world of apparently separate entities [71]. On the basis of this view, every experience is an interpretation of bare sense data through language, so that we cannot perceive what we have not a word for. Moreover, all that is perceived through different names appears as a fragmented set of discrete entities.

In Indian thought, the ancient precursor of this constructivist perspective was the concept of *nāma-rūpa*. *Nāma* means "name" and *rūpa* means "perceptible form". They are joined together in one compound word just to emphasize that we can only perceive a form through a name. No name, no form; many names, many forms. So our perception of a multiplicity of separate entities comes from language, as stated in the *Bṛhadāraṇyaka Upaniṣad*.

Later on, Śaṅkara and advaita-vedānta maintained that the illusory perception of multiplicity arises by superimposing concepts (stocked in memory) on "what is" now, in such a way that the indivisible Whole appears as a mass of discrete entities limited by their names. Superimposition (*adhyāsa*) and limitation (*upādhi*) through names and concepts are the origin of *māyā*'s illusion.

Therefore, through language our thought assigns specific names to various aspects of this huge, indivisible process called "universe", giving rise to the perception of many different forms. Each word is like a "frame" that traces a conventional as well as arbitrary edge around some aspects of the Whole, differentiating an "inside" as opposed to an "outside" and thus creating the illusion that a specific form is independent and *separate* from all other forms identified by different names. Moreover, names are static, incapable of capturing actual movement, just like photography, which is obliged, for example, to show a man running by means of many different photos of men frozen in motion.

Thus, after creating an illusory multiplicity of fixed and separate entities through language, we mistake this inadequate description of reality for reality itself, whereas the universe is just one formless process, which appears as an amazing expanse of different, but *not* separate aspects.

In Indian non-dualist inquiry into our true identity (*ātmavicāra* or *ātmavidyā*), the core question is: "Who am I?" The response can already be found in the early vedic *Upaniṣads*, where our true self (*ātman*) is conceived as an impersonal and boundless awareness that coincides with the totality of being (*brahman)*. Subject and object cannot be separated, as they are both emerging from one and the same source: being-awareness.

By inquiring into the foundation of individual identity, through a meticulous work of reduction of appearances, at the bottom of our immediate and direct experience we find (as both Śaṅkara and Cartesio remark) the undeniable and certain evidence of our being and awareness (*sat-cit*). Without firstly existing and being aware, we can neither perceive nor assert anything. Dualistic perception forces an illusory gap between objects and consciousness that is deceptively considered an individual attribute. However, according to the non-dualist perspective, both the individual ego (identified with a single body-mind complex) and the so-called "external" objects are only different (but not separate) *contents* of one and the same universal consciousness, which encompasses all existence. No content can be perceived if primarily awareness is not there: any object appears always *in*, *to,* and *as* consciousness.

In Western philosophical tradition, the Reverend Berkeley [72] had already remarked that, according to the evidence of our direct experience, anything concerning external reality is primarily an object of perception appearing in and as consciousness. Therefore, it is impossible to prove the existence of a world apart from consciousness, given the inseparable and unavoidable coexistence of both: in fact, since they always appear together, they are not two separate entities, but rather *two different aspects* of the same reality.

So the boundary between subject and object is not real: the terms "consciousness" and "world" refer only to two different perspectives (in first or third person) describing one, indivisible reality, just as "ascent" and "descent" are two different words for the same slope, depending which way one is going.

For example, one single experience can be named either as "hearing" (if described in terms of the subject who hears something), or as "sound" (if described in terms of the object heard). However, in the *actual experience* of hearing, one cannot establish a precise boundary where sound ends "out there" and hearing begins "in here": in fact, there is just one, immediate experience and only later on, in order to describe it, the thinking mind says "*I* heard *a sound*", creating a deceptive subject/object duality.

Indian non-dualism can offer a critical contribution to the current mainstream of contemporary neurosciences that regards the origin of consciousness as a side-effect emerging from a certain degree of organization of a material device like the brain (*wet-ware*).

Firstly, due to the lack of philosophical accuracy, neuroscientists often confuse "consciousness" with the "contents of consciousness", the *objects* of consciousness (thoughts, images, perceptions, memories) that can be observed and studied experimentally—as linked, it is true, to the functions of the brain—with the *very fact of being conscious* (consciousness as such), which cannot be observed as an object by science, since it is the source itself of any observation.

Secondly, the stance of a cause/effect relation between brain and consciousness presumes a hierarchical causal order ranging from biological matter to consciousness: *y* (consciousness) depends on *x* (the brain) in order to exist. But how can we assert the pre-eminence of the brain over consciousness if it is only via the consciousness that it becomes possible to perceive and know the brain? To what extent should we regard as "scientific" a theory asserting that *y* depends on *x* when it is also true that *x* depends on *y*, unless we acknowledge that both of them are only two sides of the same coin?

This unsolvable epistemological loop should lead us to consider consciousness as a primary *datum* of reality [73]—on a par with the fundamental forces of physics. Max Plank considered consciousness a fundamental principle from which matter derived [74], just as Erwin Schrödinger realized the impossibility of attributing consciousness to matter. The classical relation between subject and object emerged significantly renovated in Schrödinger's words: "The world is given to me only once, not one existing and one perceived. Subject and object are only one. The barrier between them cannot be said to have broken down as a result of recent experience in the physical sciences, for this barrier does not exist" ([75], p. 127).

Since we are able to observe the universe whilst we can never be apart from it, saying we observe the world would be the equivalent of asserting that the universe watches itself via our observation. So the universe can be regarded as a self-observing unified system: it sees itself through our eyes. However, as G. Spencer Brown [76] properly remarks, in order to observe itself, the universe must split itself up into at least two parts: the observer and the observed. Consequently, since the observer cannot be observed while observing, there is always a part of the totality that remains unseen, outside the field of observation: this unknowable remainder is consciousness itself. Here lies the paradoxical mystery of consciousness: *the very source of any knowledge is unknowable by itself*.

Therefore, according to Indian non-dualist traditions, any observation or theorizing about "objective" reality can never reach consciousness, which is the hidden background of any observing or theorizing process. But *prior* to consciousness, beyond the splitting duality of subject/object, there is the unknown Source of everything (*parabrahman*), the ineffable substratum of reality, which resonates deeply, to some extent, with the concept of "vacuum" in Quantum Physics.

6.3. Amit Goswami and Quantum Consciousness: A Summary

Goswami provides science and philosophy with a new way of conceiving the puzzle of consciousness. His proposal scourges the invisible confines of the imagination without renouncing to the support of a measured scientific argument, to which he entrusts the force of his intuitions and faith in universal consciousness. We use the word "faith" because Goswami seems little inclined to respect the cornerstone of the experimental implementation proper to western science. In fact, the way in which this revolutionary architecture of reality is presented to us provides subjectivity with a role transcending our personality (our ego?) as to embrace that infinite coexistence of consciousness in which the singularity embodied in individuals acts as synolon.

The monopoly of studies concerning consciousness is held by the neurosciences and the sciences of artificial cognition [66–77]. Leaving aside for now the latter, the peak that an erudite neuroscience can reach is a correlation between the neuronal activities and the phenomenology of experience in the first person [78].

In the most trivial versions of the discipline, the problem of the correlation does not even present itself since consciousness is perceived as an unwelcome guest: evolutionary tinsel qualified as epiphenomenon—an appendix stripped of causal power—which emerges mysteriously from the work patterns of the brain [79]. We are convinced that every epiphenomenalism is nourished by an enigmatic paradoxality: as we fear that reality is not reflected and resolved by the system of

knowledge pleaded by a certain physics (as to save the certainty of a manageable universe), we appeal to the last stage of magic art which is epiphenomenalism.

The magic is in accepting that a phenomenon (consciousness/immaterial)—without a clear definition of "phenomenon" in physics—supervenes [80] to another phenomenon (biological activity of the brain/material) without causal prosecution or retroaction. How can a causal chain of corporeal happenings culminate in an event, which violates the fabric of causal relations and connections inscribed in space-time? Here we see the paradox reasserted and unveiled. To avoid asserting directly the insufficiency of a physicalist vision, we appeal to an obvious metaphysics, which undermines the principles of the physicalism itself! Goswami is shrewd in grasping that a vision of the world crushed against a raw and naïve materialism ends up generating sclerotic and indirectly obscurantist propositions, incapable of explaining the phenomena it pretends to observe. According to quantum mechanics there are six dogmas, which mark scientific thought and which impede a clear vision of things [81]:

1. Causal determinism
2. The continuity of events
3. The locality of all objects
4. Clear objectivity
5. Monism and materialistic reductionism
6. Epiphenomenalism

The fact that consciousness remains tangled up in the net of these six assumptions is clear, indisputable: where is consciousness supposed to be? If I observed my brain caught up in listening to Miles Davis, I wouldn't find trumpets flooding the imagination, but strips of neurons busy with a continuous release of electro-chemicals. In this case we do not have objects of thought to be measured and positioned in the space-temporal plot. This last observation interposes itself on the path to consciousness like a threshold to cross. Beyond this threshold an unknown universe is waiting to be discovered and understood. Amit Goswami builds a bridge between the old and the new: the quantum principle of non-locality [81] seems a compulsory stage in sparking off a revolution, the protagonist being the inseparable unity of consciousness and material, both resting upon the fullness of the vacuum.

Our question is if we will ever be ready to embrace a reality so solidly dependent on the human presence; a reality where the abode of daily routine will be definitively assigned to the marvelous lands of the spirit.

7. Conclusions

The aim of this work was to initiate a dialogue between disconnected areas of knowledge because of the persistent disciplinary fragmentation inherited by educational and research institutions based on the model established in 19th century Europe [82]. Of course this attempt, for obvious reasons, can only be partial and epistemologically incomplete. However, we should at least trying to remedy the damage produced by this separation on our university system and at the same time seek out for a new model. And if a third way exists, it will be inevitably be founded on a "virtuous incompleteness"

of all epistemological models. The task of the New Humanities researcher will be to transform the isolation of competences into a stable alliance for opening new scenarios.

The present contribution has only begun the work in this direction. Placing studies like "Protocols of Vision" side by side with spiritual and scientific exploration like "Contribution of Quantum Physics to the Idea of Consciousness", or intersect the naturalistic scenarios of "Narrative Identity: Nature, Ontogeny and Psychopathology" with the radically different perspectives like those proposed by "Signs and Bodies Between Digital and Gendering", has been a healthy critical exercise for challenging and deconstructing the old disciplinary boundaries. We think that insisting on this work of synthesis is the only way to avoid regression to a sort of unwary society, unable to express, transmit and criticize the complex and interconnected structure of today's knowledge and culture.

Acknowledgments

We dedicate this work to the memory of Emilio Del Giudice, brilliant scientist and friend, who died prematurely on the 31 January 2014. In the words of his fellow scientist Mae-Wan Ho, he was considered by many the "Prometheus of the New Science", a "gentle intellectual giant [who] will be immortalized in our collective memory and in the memory of generations to come" [83]. Without his challenging ideas and intellectual generosity, the New Humanities project would never have existed. We are also very grateful to Antonella De Ninno for her accurate review of the transcription of Emilio's original conference. Translation and revision of the article is by Colin Swift.

Author Contributions

Domenico Fiormonte is first author and was responsible for editing and revising all the contributions. Francesco Fiorentino and Domenico Fiormonte authored the "Introduction"; Ugo Fracassa edited the Section 2 "Seeing, Knowing, Recognizing: Protocols of Vision in Science, Art and Life"; Teresa Numerico and Francesco Fiorentino authored the Section 3 "Memory Construction: Invariants, Variability and Media"; Massimo Marraffa wrote the Section 4 "Narrative Identity: Nature, Ontogeny and Psychopathology"; Laura Fortini authored the Section 5 "Signs and Bodies Between Digital and Gendering"; Domenico Fiormonte and Michele Lucantoni edited the Section 6 "The Contribution of Quantum Physics to the Idea of Consciousness: a Culturally In-Between Hypothesis" (except for Section 6.2 which was authored by Mauro Bergonzi).

Conflicts of Interest

The authors declare no conflict of interest.

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Democratic Citizenship and the "Crisis in Humanities"

Vicki A. Spencer

Abstract: As a consequence of the recent global recession, a new "crisis in the humanities" has been declared, and ideas of how best to defend the humanities have been vigorously debated. Placing this "crisis" in the context of neoliberal reforms to higher education since the 1980s, I examine the argument expounded by Martha Nussbaum that the very foundation of democratic citizenship is at stake. I indicate a number of problems with Nussbaum's case. First, to resist the neoliberal agenda that pits disciplines against one another, I maintain that we need to understand the humanities broadly to include the social sciences. Second, I indicate that the humanities are not just important to democracies, but are a vital aspect of any society because they form a crucial part of human existence. Third, I argue that the humanities are important to democratic societies not merely because they promote critical thinking about our political processes and sympathetic understanding as Nussbaum argues. More fundamentally, the diversity of the humanities in both their content and approaches to knowledge is central to freedom. Finally, I warn against framing the challenges facing the humanities in terms of a crisis discourse that deprecates freedom in accord with the neoliberal agenda.

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1. Introduction

In the fall out from the recent global recession, commentators on higher education in the United States have emphatically declared a "crisis in the Humanities" [1–5]. Yet, in the United Kingdom, Australia, and New Zealand—the three countries I possess most familiarity with—recent proposals to prioritize technocratic skills and business needs are merely the latest in a long line of neoliberal reforms to higher education that were initiated in the 1980s when academic autonomy was first arrested [6–9]. During Margaret Thatcher's premiership, academics lost security of tenure and the university grants committee that had been run by academics was replaced with a funding committee on which academics constituted a minority. Priority was also placed in funding student places in accord with the national priority for "highly qualified manpower" [9]. Since then, universities have been increasingly transformed into business corporations with the introduction of student fees for domestic students in 1981, and the need to generate funds from external sources seen as a core role of the academic enterprise. The Higher Education Funding Council for England is now located in the Department for Business, Innovation, and Skills, the "department for economic growth" [10], and in the budget cuts to public funding in 2010, the humanities and arts were targeted causing outcry among their advocates [11]. As in the United States, when dealing with scarce resources, politicians in Britain have tended to favor the sciences over the humanities.

Though neoliberal reforms in Australia and New Zealand have followed their own unique trajectories, governments in these countries have often taken their lead from higher education

reforms initiated in the United Kingdom. The result has been no less than a mini-revolution in the higher education sector, one that has affected the sciences, as well as the humanities. In a climate where the profit-motive reigns supreme, the commodification of the sector has seen many scientists struggling to defend the importance of their non-applied research that will never have any direct commercial value. Nonetheless, from the perspective of some in the humanities, even having an indirect potential to contribute to the profit-motive is an enviable position to be in. What is undeniable is that within this climate, advocates for the humanities have been scrambling to produce arguments in their defense, and to justify the very existence of some fields of study whose use-value to the present and/or business has been less than immediately obvious. For some, like Martha Nussbaum, the very "future of democratic self-government" ([1], p. 2) is at stake.

In this paper, I maintain, like Nussbaum, that the study of the humanities plays a vital role in the promotion of empathy, and the development of self-examining thinkers with the knowledge and analytical abilities to question political authority. Nevertheless, I indicate that an exclusive focus on this argument poses the danger of prioritizing certain disciplines over those whose contribution to democratic self-government is less evident. I argue instead that the importance of the humanities lies in its diversity in both its content and approaches to knowledge. The value of the humanities extends beyond its use-value to business or the democratic polity by helping us understand human existence in all its manifestations. It is also this diversity that forms the foundation stone of freedom and that we therefore have a duty to foster. It is precisely this diversity that is threatened, however, by the neoliberal agenda that privileges its singular conception of freedom based on profit. If we are to resist this neoliberal agenda, we need to form alliances wherever possible by widening the debate and asking more fundamental questions about the kind of society we wish to live in. For, the neoliberal attack on diversity and its creation of perpetual crises poses a serious risk not just to the humanities, but also to the free individual everywhere.

2. Defining the Humanities

Before I proceed to the main argument, it is first necessary to clarify what I mean by the humanities. In *Not for Profit*, Nussbaum claims exclusively to promote the humanities, which she distinguishes from both the sciences and social sciences, because "nobody is suggesting leaving these [other] studies behind" ([1], p. 7). By contrast, in its 2013 report, *The Heart of the Matter*, the American Academy of the Arts and Sciences identifies the humanities and social sciences, unlike the physical and biological sciences, as together possessing unique problems due to a lack of investment in the United States [12]. For example, Congress is currently considering a 22% cut to the National Science Foundation's Social, Behavioral and Economics Sciences Directorate [13]. Likewise, in the 2010 cutbacks to higher education in Britain, the social sciences were targeted along with the humanities [14]. In Australia, during the 2013 election campaign, Prime Minister Tony Abbott promised that "wasteful" and "futile" research would no longer be funded through grants from the Australian Research Council. The four projects highlighted for criticism expanded across the arts, humanities, and social sciences [15,16]. Nussbaum indicates that supporters of economic growth fear artists who are "not the reliable servants of any ideology" ([1], p. 24); but this is no less the case with academics

in the fields of social and political thought, as well as many social scientists who conduct empirical work that challenges increased inequities and other injustices perpetuated by their governments.

Neoliberalism operates by pitting universities, departments, and individual researchers against each other in an attempt artificially to increase "market" competition. Collegiality across departments—and often within them due to competition for scarce resources among fields within a discipline—is broken down as academics compete with each other to attract student numbers as a source of income. The research output of universities and departments are regularly assessed, and league tables produced. These exceptionally time consuming and expensive surveillance exercises militate against the development of collegial relations across disciplines and institutions. Although it is a normal reaction when under attack to bunker down and defend one's own turf, strategically it is crucial to resist this temptation by forming alliances wherever possible.

In the case of the humanities and "social sciences", many would also dispute that they are easily demarcated as separate intellectual enterprises. Both assist us to understand the human world including its impact on the non-human world, whilst the sciences focus on the natural world. The American Academy defines the humanities as "the study of languages, literature, history, film, civics, philosophy, and the arts", whilst the social sciences include the disciplines of "anthropology, economics, political science and government, sociology, and psychology". The social sciences, it claims, "examine and predict behavioral and organizational processes" by "[e]mploying the observational and experimental methods of the natural sciences". The impetus for "non-scientific" disciplines to prove their "scientific" credibility goes at least as far back as the seventeenth century when Descartes "denied to history any claim to be a serious study" ([17], p. 103). In an effort to establish history as a viable field of study, many thinkers during the eighteenth century adopted scientific methods in an attempt to uncover fundamental laws governing history and the behavior of human societies. Yet, as much as positivism has been (and still is) evident in departments of political science and government in the United States, it is also highly contested within the United States and largely rejected outside it. Debates over methodology in all of the so-called "social sciences" seriously question the veracity of the Academy's claim that they apply the methods of the natural sciences. On the contrary, whilst we deal with facts, many of us consider our work is far more "artistic" and interpretative ([17], p. 132).

Although a detailed discussion of methodology is beyond the scope of this paper, recognition of the interdependence between the humanities and social sciences shows how important the humanities are and the scope of their influence. When the humanities are broadly understood to include the social sciences, the impetus to justify the value of these disciplines on the extent to which they conform to the sciences where "real" knowledge is attained is radically disrupted. Scholars in the humanities need not apologize for failing to be scientists, or see themselves as engaged in an increasingly marginalized sphere of activity, but they can stand on their own intellectual strength based on their difference and re-position their place as center stage in the study of the human world.

Moreover, Nussbaum's democratic argument that promotes "[t]he ability to think well about political issues" and "[t]he ability to judge political leaders critically, but with an informed and realistic sense of the possibilities available to them" ([1], pp. 25, 26) is dependent on equipping students with the knowledge provided in the "social sciences" and, in particular, political studies. Anthropology with its focus on culture; sociology with its attention to class, race, and gender studies; and human

geography with its interest in development also provide crucial insights into our own and other societies that assist students better to understand the complex world in which we live and that have the potential to influence policy-making. Nussbaum ([1], pp. 23–24) rightly indicates that literature and the arts have the ability to open our eyes to new ways of viewing our world and to increase sympathy between people, but so do the study of different cultures and the plight of people that face social, sexual, and racial oppression in the present. It thus does no service to the humanities in Nussbaum's own terms of their value to democracy to divorce them from the social sciences. Indeed, in her chapter on creating citizens of the world, she concedes the importance of economics, history, and political science along with language learning in the creation of a multicultural education ([1], p. 91).

3. The Democratic Argument

Let us therefore examine more closely the argument for the humanities—when we understand them broadly—for the creation of the kind of citizens we need in order to maintain a healthy democracy. Nussbaum's case is three-fold. First, the humanities specialize in the promotion of the "cultivated capacities for critical thinking and reflection [that] are crucial in keeping democracies alive and wide awake". Second, the knowledge contained in studying other cultures and the international political economy "is crucial in order to enable democracies to deal responsibly with the problems we currently face as members of an interdependent world". Third and finally, humanities and the arts are adept at cultivating empathy with others and sympathy for their circumstances, which need "to be greatly enhanced and refined if we are to have any hope of sustaining decent institutions across the many divisions that modern society contains" ([1], p. 10).

Arguably, these skills are necessary for all societies and not merely democratic ones. Sympathy and compassion are not uniquely democratic values, but feature in a range of moral and religious traditions. Nor do the humanities and the arts necessarily promote these values. As Nussbaum ([1], pp. 28–29, 35, 109) realizes, antidemocratic movements have been highly effective in their utilization of the arts to foster hatred toward marginalized groups, and many stories perpetuate misleading caricatures and sexist stereotypes. Whilst the arts cultivate the imagination, that imagination can be dark and brooding, as can human existence. If we look, moreover, to the political values and personal lives of many artists whose works we admire, they will often disappoint in terms of their empathy for others. Philosophers, too, are not well-known historically for their progressive gender relations, and contra Nussbuam's claims about the democratic features of Socrates' approach to knowledge, Socrates far from supports democratic values in *The Republic* [18].

The challenges of multiculturalism and globalization extend well beyond democratic boundaries. Non-democratic societies that previously focused one-sidedly on the promotion of technical skills are increasingly recognizing the value of the humanities in fostering innovation and understanding in a globalized world [19]. For example, in a 2012 Humanities Educators' Conference with the theme "Fostering Critical Thinking, Inspiring Active Learning", the Minister for Education in Singapore, Heng Swee Keat, declared:

> Humanities educators play a vital role in preparing our young people as Singaporeans with a global outlook. Our students need civic literacy, global awareness and cross-cultural

> skills so that they can interact with people of diverse backgrounds with confidence and empathy. They should also be able to think critically and creatively when solving problems at work and in life, and tackle problems that do not even exist today [20].

The Hong Kong Academy for the Humanities was also established in 2011 to promote the value of the humanities. The kinds of questions posed in the humanities about the things that concern us; the ways in which we view them, that is, the categories in which we understand our world; and the imaginative impulse to view things differently are at the core of human experience whether it is democratic or otherwise.

Yet many would concur with Nussbaum that the humanities are particularly vital to a well-functioning democracy. As she writes: "Democratic participation makes wider demands, and it is these wider demands that my primary argument supports" ([1], p. 11). For one, democracy depends upon people participating in the political system at the very least through the great majority of the population voting in regular elections. If those voters are literate, informed about social and political processes in the past and present, and can think critically so they do not simply accept without question whatever politicians and the media claim—all of which are skills the humanities specialize in developing—the general belief is that we will have a more robust political system with leaders kept adequately in check by being held accountable for their actions. Thus, democratic leaders and philosophers from Thomas Jefferson to John Stuart Mill have argued for the importance of universal education to the development of representative democracy ([21], p. 280).

There is nevertheless a tension here highlighted by Mill's logic that led him to argue that the more qualified one is, the more votes one deserves ([21], pp. 284–86). Few would accept the elitism of that argument today, in part, because the more egalitarian argument entailed in the idea of the right to vote predominates. One needs no skills to vote; it is simply a right accorded to human beings by virtue of their citizenship in a democratic polity. That right is commonly interpreted also to entail a right not to vote derived from the more general liberal right of one's freedom do as one wishes as long as one does not infringe on others' freedom. The liberal framing of this right is therefore divorced from any notion of a duty to participate that, as David Miller indicates, is more indebted to a republican conception of citizenship [22]. It is also based on the assumption that no one is in a better position to understand one's interests than oneself. One might decide that one's interests are best served by supporting a party that attempts to create a peaceful society that is committed to a reduction of inequity, but one might think otherwise. The idea that the individual ought to be free to pursue his or her own conception of the good plays a central role in both liberal and libertarian thought alike.

Not all liberals, however, believe that freedom is merely a matter of being left alone. Nussbaum challenges this classical liberal conception and champions a conception of freedom based on self-governance. Freedom requires "good" citizens—and not just an elite few—who understand the importance of democratic participation. This requires that they are not only critical thinkers, but also sympathetic toward others so they do not merely consider their self-interest in their political decision-making. For this reason, she rejects the current emphasis on vocational training and technical skills, and instead promotes a "good" education that "is not just about the passive assimilation of facts and cultural traditions, but about challenging the mind to become active, competent, and

thoughtfully critical in a complex world" ([1], p. 18). It is also an education that gears its instruction and the kind of books that are read toward those that develop people's compassion and empathy for others ([1], p. 37). These are laudable goals and whilst I might disagree with her focus on Socrates as an appropriate model for a democratic interlocutor, who promotes the empathy, humility, and respectful listening skills essential for intercultural dialogue, I sympathize with her desire to develop self-examining and critical thinkers who possess the empathetic skills to understand others in their own terms.

Another side to democracy is nonetheless evident in the way it operates in many advanced industrial societies today. Mass participation is minimized in favor of representation by politicians whose loyalties—whether they are to a party whip with the power to deselect them or lobby groups with the funds to devastate their next election campaign—often override any concern they might have to listen to their constituents. The professionalism of political life—or what is called the presidentialism of the prime minister's role in Westminster systems of government—has accorded greater power to leaders who in some cases even fail to listen to the advice of their cabinet ministers in favor of their own network of analysts [23]. Parties have become increasingly run from the center with the voices of their members having minimal impact so that membership has been in rapid decline. In the United Kingdom, for example, only 1% of the electorate was a member of one of the three major parties in 2010, compared to 3.8% in 1983 ([24], p. 2). Similar trends have been reported in Australia [25] and New Zealand ([26], pp. 236–37). Mass demonstrations—as were evident in the United Kingdom and Australia prior to the Iraq war—also have had little, or no, effect on political decisions.

It is in the interests of those in power even in democracies to ensure the populace does not become thoughtful and critical about our political processes. If parties increasingly want to control their internal dynamics in a top-down manner, they are not looking for alternative perspectives. The irony of neoliberalism in the higher education sector, too, has been greater government control over the sector by reducing academic freedom and expanding bureaucratic control. Between 2003–2004 and 2008–2009, professional managers in the British tertiary sector increased by 33% and academics only by 10% [27], whilst Australia now has a sector with 55% non-academic staff across all universities [28]. Though administrative staff are crucial in supporting academics in their research and teaching, this bureaucratic growth has often been accompanied by a decline in academic control over core activities in favor of hierarchical line management and greater government control in determining national priorities. A range of compliance mechanisms have been developed from the United Kingdom's Quality Assurance Agency that oversees course design and learning outcomes for students to annual performance audits for academic staff. Often the justification is greater democratic accountability; if taxpayers' money is involved, then we need to develop open mechanisms to ensure they receive value for money. The institutional culture that has ensued in many places is based on the premise that academics are not to be trusted to perform well without punitive surveillance measures in place [29]. By contrast, the new managers are rarely, if ever, accountable for their decisions to the teaching and research community that (in theory, at least) they are meant to serve.

The answer to reducing bureaucratic control is not to reduce government funding; on the contrary, bureaucratic growth has operated in tandem with decreased funding. Where universities in Australia

have been given autonomy, it has been in terms of increasing non-government avenues for income generation but that, in turn, has merely justified further the shift away from academic control within universities in favor of increasing business and managerial interests. Money is redirected from teaching less popular or expensive courses irrespective of their educational value toward marketing campaigns, glossy mission statements, and expensive compliance mechanisms. Meanwhile, individual academics are routinely gagged from commenting on areas beyond their field of expertise such as administrative decisions that affect their working lives ([29], p. 32; [30]). We have a product to sell, so we need to keep any disgruntlement in house, and on a business model we need happy consumers. This means our students need to be proud of their institution, and believe it is at the forefront of research and teaching innovation. The upholding of this image means the impetus is strong to sacrifice critical thinking about the direction of our institutions and government mechanisms that measure our performance. Despite all the cynicism that exists, for example, toward the New Zealand Performance-Based Research Fund exercise due to the ways its rules can be manipulated by various universities and disciplines to their advantage, we all nonetheless complied in submitting our portfolios, and our institutions simply looked for the best spin they could make with the statistical data. Conformity to the rules of the game—no matter how much they are found wanting by thoughtful, critical people—is what counts.

Of course, there is a degree of merit in the notion of the happy consumer. Many academics are, for example, committed to teaching students well, and hope they will receive positive student evaluations in recognition of their work. Does being a good educator necessarily correlate, however, with happy students? It does according to the neoliberal model of education that focuses on providing skills training, but is it really my job, as a political theorist, to make all my students feel comfortable so they leave my lecture with a satisfied smile? Or is it my role to challenge them so they feel decidedly uncomfortable at some point during a semester? Is confusion, at least initially, not an important step in learning new concepts and ways of thinking? To be sure, there are better and worse ways to guide students through that process, but confusion is unavoidable as they learn to assess difficult material for themselves. Sometimes, too, no matter how much we simplify philosophical material so it is more accessible to our students, it can be difficult and even tortuous to read and engage with. Yet, we consider it worthwhile for the insights that are gleaned by doing so. Hence, there remains the importance for students at a certain stage in their development to read the originals for themselves so they can determine what they think of them rather than experience them only through others' interpretations. As much as some students might wish to be shown the "right" way, it is not our role simply to replace their current ideology with a new one and thereby produce followers for our cause. A commitment to critical thinking about society and our role in it is about letting the desire to control others go, and constitutes a radically subversive position also in contemporary democratic societies.

Thus, whilst I concur with Nussbaum on the benefit of nurturing thoughtful, critical thinkers in our respective societies, we first need to ask more fundamental questions about the kind of democratic society we wish to live in. We also need to examine our role in society as academics and the part we play in perpetuating the current neoliberal agenda. To take just one example, "the publish or perish mentality" has been keenly pursued by academics wishing to obtain tenure and promotion, but it is having dire consequences in many of our disciplines where we know that the greatest figures in our

fields would never have produced the works we admire if they had faced similar strictures. Thoughtful, considered thinking takes time, and whilst increased funding to employ more academics in the humanities would considerably assist in this regard, the current challenges facing the humanities cannot be reduced solely to a funding issue.

Nussbaum has produced a spirited defense of the humanities by appealing to a tradition of education she identifies in the United States that is based on critical thinking rather than the profit-motive. She also ([1], p. 93) recommends the American liberal arts model that includes general courses for all students—over the kind of specialization that exists in European countries—for all democratic countries. There are certainly advantages to a model that combines the development of more technical and scientific skills with the incorporation of humanities subjects. One is that the value of the humanities in enriching people's worldview is recognized by diverse groups in society including engineers and scientists [31]. However, in terms of the democratic value of the American liberal arts degree, it is noteworthy that whilst the voter turnout rate in the United States is now comparable to that in Britain, it is far worse than in New Zealand, the Netherlands, Norway, Spain, Italy, Greece, Sweden, and Denmark ([32]; [33], p. 53). Also, Europe possesses a long tradition of producing some of the most radical and critical thinkers in the humanities. There is thus more than one educational model at the tertiary level that can achieve critically informed, democratic participation.

4. The Importance of Diversity

The danger of focusing solely on the democratic value of the humanities is that it can readily lead to the prioritization of certain disciplines within it such as political studies. Somewhat surprisingly, Nussbaum does not propose the study of politics; instead, as a philosopher, she prioritizes the compulsory teaching of two philosophy courses including logic. Yet the privileging of one form of thinking over another is highly problematic. As a scholar indebted more to the German tradition of philosophy, I am less enamored with the advantages of the Anglo-American analytic tradition that still dominates many philosophy departments in the United Kingdom, Australia, and New Zealand. As Isaiah Berlin ([34], p. 19; [35]) indicates, a sentence can be both logical and grammatical, but nonetheless nonsensical. Logicians are also deeply divided over what constitutes a "good" proposition. Honing one's debating skills can be a valuable exercise, as Nussbaum suggests, particularly if one is planning on a political career. Debates are nonetheless directed toward the winning of an argument, something that can interfere with the kind of listening skills required for genuine intercultural dialogue. Nussbaum maintains that the Socratic legacy of reasoning she supports is not about winners and losers because Socrates submits himself to the same examination as he does his interlocutors so "all are equal in the face of the argument" ([1], p. 51). Yet, in *The Protagoras*, by determining the rules of the discussion on his terms, Socrates delegitimizes alternative modes of argumentation and thereby increases his chance to regain the upper-hand in the dialogue [36]. The strength of the humanities instead lies in teaching us that there is not one way to argue, and not one way to foster critical thinking.

At the university level, too, the argument for gearing the books that are read toward those that promote empathy is deeply contentious. Franz Fanon's *The Wretched of the Earth* is no less important to read on the subject of power because it advocates violence [37]. Through literature and

drama, too, we learn about the complexity of human existence and much of that is not directed toward empathy or compassion. It is the diversity of human experience that the humanities excel in illuminating and that enable us to gain greater understanding of our existence. We can, of course, teach empathy as a methodology aimed at attempting to understand others' arguments and experiences from their perspective. However, whilst I adopt such a hermeneutic method in my classes, it is a different proposition to consider making it mandatory. The disputes I have, for example, with rational choice theory, or positivism, or realist approaches to international relations constitute debates that need to be conducted, not legislated upon. Sometimes we hear students complain if a course adopts a particular ideology or framework of thinking with which they do not agree. In contemporary neoliberal times, Marxist academics, for example, are bound to run against the grain. Yet knowledge within the humanities operates within different disciplinary and theoretical perspectives, and whilst I promote critical thinking by teaching a range of philosophical perspectives on a topic, there also remains considerable value in learning from a scholar immersed within a tradition. To teach our students to respect this diversity by being open to learn from it, we need to support it within our respective fields.

For, the value of the humanities collectively lies in its diversity in both its content and approaches to knowledge. Medieval history is important for both the research skills it provides its students and to understanding the present, but even if I do not benefit directly from the knowledge generated by colleagues in medieval history it does not follow that it possesses no value. Also, if courses in international relations attract a hundred more students than those in medieval history, it does not mean that they have a hundred times more value. Nor is it the case that because international relations might inform students so that they become more considered voters, and I thereby benefit as a citizen of a state with more peaceful foreign relations, that courses without a similar missionary intent have no value. Indeed, if such benefits to society were the standard of success for the humanities, we would need to conclude that they have been to this date an abject failure. Moreover, while I may never individually benefit from the existence of courses in medieval history, they nevertheless enrich the society in which I live. It might be objected that I therefore obtain the kind of instrumental benefit I would with improving our democratic system, but in the case of medieval history it is highly probable that I will remain entirely divorced from any direct benefit from its teaching. By contrast, even people who never vote would benefit if the decisions of their politicians were based on a more informed understanding of world affairs.

Nevertheless, I do possess an interest in being a member of a society that cherishes diversity and I therefore possess a duty to sustain its diversity. I may never take a class in medieval history, but having the option to do so increases my freedom of choice. More importantly than my self-interest, it provides freedom to those students and historians who specialize in the field to do so. Although I might not wish to follow that path, it is possible that my neighbor or friends' child might. While neoliberals claim that they allow everyone to purse their own conception of the good, in practice, they narrowly conceive freedom in market terms. In current education policy, for example, arguments about autonomy form the basis to reward those subjects that attract greater student numbers and to cut those that fail to have mass appeal.

At the same time, however, the market can be understood in more liberal terms. Thus, John Stuart Mill insists in *On Liberty* on the importance of diversity to freedom of expression ([21], pp. 116–17). As he argues, it is possible to find insights in a range of material also when one otherwise disagrees with it, and even if 99% of people agree a publication is egregious, it is always possible that those 99% of people are wrong. Enabling the market place of ideas to flourish unfettered by censorship is seen as essential to the capacity to learn and progress. According to Mill, we should therefore "thank" those "who contest a received opinion", and "open our minds to listen to them" ([21], p. 105).

Few in the humanities today would accept so uncritically the idea of a "free" market place of ideas undistorted by power relations. Many would also add the caveat that when confronted with hate material of various kinds, there ought to be limits to freedom of expression. Yet Mill's argument with respect to diversity and freedom for which he was indebted to the German philosopher Wilhelm von Humboldt maintains its relevance; if the profit-motive becomes the sole criterion for what is taught at tertiary level so that entire fields are rendered redundant, then censorship is exponentially increased. It might be covert rather than overt censorship, but it is no less effective. Historians will still be able to access library books on medieval times and conduct their own research even if the teaching of a course in their field is considered irrelevant, but as publishing options wither away in response so, too, will the incentive to work in the field. If students never have exposure to medieval history, extraordinary initiative by individuals will moreover be necessary for them ever to consider it as a field of endeavor. Whenever the market closes another door to their possible endeavors, the freedom of future generations is thus diminished.

It does not follow that the autonomous critical thinker favored by Mill and many liberals is the only appropriate model to adopt. Mill advocated a life so dedicated to autonomy that he made invalid alternative forms of life more devoted to reverence [21]. We could also follow Nussbaum's Socratic method of reasoning in our study of alternative traditions of thought, as we would examine our own. However, to do so, before we have attempted to understand them in their own terms and to appreciate them from the perspective of the people for whom they possess meaning, means we are liable to miss any wisdom they might possess in our attempt to assimilate them into our own way of thinking and examining. Thus, we will also fail to fulfill the more primary role of the humanities that unites its various disciplines, namely, to help us understand human existence in all its diversity.

The aesthetic value of the humanities and its creative dimension have been recognized throughout history, and fulfill an important part of who we are as human beings by enlivening our imaginations in multifarious ways. This value is not reducible to the capacity of the humanities to teach us empathy or sympathy, or their usefulness to democratic participation, or their ability to help us understand the present, despite the importance of these ends. When a poet eloquently describes nature, he or she can open our eyes to a new way of viewing the world, but a poet's propensity to transport us to the sublime is a significant achievement in itself. There is not one way of experiencing the humanities, just as there is not one way of being human. The strength of the humanities as a whole lies precisely in this diversity. For this reason, too, the value of the humanities extends far beyond democratic societies.

5. The Neoliberal Politics of Crisis and Fear

It is this diversity, however, that is currently under threat from neoliberal policies. The dilemma we face is not whether the humanities will survive; the importance of the humanities and the skills they provide are sufficiently well understood in democratic societies that the demise of the humanities is nowhere seriously countenanced. Yet the humanities are being transformed, and the question we confront is to what extent its diversity will be impoverished. In some UK universities, scarce resources have resulted in the closing of departments deemed irrelevant and the burgeoning of others considered more viable in attracting student numbers. In England between 2006 and 2012, full-time undergraduate degree courses fell by 31% (27% throughout the UK), restricting student choice [38]. Within departments, too, academics vie for the intellectual importance of their subjects against their colleagues more concerned to ensure student popularity. In departments of politics, this has often led to a prioritization of papers dealing with current international affairs or domestic public policy over those more difficult courses devoted to the theoretical underpinnings of the discipline. Of course, diversity will always be less in smaller departments and universities. It would also be naïve to suggest we entirely ignore the pressures to attract student numbers. However, neither students nor university administrators are in the best position to know the educational value of particular topics to a discipline, and wherever possible we need to resist the pressures to concede solely to their demands by protecting the diversity of our offerings.

Where academic control over educational content has already been lost, such resistance may be unfeasible. Thus, it is crucial for academics where they still possess a level of autonomy to resist attempts to remove it. Effective resistance can only exist, however, when academics put aside their urges either to protect their particular field in a way that casts other academic fields, like the sciences, as the threat, or to exploit an opportunity for expansion of their particular interest within their discipline when it is at the expense of others. Above all, to protect the pluralism on which the intellectual integrity of our disciplines is dependent, the forming of alliances wherever possible both within our own disciplines and across them is vital. As noted above, the liberal arts structure in the United States might have advantages in this regard. However, great scientists everywhere recognize the value of the humanities, and those who do not might be convinced at least by the need to protect non-applied research. If the Australian case is a potential gage of the development of neoliberal reforms in higher education, it is also naïve to think that the sciences will not elsewhere be eventually affected more directly. In the 2014 Australian federal budget, for example, research funding to the sciences in all areas other than medical research was cut by A$450 million in addition to the A$470 million over the previous two budgets [39]. The issues at stake are not merely a concern for those of us in the humanities.

Yet the framing of these challenges in terms of a crisis discourse is counterproductive. The politics of neoliberalism is characterized by the creation of crises. To be sure, crises are not entirely manufactured. The terrorist attacks on the New York World Trade Center and the Pentagon were momentous, but the “war on terror” that was subsequently created by the Bush administration effectively placed the world in a permanent state of crisis. Having established we were in a perpetual warlike condition—with a war on terror never winnable—then the imminent threat of Saddam Hussein and his alleged weapons of mass destruction were employed to justify the US-led attack on

Iraq. Having created a crisis, governments then offer solutions to calm the fear they have generated. Rational and critical thinking is in the meantime sacrificed in the interests of "necessity". In both the United States and the United Kingdom, intelligence agents and those in power ignored evidence that did not accord with their preconceptions, and in some instances misused the available information to suit their own political ends [40,41]. As it became evident post-invasion, no real necessity existed. Yet the cruelty inflicted on the Iraqi population with over 120,000 civilian deaths from violence estimated between March 2003 and October 2013 was real [42]. As Judith Shklar maintains in *Ordinary Vices*, fear deprecates freedom in the name of "necessity", and can far too easily lead to cruelty ([43], chap. 1).

Here lessons can also be gleaned from the case of Australian higher education. According to Michelle Carmody, higher education in Australia—and not just the humanities—has been in a perpetual state of crisis for the past 20 years, and the solution to outcries at this occurrence has not been to return government funding to previous levels or to reduce bureaucratic control. Instead, each crisis has led to another neoliberal solution sold to the public with the rhetoric of increased freedom through workplace flexibility and greater freedom of choice for students [44]. The latest "necessary" solution is further to cut government funding to higher education, whilst providing universities with the "autonomy" to charge whatever fees they wish for their degrees [45]. Managers of the older universities that are likely to benefit financially from deregulation have welcomed the change. Yet, the unique conditions in the Australian sector (see [46]) mean any idea that a fair market can be created is a pure fallacy, as is the successful adoption of America's private sector model of higher education in a country that lacks a developed philanthropic culture amongst its elite.

The "necessity" of these changes has not derived from successive governments having insufficient funds during these constant crises. During the lifetime of the Howard government from 1996–2004, higher education was cut by 4% whilst the defense budget almost doubled from A$10.4 billion to A$19.9 billion [47,48]. Nor has the Australian economy since suffered the kind of recession experienced elsewhere in the world. The neoliberal rhetoric is a chimera, and not merely because individual freedom is not created through job insecurity with almost half of Australian academics now unconvinced they possess autonomy and control over their working lives ([29], p. 32), or because student choices are not free if they are determined by their capacity to pay. The commodification of education further means students increasingly consider the value of their degree not for any intellectual enrichment it might offer them, but *only* for its use-value in the market place; their freedom is thereby diminished.

As idealistic, romantic, and old-fashioned many might think attempting to turn back the clock on the neoliberal university might be, neoliberalism has created a discourse of freedom and choice that provides the possibility to challenge its credibility. It is also feasible to eliminate much of the bureaucratic red tape and wastage that exists in the Australian system to redirect funding back into actual research and teaching [46]. It would take political leadership, but it is not inconceivable or entirely impractical. Where neoliberal reforms to higher education are not so advanced, and the new managerial class has not been so firmly embedded into the system, resistance is clearly more viable. To resist successfully, though, we need to open the discussion beyond the role of the humanities and consider what role, if any, the intellectual has to play in our various societies today. At the very least,

if intellectual endeavor is to survive beyond the production of knowledge according to whatever government in power finds useful, we need to engage more effectively with the populace than we have done so in recent years. Though this might seem like a mere pipedream in Australia after years of anti-intellectual rhetoric, it is inadequate to bemoan the anti-intellectualism of our respective societies; our alumni attest to its fallacy. The transformation of universities from elite institutions to mass-based ones has also meant there are far more academics today from working-class backgrounds who demonstrate that the desire to think critically is not confined to an out-of-touch elite.

6. Conclusions

Rather than plunging from one crisis to another without ever catching our breath, we need to have the audacity to resist the neoliberal drama and pause to think. We also need to ask fundamental questions about the kind of society we want to live in. Everyone has a stake in this debate; as Charles Taylor aptly put it in his critique of neoliberalism in the 1980s, it matters to the free individual everywhere

> that certain activities and institutions flourish in society. It is even of importance to him what the moral tone of the whole society is—shocking as it may be to libertarians to raise this issue—because freedom and individual diversity can only flourish in a society where there is a general recognition of their worth. They are threatened by the spread of bigotry, but also other conceptions of life—for example, those which look on originality, innovation, and diversity as luxuries which society can ill afford given the need for efficiency, productivity, or growth, or those which in a host of other ways depreciate freedom ([49], p. 207).

In this debate, the humanities are central, and yet simultaneously the current situation in the humanities is merely symptomatic of a wider neoliberal attack on freedom itself. If we broaden the debate, we will have far greater chance of finding allies. Neoliberalism has a highly impoverished conception of freedom, but the desire for self-governance and a respect for diversity cross many political and philosophical divides. We thus need to recognize that the problem for those of us in the humanities is not an isolated one produced by the recent, global recession; rather, it is the consequence of the far greater threat that neoliberalism poses to the diversity on which freedom depends.

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Conflicts of Interest

The author declares no conflict of interest.

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Timely Meditations: Reflections on the Role of the Humanities in J.M. Coetzee's *Elizabeth Costello* and *Diary of a Bad Year*

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Abstract: What may be the relevance of the European tradition of the humanities and of humanism today? In his novels, *Elizabeth Costello* and *Diary of a Bad Year*, the South-African writer, academic, and current resident of Australia, J.M. Coetzee, both enriches and puts into question the European traditions that have shaped scholarship, literary writers and academic professions in the humanities. His characters' meditations on the value of literature, humanism, and the humanities, their present crisis and future possibilities, are timely interventions made from a complex, critical, comparative, cultural and geographic distance. The metafictional investigations of the two novels test the limits of the genre in a manner consistent with more experimental strains of postmodern fiction, while the two protagonists reflect two main personae of the author as itinerant, ageing academic and writer. It is the position of this paper that Coetzee constructs a minor literature within the major language of English; this is made evident by the entirety of his *oeuvre* to date though it becomes thematized in these two works. This paper will trace some of the contours, confrontations and dialogs of the two books and explore certain tangents of the radical quests and questions they put to their readership.

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1. Introduction

What is the relevance of the European traditions of literature and of the humanities today? This is the question explored in J.M. Coetzee's *Elizabeth Costello* [1] [2003] and *Diary of a Bad Year* [2] [2007], in which I will trace three inextricably related crises: of literature, the humanities, and language.

Coetzee is of Dutch descent but writes in English, not in Afrikaans, and the significance of this choice may be understood in the terms Gilles Deleuze and Felix Guattari gave to "minor literature", their example being that of Franz Kafka, a Czech Jew writing in German in Austro-Hungarian Prague. Here is the definition Deleuze and Guattari provide of a minor literature:

> A minor literature doesn't come from a minor language; it is rather that which a minority constructs within a major language […] The three characteristics of minor literature are the deterritorialization of language, the connection of the individual to a political immediacy, and the collective assemblage of enunciation ([3], pp. 16, 18).

An equally striking illustration of minor literature is, in my estimation, the poetic oeuvre of Paul Celan, a Romanian Jew deliberately choosing to write his poetry in German, the language of his education and of his mother's literary preference, despite the traumatic weight of violence and betrayal in the immediate aftermath of the Second World War and Nazi genocidal campaign.

Whereas the full impact of the nuances of the deterritorialization of language in the case of Kafka and, especially, Celan, is diminished in translation (hence the significance of the bilingual edition of Celan's poems in the Michael Hamburger translation) [4], it can be directly gauged in the English prose of Coetzee's novels [5]. Like Czech or Romanian German in Kafka or Celan, respectively, Coetzee's South African English is a deterritorialized language; by writing in this language, Coetzee immediately is set at a distance from both his South African, Africaans-speaking ethnic milieu and the Apartheid State of the Dutch colonial minority [6].

While German is the language of the Austro-Hungarian Empire and German literature enjoyed a high cultural status in Europe already since the Romantic period, English is similarly a language of empire, and English literature had long been held in regard not only in Europe but in the expansive British empire. Deleuze and Guattari's designation of a minor literature has, however, nothing to do with a minority status of the language in which it is written: "A minor literature doesn't come from a minor language; it is rather that which a minority constructs within a major language" ([3], p. 16). Firstly, the language of a minor literature "is affected with a high coefficient of deteterritorialization" ([3], p. 16); writing in German alienates Kafka and, especially, Celan (for obvious historical reasons) from their Czech and Romanian native population context, respectively. Similarly, English alienates Coetzee from his native Afrikaner context (something poignantly illustrated by his autobiographical novel, *Boyhood*). However, the South African context though comparable has an added, ironic twist with respect to this first criterion for a minor literature. As William Beinart notes in his history of *Twentieth-Century South Africa*, despite the imperialist program of increasing the English-speaking population through immigration schemes at the end of the nineteenth century and the beginning of the twentieth, in the belief that anglicization would strengthen and benefit the State, this racial ideology backfired [6]. The assumption was that "'race' or culture determined political interest and behavior" ([7], p. 75), what happened instead was that working-class awareness made many align with anti-imperialist politics and gave rise to class conflict amongst English-speaking whites; "a few even made contacts with blacks in socialist organizations" ([7], p. 75). What is more interesting, following the end of Apartheid, as "black people were drawn into the core political processes, English increasingly became the shared language of national politics" ([7], p. 281). In the example of Coetzee's South-African English, what is a schoolbook language, a language "cut-off from the masses" ([3], p. 16), later becomes one of the factors for a revolutionary change in national consciousness since it brought together groups that the Apartheid regime kept apart.

As a second characteristic of minor literatures, Deleuze and Guattari stipulate "is that everything in them is political ... its cramped space forces each individual intrigue to connect immediately to politics" ([3], p. 17). Whether one considers the early, overtly anti-colonial novels, *The Master of Petersburg*, the autobiographical novels, or the more recent reflective, philosophical novels, in each text the socio-political is never a background to a personal or familial plot [8]. The political concerns, dilemmas, anxieties are part of the personal situation, they are an overtly thematized aspect of ethical and aesthetic matters, which also means that the latter are never abstract discourses. Notwithstanding the novels' focus on the individual, there is another way in which everything is political and that is that everything in them "takes on a collective value", which fulfills the third criterion Deleuze and

Guattari set for a minor literature: "the role and function of collective, and even revolutionary, enunciation" ([3], p. 17).

As a South African with links to both an Anglophone and a Germanic (Dutch) European tradition, J.M. Coetzee enriches and puts into question the European traditions that have shaped him as both academic scholar in the humanities and literary writer. If Kafka's stories render typical meaning-producing narrative and interpretive structures uncanny and unstable, while Celan's ever greater breakdown and re-assemblage of German words and syntax veers away from representationalism [9], Coetzee's narratives create fault lines within the fictional universe that force our attention onto the problematics of the poetics of storytelling, making the reader share in the discomfort and anxiety of the authorial creative process. If narrative fiction is a kind of language, a use of language that also depends on a *sensus communis* for its real-life contexts and coordinates, then Coetzee deterritorializes the novel in his prose narratives. Narrative meanings are caught up in a relentlessly metonymic structure just as his characters are caught up in a movement of displacement from which any reassuring or certain sense of origin is unattainable or non-existent. The political immediacy that his individual characters connect to is defined by empire; typically, they are colonizers or colonized, immigrants, refugees, asylum seekers, shipwrecked or stateless persons in an environment that is at least vaguely threatening or indifferent to them. Even when his narrators start from the master's position, they devolve towards the minor: "To hate all languages of masters" ([3], p. 26). The narratives "break forms, encourage ruptures and new sproutings" which, when reconstructed create a "content that will necessarily be part of a rupture in the order of things" ([3], p. 28). We do not find difficulty in assigning *Elisabeth Costello* and *Diary of a Bad Year* to the genre of the novel, if we take all this into account and consider the following description of the genre: "An assemblage, the perfect object for the novel, has two sides: it is a collective assemblage of enunciation; it is a machinic assemblage of desire" ([3], p. 81).

The two novels, *Elizabeth Costello* and *Diary of a Bad Year*, are semi-fictional, not because of the autobiographical dimension they may or may not have, but because much of their writing is non-fictional—in the form of the literary essay, philosophical reflections or academic debate; as such, whether or not the opinions of the fictional authors or speakers are also those of J.M. Coetzee is irrelevant to their generic description and overall import and impact on the reader. Rather than considering them as distinct characters in a conventional sense, the various writers (academic or literary but even an author of a letter) that feature in Coetzee's novels constitute what Deleuze and Guattari signify by "a collective assemblage of enunciation"; the third criterion for a minor literature. Elizabeth Costello the fictional Australian author who features in most of the novel by that name; Lady Elizabeth Chandos—of the same initials –who is the fictional author and wife of the (also fictional) Lord Chandos, invented by Hugo von Hofmannsthal, of the 11 September, 1603 dated letter to Francis Bacon in the post-script to the novel; and Mr. C, the author figure in *Diary of a Bad Year*, indirectly identified as Coetzee himself, all form a *collective assemblage* for the author function.

The meditations of this collective assemblage, or authorial personae, on the value of literature and the humanities, their present crisis and future possibilities, are timely interventions made from a complex cultural critical and geographical distance, which ought to compel our attention. Their timeliness is not restricted to their date of writing or publication. What renders the meditations timely is

their untimeliness, understood as both a negation of this restriction and even as their being *contre-temps*, at the wrong time or against the times. More precisely, to use Nietzsche's terms from *Untimely Meditations* [10], "acting counter to our time and thereby acting on our time and, let us hope, for the benefit of a time to come" ([10], p. 60).

On a more thematic level, both books foreground an intense awareness of time or timeliness as a problem for an embodied individual embedded in the modern world: the crossing of time zones, jet lag, old age, ageing and sexuality, saying things at the wrong time and the reverse, repetition and even a parodic fantasy of limbo or the afterlife, but also marking time with one's writing, as in *Diary of a Bad Year*. The question of time is also the question of life, the question of the good life, of ethics. Coetzee brings together in *Elizabeth Costello* but also in *Diary of a Bad Year*, literary writing that is critical and even deconstructive on a subject that can be given the title "The uses and disadvantages of literature for life" [11]. Here, however, we should give to the term "literature", the wider sense of writing that encompasses fictional, historical, and philosophical writing.

The act of writing, the writing of a novel, of lectures, of award speeches, of philosophical reflections for publication, of a confessional statement, and by extension, literature in general (as cultural institution, personal activity, public responsibility, and form of entertainment), is repeatedly, and often dramatically, staged in these two semi-fictional novels, while simultaneously the (institutional) authority and (cultural) power of both the literary and critical author are subverted. Altogether, these works are illustrative of our still being, in the words of Jean-Luc Nancy and Philippe Lacoue-Labarthe, living the legacy, whether we are aware of it or not, and indeed the problematic, of Jena, of the Early German Romantics, as set out in the *Athenaeum* and *Critical Fragments*, the *Letter on the Novel*, and other seminal texts of what they rightfully designate as the first modern European avant-garde. What this means is given in part by this statement:

> […] it means that literature, as its own infinite questioning and as the perpetual positing of its own question, dates from romanticism and as romanticism. And therefore that the romantic question, the question of romanticism, does not and cannot have an answer. Or, at least that its answer can only be interminably deferred, continually deceiving, endlessly recalling the question […] "The romantic kind of poetry [*Dichtart*] is still becoming; that is its real essence: that it should forever be becoming and never be perfected" [12].

In *Elizabeth Costello* (of which *The Lives of Animals* [1999] forms a part), and in *Diary of a Bad Year*, Coetzee's authors act as members of a virtual Republic of Letters; it is with equally serious consideration that they address, engage with and respond to others, irrespective of their social or professional status, their gender, class, or color. The books themselves are the indispensable means of their radical democratization of this humanist, enlightenment and romantic notion of a republic of letters. Elisabeth Costello and her male counterpart in *Diary of a Bad Year*, another ageing but eminent Australian author (born, like Coetzee, in South Africa) debate, contemplate and put into doubt others' or their own strong opinions on what could be said to fall under the general rubric of *studia humanitatis* (an enlarged version of the present day "humanities", to include social and political thought, literature, history, philosophy).

2. Elizabeth Costello

2.1. The Novel's Theses

The lessons that make up *Elizabeth Costello* constitute a critique of literature and the humanities through the (auto)biographical fiction of an authorial figure [13]. In the first six lessons, Elisabeth Costello's lectures on literature are embedded in the personal everydayness of the speaker in a narrative that openly shows the "wiring" behind realism as a literary style by the real author. Though the actual author never interrupts the narrative to rupture the fictional world, the exposure of realism as a fictional mode is achieved by the various metafictional techniques of self-reflexivity. Furthermore, no one is allowed to appear either glamorous or authoritative, nothing goes without being challenged, undermined, passionately and personally criticized. At first, Elisabeth Costello is introduced in good realist form: we are given her date of birth, present age, countries of residence, and marital history, after which follows the explanation that she is traveling all the way from Australia to Williamstown, Pennsylvania, to receive one of the most generous literary prizes, the Stowe prize, at Appleton College, and give a speech at the prize ceremony.

The speech itself is then a total subversion of the already tired realism of this story. The title "What is realism?" immediately launches into a description of Kafka's famous story "Report to an Academy", briefly discussed as proof of the end of realism, of the debunking of the realist illusion by its exposure as just that, an illusion, and by the multitude of uncertainties and ambiguities of Kafka's story that are not merely epistemological ones, but deeply ontological ones, shared by herself and her contemporaries. The son's argument with his mother on the appropriateness and relevance of her topic and its development turns into another kind of argument on realism and animal lives. The chapter ends with his view of the open mouth of his sleeping mother, and while staring down into it and imagining the rest of her inner organs, he protests (in his mind): "No, he tells himself, that is not where I come from, that is not it" ([1], p. 34); yet another rejection of realism. The protest is not merely attributable to a kind of (male) squeamishness with regard to the (female) human anatomy, but against the reduction of reality to a purely materialist vision of being.

The graphic anatomical orality of this ending is then followed by a look at the claims of orality in African literature. The novel in English lays claim to a very specific matrix of genesis in eighteenth-century England, where the insistence on realism—as opposed to the excess of the romance tradition in prose fiction—has the most formative and polemical role. The rise of the realist mode in prose fiction however, cannot be separated from the focus on the individual as guarantor of the truth of experience and of individualism in the growing literary industry. These remarks by no means exhaust the parameters, context or conditions for the origins of the English novel, but they do matter in pointing out the radical difference of this genre from other traditions of storytelling elsewhere, and therefore raise the question of its universality. In chapter/lesson 2, "The Novel in Africa", Elisabeth Costello finds herself accepting an invitation to give a lecture series on a cruise ship. There she encounters an old acquaintance and former lover, the African writer Emmanuel Egudu, whom she describes as having ceased to produce anything of substance for some years now, cashing in on his identity as African novelist to make a living on such cruises. His speech, given in full, offers well-known arguments on orality in African culture, the essential difference and distinction of

Africans and other ideas known from the Negritude movement. He presents these in support of the essential difference of the African novel from the European novel. The speech is highly contested by Elisabeth in an exchange she has with the speaker in the presence of two lay members of the audience, who also have their viewpoints. The disagreements of Elisabeth, the elusive answers of her interlocutor, the entirely different approach of the non-writers and the sexual jealousy with which the chapter ends, hinting that perhaps Elisabeth's vehement disagreements were not entirely fuelled by disinterested aesthetic judgments, all serve to undermine any pretence to rational authority, yet also sustain a polyphonic narrative debate. It is a debate that has affected for some decades now the formerly facile assumptions of academic departments of (English) literature, especially in Anglophone countries. It is worth noting also how this chapter, as the previous one put forward critiques and critical debates that arise from a comparative perspective. The legitimacy of comparativism itself will come under attack in the section to follow.

If the arguments of the previous lesson are partly fuelled by personal feelings, this issue is brought into the foreground of the following two lessons. *The Lives of Animals* picks up and most fully develops the "hobbyhorse", as her son calls it, of Elisabeth Costello. Again, it is an invitation to speak that she has accepted. This time she is to give two lectures at her son's college. Rather than talk about her novels, she flouts disciplinary divisions and institutional conventions and talks about animals: their status as living beings, but especially the industrial production, slaughter and consumption of animals, linking this vast topic and its ethical ramifications with literature and philosophy as two different ways humans approach the differences between human and (other) animal being. From an ethical it becomes an ontological and also an aesthetic discussion, breaking down not only the distinctions between humans and animals, but also trampling the prerogatives of disciplinary specialization and, for some, committing sacrilege by making a comparative reference to the mass murder of Jews during the Holocaust with the industrial mass production and murder of animals to fulfill dietary and other purposes of humans. Here, the greatest diversity of ideological positions, are shown, once again, to have personal roots, to be inexorably products of embodied and ideologically embedded existences.

Thus far we have been exposed to the limitations of realism, the hidden and unhidden biases of universalism, the arrogance and error of human supremacism in the animal world, based typically on the spurious prerogative of language. Each chapter underlines and undermines the continuing fallacies of humanism without, however, offering an easy way out, or total refutation, of humanism. The next two lessons are highly complementary chapters and also return us to issues in the previous lessons: the interrelation of the aesthetic and the ethical. In "The Humanities in Africa", the writer has a debate with her sister, a Catholic missionary nurse who runs a hospital for dying children in Africa. The debate is occasioned by the indictment of the humanities in her Sister Bridget/Blanche's acceptance speech for an honorary doctorate. The Sister argues that the humanities failed and are dead, for some centuries now. The contemporary disciplines comprising the humanities, especially literary studies, constitute a form of study that perverted from its original *raison d'être*, *i.e.*, as a means for the salvation of the soul through the development of the knowledge and method needed for Western Europeans to read and interpret the Greek New Testament for themselves, into a secular and fragmented set of disciplines with no ultimate purpose or usefulness in the world. The value of

literature, especially the written text, is, thus, contested by two independent cultural histories: Negritude and African oral traditions of performance (the thesis of the Nigerian writer's talk), and late Medieval and Renaissance Europe or Western Christendom on the other. The aesthetic dimension is prevalent in the African contestation, the ethical dimension in the European one. What then, could be the point, purpose or project of the humanities today? On what basis could one argue for their legitimation? The collective assemblage that constitutes the "machinic desire" of this novel present key facets of this contemporary problem, inviting us, as readers, writers, authors, students and teachers, to engage in the discussion. The outcome cannot be known but the engagement itself implies a commitment to salvaging what is worthwhile, refuting what can no longer be accepted as valid or relevant, and perhaps a move towards a new future for the humanities, a post-humanist one in many respects.

The next lesson, "The problem of Evil", picks up from the earlier indictment of the Catholic church as promoting an aestheticization of suffering by its manner of focusing on the representation of the Passion and the dying Christ on the cross. It also links up the theme of the Holocaust from the chapters on the lives of animals with the problem of evil in general, and specifically, the question of whether evil should be represented in literature. Elisabeth Costello has been invited to a conference on the theme of evil in Amsterdam, where, just having read a fictional account of the trials and execution of those German officers who had planned to assassinate Hitler, she has been stunned by the author's uncanny ability to get inside the head of the brutal executioner and Nazi cruelty, to take the readers to scenes that in fact had no witnesses, apart from the executioner, who presumably never gave an account. Feeling "touched by evil", she intuits that the author must also have been touched by evil in his imaginative historical description of their degradation, suffering and slow deaths. Disconcerted by the unexpected presence of the actual author in the audience, she contemplates a variety of solutions (mostly self-censorship) but in the end decides to go ahead and read the original paper.

Elisabeth argues that of such evil we must be silent, because of the power of its affect not just on the mind, but on the soul, too. Her view is that everything affects the soul; "This soul is", as Jean-François Lyotard refers to it, "but the awakening of an affectability" [14]. It is a view that also tacitly aligns her with the aesthetics of the classical Greek world, since in ancient tragedy, the representation of extreme violence on the stage was forbidden, thus, the aestheticization of violence was elided. Despite violence and human evil being at the heart of tragedy, it was the meditation on the motives and effects of violence that mattered. The two stances, Elisabeth's and the classical one converge on the agreement that everything has an effect on the soul, that representation of violence aestheticizes violence—she describes herself as being excited and carried away by the narration—and that in the case of the graphic depiction of evil, these effects carry too high a risk.

Contrary to the dangers inherent in imagining and depicting evil, the lesson "Eros" probes the sexual relations between humans and gods/goddesses in ancient Greek myths; the greater curiosity behind this attempt to imagine sexual intercourse with a god or goddess is whether such intimacy would allow one "to *get a sense of*, a god's being?" ([1], p. 188). Perhaps this is the most untimely of the meditations since, as Costello notes immediately after, it is "a question that no one seems to ask anymore" ([1], p. 188). She then offers her own articulation of this question: "*Other modes of being*.

That may be a more decent way of phrasing it. Are there other modes of being besides what we call the human into which we can enter; and if there are not, what does that say about us and our limitations?" ([1], p. 188) In other words, we return to the question of the limits of the imagination that was first raised in the lesson on the poets and the animals. Moving once more in favor of the direction of the sympathetic imagination, of feeling, both as sensation and sentiment, the chapter concludes with a reference to love as offering a vision of the pattern that brings and holds disparate entities together.

The playful metaphysical musings of the lesson "Eros" are continued in the final lesson. "At the Gate" is a fantasy of the afterlife and judgment in an obvious and signaled postmodern, parodic take on Kafka's "Before the Law". Elizabeth Costello must provide a statement of beliefs to a board of judges in order to be allowed to pass through the gate into a realm of brilliant light. Her initial resistance to this demand, on the grounds that belief runs counter to the vocation of the writer, is dissolved in the end by the surprising epiphany that "She lives by belief, she works by belief, she is a creature of belief" ([1], p. 222). Equally surprising, perhaps only to the readers, is her exasperation at her tendency to view everything around her, even in the afterlife, as and through literariness. Her own final words in this lesson are the exclamation: "A curse on literature!" when the vision of an old dog lying beyond the gate prompts the automatic production in her mind of "the anagram GOD-DOG" ([1], p. 222). The writer's exasperation at her conditioning that produces the hubristic perception of the most sacred word, leads her then to the double hubris of cursing her own confessed faith in literature. Literature, and by extension language, can also block one's apprehension of reality and should not be mistaken for an adequate path to all truths either since not only the signifier and the referent are arbitrarily linked but the sign may easily slip into or be substituted by another sign.

This curse emitted by Elizabeth Costello nevertheless realizes itself, albeit anachronistically, in the post-script, which refers us to the 1902 letter "*Ein Brief*" by Hugo von Hoffmansthal, in which a fictional character, Lord Chandos, writes a letter denouncing all literary endeavour to a real historical person, Francis Bacon. As is well known, this fictional letter was the proclamation of a truthful statement by Hoffmansthal himself to end his short but acclaimed career as a poet and turn instead to the writing of librettos. Coetzee provides a brief quote from Hofmannstahl's letter:

> At such moments even a negligible creature, a dog, a rat, a beetle, a stunted apple tree, a cart track winding over the hill, a mossy stone, counts more for me than a night of bliss with the most beautiful, most devoted mistress. These dumb and in some cases inanimate creatures press toward me with such fullness, such presence of love, that there is nothing in range of my rapturous eye that does not have life. It is as if everything, everything that exists, everything I can recall, everything my confused thinking touches on, means something ([1], p. 226).

He then gives a second letter, written by an invented wife, Lady Elizabeth Chandos, some twenty days supposedly after the date of the original by her husband. It is a secret letter to Francis Bacon, in which she confesses to having read her husband's letter, prompting her to write her own in an attempt to override the authority of her husband's account of his subjective experience for the sake of their conjugal happiness, as well as for the good of all.

What is this fictional supplement to the Lord Chandos letter doing as a postscript to a book that has chronicled the crisis of literature and the humanities, as institutions in their present form, through the crises of its academic author-protagonist?

Coetzee's rewriting, or supplementation of the Chandos letter from the perspective of his wife, Lady Chandos, is an appeal on behalf of her husband. Here, postmodernism reads romanticism (more specifically, it is possible to situate the Lord Chandos Letter within romantic decadence or romantic modernism). A comparative reading of the original with this hypertextual version will point to, amongst other things the continued crisis of literature that has now deepened into a crisis of language itself. Retreating from the extreme affectation of the soul in the experience of sublimity, Lady Chandos asks for a return of attention to the exigencies of the everyday, and through its 9/11 dating, to the ethical urgency for action, for words to be *useful* again for doing things. Though the original letter by Hoffmansthal does not include a direct explanation of why the addressee should be the eminent English humanist, Bacon, Coetzee's Lady Chandos provides us with a clue: "he writes to you, as I write to you, who are known above all men to select your words and set them in place and build your judgments as a mason builds a wall with bricks" ([1], p. 230). Here, rather than looking to the gods or God (*i.e.*, the ancient Greek or Judaeo-Christian ultimate form of authority—a Lacanian big Other), the letter issues an appeal to a great figure of tradition (Hoffmansthal, Lord Bacon), an appeal for *salvation*, and it would seem, for a new "golden age" of literature, of culture, in which transcendence will again be possible.

2.2. From the Crisis of Language to the Crisis of Aisthesis

If from the realm of the afterlife Elizabeth Costello has met her fellow in Lady Elizabeth Chandos, the impassioned and direct plea for the relevance of literature, for a new (post-)humanism, and therefore for a newly-oriented humanities, would not be incompatible with the unease, doubts, uncertainties, critique and crises of the more hesitant and guarded postmodern author, Elizabeth Costello. Nor, indeed, would it be implausible to divine some share of that unease in the situation of the factual author, J.M. Coetzee, who between 1997 and 2003, the period of the writing of all the sections of *Elizabeth Costello* had suffered the condensation of these crises of literature and the humanities in his own literary, academic life [15].

Considering how the Greek origin of the word *crisis* ("*krisis*") signifies both the act of forming a judgment and the condition of suffering, it is possible to identify a link between the last two sections of the book. It is a crisis of legitimation, for the author/creator and for literature/language that links the intertextual dialog with Kafka and Hoffmanstahl in these final sections of *Elizabeth Costello*. If, instead of the allusion to "Before the Law", we consider Kafka's short story "The Silence of the Sirens", in which modernism reverses the matrix of the mythical encounter between Odysseus and the sirens in order to create an allegory of its present condition, a further illumination of the postscript can be effected. Here Kafka rewrites the siren song episode as an enigma which, even more uncannily than in Hoffmanstahl's prefiguring of Theodor Adorno and Max Horkheimer's reading of the episode in *Dialectic of Enlightenment* [16]. In their first chapter, Adorno and Horkeimer read the cunning episode where Odysseus has himself tied to the mast of the ship and blocks his crew's ears so they do not hear the sirens and be enthralled by their song or his own cries to untie him as an early

sign of the progressive alienation of modern Western humanity from nature through the subject's reliance on instrumental reason, and of the relegation of art (epic/narrative art) to impotent decoration. Kafka's sailor revisits the site of the Sirens' island but finds tragedy turned into farce since the sirens do not sing to him. Is this an answer/punishment to humanity for resisting their epic/lyrical power of sublimity leading to death? Or is it just Kafka's perennial fear of not being able to write? The condensed polysemy of this new myth allows for more than one answer. If we consider the Homeric episode, Kafka's story, Adorno and Horkeimer's polemical interpretation together with Hoffmansthahl's "Ein brief" and Coetzee's supplement as a single palimpsest, we may look back to Kafka's revisitation of the episode in "The Silence of the Sirens" as the first moment of the absurd, of the siren's threat having become the threat of meaninglessness, of lack of signification as well as significance. It foretells the opposite of being overwhelmed by the power, meaning and beauty of the original siren song. The end comes not by fire, but by ice; the fear of being consumed by transcendence is replaced by the horror of being abandoned to an impermeable solipsism. However, here again we note the uncanny resemblance of Kafka's story to the theoretical re-articulation of the sublime by Jean-François Lyotard in terms of the threat of privation, of the "Is it happening?" no longer occurring. Kafka's story can be ready as an exemplary fantastic narration of that catastrophe.

Thus, in the postmodern moment we have a revisitation of both modernist and late romantic anxieties. In Lyotard there is the fear or dread of privation; in Kafka the terrifying silence of the sirens is dreadful for the utter lack of emotional affect. Yet both stories report the disaster of aesthesis, a phrase used by Lyotard to describe the Burkean and Kantian interface in the discourse of the sublime. The disaster of aesthesis indicates a problem with subjectivity; what happens if/when there is no "anima minima" to enable sublimity and the "Is it happening?" of art/literature? Additionally, if one moves on from Lyotard's consideration of the issue, we must ask, as do Coetzee's later works in their entirety: how does literature/the arts in general and their study in the university figure in the project of sustaining this "anima minima"?

Truth, anima minima, the arts and humanities, the future (of the) university, but also literature and sublimity, from which we started, are, for these writers, and the connections I've drawn between them, intricately and inextricably linked. For those postmodernist or late modernist writers and thinkers, such as Coetzee and Adorno, the sublime becomes either the object of an impossible yearning/haunting, inadmissible and irreconcilable with the negativity bequeathed by much modernism (Coetzee's view) or plain irrelevant if not ridiculous for the contemporary consideration of aesthetics, art, literature, the humanities. However, though Adorno contends, in his *Aesthetic Theory*, that suffering is the secret and inalienable *raison d'être* of art, its special prerogative that justifies its continuing relevance, he virtually rejects the sublime, out of the bias held against Romanticism [17]. To refer once more to Paul Celan, it is his work that vindicated lyrical poetry after Auschwitz; in his poetics the necessity and possibility of a sublimity stemming from extreme suffering is present even as it impossibly shrinks representational poetics into near-immateriality, thus intensifying the emotive and performative force of the poem in the direction of a very Kantian, very Lyotardian also, understanding of the sublime. For Lyotard, the sublime is not just now, to cite the title of Barnett Newman's 1948 essay, "The Sublime is Now", which he refers to, it is also necessary [18]. For Kafka, too, it was necessary; without it no literature was worthwhile. Is this not

what his 1904 letter to his schoolmate Oskar Pollak famously says when he disdainfully dismisses books that leave him indifferent, declaring as his principle of poetics a principle of *aesthesis*: "a book must be the axe for the frozen sea inside us" [19]? Aesthetics has replaced, and guides, poetics in modernity and postmodernity alike.

If not achieving the sublime, these works gesture towards it, or point to its absence, since it is also not only the task of the writer, the task of the book, but also the task of the reader. As Maurice Blanchot reminds us, the book does not exist until it is read [20], which means that in the hands of the reader, the book may or may not become the work, may or may not attain the function of the axe, since, in Heideggerian terms, the axe-book would remain a mere tool, not a work of art, without a "sea inside us" to act upon, even if frozen. What happens if, where once there was a frozen sea, there now is a desert? What good may an axe be in the desert? Here, I refer once more to Lyotard's postulation of the *anima minima*, of the bare modicum of subjectivity still needed, with all its metaphysics, if there is to be *aesthesis*.

Thus, in these last three parts, what seemed initially perhaps to be a strange series of three digressions due to their formal and uniformal palimpsestuousness, turn out rather to be a literary enactment of the previous chapters' more diegetic, dramatic and theoretical discourse of Coetzee's Costello, who on and off had referred to literature as salvation, to the entire history of the humanities in Europe as having been such an attempt. A failed and perhaps mislead attempt, to put it in other words, to achieve what Plato called "the care of the soul"; an ideal, but the only ideal that could ever make Europe worthwhile according to the Czech philosopher Jan Patočka in *Plato and Europe* [21]. What directions this solicitude over the anima minima, the *psyche* or, as one prefers, the spirit or soul, may take can be gauged by the impassioned contestations and experiments in the history of humanist scholarship and the contemporary humanities, which Coetzee's highly metafictional novels manage to distill and dramatically convey outside the ivory tower of the university.

Coetzee dramatizes the relations between lay and professional readers, literary authors and academics, poets and philosophers, religious thinkers and secularists in an intricate web of personal relations that underpin and affect the professional disputes. Laying all bare, getting into the consciousness now of the son of the famous mother, now of the writer herself, Coetzee issues a challenge to two major pillars of the world of letters and the humanities *per se*: academe and the institution of the author. Both are powerful institutions emerging from modern European history that nonetheless today and, arguably, for more than a few decades now, are experiencing a severe crisis.

Elizabeth Costello's linking of the question of literature to the purpose of the humanities and to the university—a link which, according to Jean-Luc Nancy and Philippe Lacoue-Labarthe in *The Literary Absolute* characterizes (Early German) Romanticism, and by extension therefore, our own, still, concept of the liberal arts in the university—continues in the next novel Coetzee published, *Diary of a Bad Year*.

3. Diary of a Bad Year

3.1. Simultaneity and Fragments

In *Diary of a Bad Year*, Coetzee approaches the figure of the writer from a different gendered perspective, but much more importantly in fact, from a different visual perspective: that of contrast and simultaneity. The novel is divided into two parts. The first part "Strong Opinions", derives its title from a book commissioned by a German publisher, in which six authors from different countries "say their say on any subjects they choose, the more contentious the better. Six eminent writers pronounce on what is wrong with today's world" ([2], p. 21). For the first twenty pages, we read two parallel texts; each page is divided into two sections by a line: above the line are the texts of *Strong Opinions*, while below the line is a continuous "common denominator" of the author's personal life in diary form. Thus, we are given the impression of spying on the author at work, in his home surroundings. While the diary shows a continuity of interest instigated by his accidental encounter with an attractive young woman in the laundry room of the communal block of flats, the texts of "strong opinions" have an impersonal and episodic structure since they are all different entries. From the fifth to the 25th entry, the pages are split into three sections, the addition at the bottom of the page is a novelistic text in which features the personal life of Anya, the 29 year old Filipina from the laundry room, now becomes his personal typist and, therefore, reader of the *strong opinions*, and her boyfriend, Alan, a well-read 42-year-old Anglo-Australian broker. The top part of the page is taken up by a series of numbered, short essays on 31 different contemporary issues, landmarks of socio-political thought or institutions: The origin of the state, anarchism, democracy, Machiavelli, terrorism, guidance systems, Al Qaida, universities, Guantanamo Bay, national shame, the curse, pedophilia, the body, the slaughter of animals, avian influenza, competition, intelligent design, Zeno, probability, raiding, apology, asylum in Australia, political life in Australia, the left and the right, Tony Blair, Harold Pinter, music, tourism, English usage, authority in fiction, the afterlife.

During the course of the writing/typing up of the commissioned reflections, Anya, well-aware of the attraction she holds for the 80-year-old writer, is slowly drawn into conversations with him about the content of *strong opinions*, and even about the purpose of thought and writing, in general and with respect to specific topics. Out of a growing sympathy and charitable feelings, she assumes occasional tasks of housekeeping and cleaning for him. He cares about her opinions, where others did not, including herself, and she cares for his living conditions, where no one else will, including himself. The romance plot is thickened by the intensifying jealousy of her boyfriend and the "competition" or "contest" of the two men for her affections culminates in Alan's nefarious plans to swindle the writer of all his money, willed to be bequeathed to an animal care organization, "the Anti-Vivisection League of Australia" ([2], p. 146), which he has discovered by installing spyware on the writer's computer through the unwitting medium of Anya. Once he reveals his information and plans to her, she is faced with the ethical dilemma of betraying one or the other man's confidence: becoming Alan's conscious accomplice and also future receiver of stolen funds or revealing all to the writer.

In the second part of *Diary of a Bad Year*, there are once again, numbered reflections on the top part of the page and two further sections, the writer's personal diary and Anya's personal story of the

same events: a total of 24 further topics appear, that start with the personal "A dream", "on fan mail", "my father" and "insh' Allah", on which pages the middle section, in which the writer's personal diary had appeared, is still divided by two lines but left blank, and end with reflections on "Dostoevsky". In the development of the novelistic plot there is change and a denouement; Anya has persuaded her boyfriend not to rob the writer, the writer invites the two over to celebrate sending off the completed manuscript to the German publisher, where Alan makes a drunken scene and none-too-cryptically gives hints of what he had planned to do. Finally, Anya leaves Alan and goes to stay with her mother in another city. She says goodbye to the writer and later writes to him, signing the letter, "admiring fan". This second part, formally entitled "Second Diary", but which we discover on reading Anya's letter to him from Brisbane, contains the pieces he had edited out because he did not judge them as being "proper Strong Opinions". These "Soft opinions", as she calls them, are her favorites and they are all more personal, more revealing of the author, than those that make up "Strong Opinions": after the first four already mentioned are "mass emotion", "the hurly-burly of politics", "the kiss", "the erotic life", "ageing", "idea for a story", "La France moins belle", "the classics", "the writing life", "the mother tongue", "Antjie Krog", "being photographed", "having thoughts", "the birds of the air", "compassion", "children", "water and fire", "boredom", "J. S. Bach", and last "Dostoevsky". In an essay considering the Nietzschean overtones in the book's critical and often skeptical engagement with opinions, Paul Patton observes that the novel is "a celebration of life" and, the ending in particular, which valorizes Anya's preference for the "soft opinions", points towards "an affirmation of everyday life, the life that we share with animals, but that is also expressed in our opinions, thoughts, fantasies and dreams" [22].

Diary of a Bad Year has, together with *Elizabeth Costello*, a modest place reserved for the fictional plots of novel writing. The novelistic frame grants the meditations an embedded existence. They seem also, so far at least, to herald a reflective pause in Coetzee's novel writing. In this sense too, they could be described as timely meditations. They are a kind of reckoning. His next book, *Summertime* (2009) [23], was a posthumous-styled biography of Coetzee the author. In the much-awaited novel, *The Childhood of Jesus* (2013) [24], Coetzee resumes a more predominantly fictional manner of narrative, but for that no less intensely committed to an interrogation of the relevance of education and academic learning to the immediate meaning and decision-making needs of ordinary people, while also insisting through a convincing literary narrative, on the absolute necessity of literary and philosophical discourse (whether one designates it as some form of humanism or not) if one is to be able to cope with the complexities and contingencies of real life and satisfy the desire for constructing life-sustaining meanings.

The "opinions" in *Diary of a Bad Year* recall, by their terse and pithy style, their provocation to thought and their personal inflection, both the fragments published by the Jena circle and Nietzsche's aphorisms and fragments. The fragment evades the dangers of even inadvertent authorial paternalism; they are an invitation to thought, to dialogue and debate. A double, then triple precaution against the tendency towards mastery of theoretical discourse is further taken by the tripartite division of the page and the space, and voice, allocated to the personal/autobiographical and to the interest of the plot: *i.e.*, interaction with others. As Jonathan Lear explains, "the aim of the style is [...] to defeat the reader's desire to defer to the 'moral authority', the 'novelist' John Coetzee [...] Coetzee's authority

lies in his ability to divest himself of authority" [25]. Referring to the definition of rhetoric in the *Phaedrus* as "a peculiar craft of leading the soul with logos" and the purpose of education set forth in the *Republic* "as turning the *whole* soul around", Lear considers how the page divisions constitute "a rhetorical move in the Platonic sense. This is Coetzee's attempt to lead the whole soul" ([25], p. 70). The three parts of the page read vertically expose to the reader "a *spectacle of embedding* [...] we see how the moral stances that are officially to be presented in book form are embedded in the fantasies, happenings, musings, and struggles of the author's day-to-day life" ([25], p. 70). The point of this is also to take a stand against the danger of thought, especially ethical thought, becoming a mere academic or literary exercise and a substitute for genuine thought and engagement [26]. Adding to Lear's just appraisal of the philosophical (Platonic) objectives of Coetzee's strategies, it is worth remarking that by turning the pages sequentially in order to follow the real-life entanglements of the author in the surprises, disappointments and dangers of his entanglement in the lives of others, our reading follows a spiral trajectory, returning to familiar but never identical acts. Thus, whether intellectual contemplation, the business of everyday life or interpersonal encounters that may awaken what Lear calls "metaphysical ache", a desire for reality no matter how unpleasant it may at times be for us; but it is equally entails "a living recognition of the reality of others [...] not only recognizing their dignity but crying out against their humiliation, degradation, and torture" ([25], p. 86). It is not difficult to recognize how what Lear describes as the purpose of the textual strategies Coetzee adopts in *Diary of a Bad Year* can be identified also throughout his novelistic work, including the most recent, *Childhood of Jesus*.

3.2. Timely Meditations

The novels involve us in a rich historical and ideological debate that compels us to reconsider the role of literature, with respect to the author and the critic function represented in these texts. At the same time, they raise the question of the post-modern re-integration of the aesthetic with the spheres of ethics and science, and challenge us by setting before us one very ubiquitous yet ugly alternative to the *raison-d'être* of the humanities: that of the banker/speculator. In *L'Université sans condition*, Jacques Derrida contemplates the significance of the profession of the Professor, of the verb "to profess", at the root of each, and chooses to "underline less the authority, the supposed competence and assurance of the profession or of the professor than, once more, the commitment, the declaration of responsibility" [27].

Could the role of literature, of the humanities, and of the university itself be related to that other mission also of the university, so frequently, as Derrida notes in *L'Université sans condition*, emblematized in many particular institutions' coat of arms, that is, the mission of "*veritas*", truth? Truth, and the ancient adage, "the care of the soul", renewed in modern terms/times by Michel Foucault and Jan Patočka, but also by others, Lyotard, Derrida and Emmanuel Levinas amongst them, is the regime for the anima minima, the "substance-soul" as Lyotard names it, and for that purpose, there must be, in the way that Derrida stipulates, a university without condition, an unconditional university, and that unconditionality is a condition for its future state, one which is not yet embodied by its present condition, and one which designates that the conditions of this unconditional university could just as well pertain outside, or beyond the university institution(s). That this is

feasible, Coetzee's work gives us just one such example. One should be able to question everything, to include the most heretical views. In *The Master of Petersburg*, Coetzee's homage to Dostoevsky, the anarchist student Sergei Gennadevich, states his exasperation with universities: "A university is a place where they teach you to argue so that you'll never actually do anything" [28]. He and his comrades reject words as having the power of physical action, as having any significant effect. This is contrary to the view of literature that Elizabeth Costello has held, as it is contrary to the understanding of literature in *Diary of a Bad Year*. Literature, the humanities and the university can have a transformative effect on the individual, can constitute an event. For Derrida, this event, in its unknowability, its unpredictability, would go even beyond the force of language in performative speech acts. As for Coetzee's own views of Dostoevsky, in *Diary of a Bad Year*, the last word he has to say, the last of the "soft opinions" is on the importance of Dostoevsky's novels:

> I read again last night the fifth chapter of the second part of *The Brothers Karamazov*, the chapter in which Ivan hands back his ticket of admission to the universe God has created, and found myself sobbing uncontrollably. ([2], p. 223) These are pages I have read innumerable times before, yet instead of becoming inured to their force I find myself more and more vulnerable before them. Why? It is not as if I am in sympathy with Ivan's rather vengeful views […] So why does Ivan make me cry in spite of myself? ([2], p. 224) The answer has nothing to do with ethics or politics, everything to do with rhetoric […] Far more powerful than the substance of his argument, which is not strong, are the accents of anguish, the personal anguish of a soul unable to bear the horrors of this world. It is the voice of Ivan, as realized by Dostoevsky, not his reasoning, that sweeps me along. ([2], p. 225) And one is thankful to Russia too, Mother Russia, for setting before us with such indisputable certainty the standards towards which any serious novelist must toil, even if without the faintest chance of getting there: the standard of the master Tolstoy on the one hand and of the master Dostoevsky on the other. By their example one becomes a better artist; and by better I do not mean more skilful but ethically better. They annihilate one's impurer pretensions; they clear one's eyesight; they fortify one's arm' ([2], p. 227).

Here, beauty and compassion, the two things that Costello had singled out as the moving, life-affirming qualities of art bequeathed to us from the ancient Greek and Italian Renaissance cultures, are once again held up in their monumentalistic significance—in Nietzsche's sense, for whom the use of this conception of the past for someone is that "He learns from it that the greatness that once existed was in any event once *possible* and may thus be possible again" ([10], p. 69).

Derek Attridge points out, in his introduction to the collection of Coetzee's critical reviews, *Inner Workings*, "Coetzee's non-fictional and semi-fictional writing taken as a whole represents a substantial and significant contribution to the continuing discussion of literature's place in the lives of individuals and cultures" [29]. I would add: of institutions and of traditions. Coetzee responds in defense of literature, not only by staging all the different angles from which literature, and its traditional institutional study within the humanities, can be discredited, but also by showing that literature, especially the novel, can still be the space for this event. It is a space that cannot be provided by any

other textual or wider cultural form, the space in which any manner of discourse can be given a platform, in the real contexts of intimate histories of individuals, and with the unique attention to the beauty of language by which we as humans inhabit the world, providing delight, even when the limits and limitations of language, or of our animality, throw up a seeming dead-end or inscrutable mystery.

4. Conclusions

Coetzee's writers carry on vulnerable, imperfect, aged and weary shoulders a demand that they should unassumingly, ingloriously, and even at the risk of disgrace, render literature a matrix through which all, whether writers or readers, may realize that they themselves can become what they are: the unacknowledged legislators of the world, and so complete the revolutionary project of Romanticism, what Novalis called the romanticization of the world [30]. Going even further back than the Romantics, the Renaissance Humanists' creation of an imaginary, virtual Republic of Letters is a significant predecessor to the ethical ideals of this kind of postmodern novel. The literary worlds of Coetzee's books, in which we, as readers, participate, suggest the continuing relevance but also need for a virtual, imaginary, republic of letters, radicalized so that neither classical or encyclopedic erudition nor letters or introduction are needed. In this renewed humanist republic of novel writers and readers, what we all do have, and what Coetzee's novels insist upon, are opinions and beliefs. What we often lack, is the chance to question, or sometimes, to even become aware of the nature of our beliefs and opinions, to articulate them coherently but also freely, to compare them with those of others, on all subjects, without fear of censorship or condemnation [31]. With unflagging ethical concern to realize the radical democratic potential of the novel form, Coetzee's novelistic aesthetics deploy a set of strategies that divest the authorial figure of any authority to dictate opinion and belief. In equally dark times as those of the original Renaissance humanist republicans, perhaps even darker, in view of the imminent threat of ecological apocalypse, "little communities" [32] dispersed throughout the global readership can, through the medium of the "fragile craft" of the book, realize the legitimacy and validity of their own claim to "maintain a different kind of society, with its own rules and values", ([32], p. 5) to question the authority held by a person or an institution, in the extreme plasticity and sociality of this kind of novel.

Conflicts of Interest

The author declares no conflict of interest.

References and Notes

1. J.M. Coetzee. *Elizabeth Costello*. London: Vintage, 2004. All further citations will be from this edition.
2. J.M. Coetzee. *Diary of a Bad Year*. London: Vintage, 2008. All further citations will be from this edition.
3. Gilles Deleuze, and Félix Guattari. *Kafka: Toward a Minor Literature*. Translated by Dana Polan. Minneapolis and London: University of Minnesota Press, 1986. First published as *Kafka: pour une littérature mineure.* Paris: Les éditions de Minuit, 1975.

4. Paul Celan. *Paul Celan: Selected Poems*. Translated by Michael Hamburger. London: Penguin, 1996.
5. One could also include the works of James Joyce (*Ulysses* and, especially, *Finnegan's Wake)* and Samuel Beckett (both English and French writings). Deleuze and Guattari's category of minor literature can thus clearly be said to pertain to anti-realist modes or tendencies in modernist and late-modernist literature.
6. *Apartheid*, or racial segregation, and its concomitant set of laws that forcibly relocated "black", "coloured" and "Asian" people into separate areas, and eventually deprived black Africans of citizenship, was enforced by the National Party that held power from 1948 to 1994. It came to an end with the first democratic elections in 1994 when the African National Congress won and Nelson Mandela became president.
7. See William Beinart. "War, Reconstruction and the State from the 1890s to the 1920s." In *Beinart, Twentieth-Century South Africa*. Oxford: Oxford University Press, 2001, Chapter Two (First edition published in 1994).
8. For a reading of three of Coetzee's anti-colonial novels, *Dusklands, Waiting for the Barbarians* and *Foe* which juxtaposes postcolonial theory with Deleuze & Guattari's work, see Grant Hamilton. *On Representation: Deleuze and Coetzee on the Colonized Subject*. Amsterdam: Rodopi, 2011. My own interest here however is in the relevance of Deleuze & Guattari's theorisation of a minor literature with the revolutionary potential of such literature to speak to the crisis of the humanities in his late, self-reflective, writerly novels (postmodernist *Künstlerromane*), *Elizabeth Costello* and *Diary of a Bad Year*.
9. By "representationalism", what is meant here is the linguistic unity of signifier-signified-referent, which enables the immediate comprehension of a word by its automatic link to an existing meaning in a shared linguistic community of the speakers of that natural language. By cutting up words, separating morphemes and using highly elliptical syntax, Celan's poetry eventually develops further and further away from conventional ways of inferring meaning from poetic language through reliance on the representation of a common world of shared meanings that the ordinary use of words and the rule-abiding formation of phrases would facilitate. In an essay on Celan that focuses largely on translation, Coetzee writes of Celan's "unremitting, intimate wrestlings with the German language, which form the substrate of all his later poetry" and so "translation of the later poetry must always fail" (J.M. Coetzee. *Inner Workings, Essays 2000–2005*. London: HarvillSecker, 2007, p. 131).
10. Friedrich Nietzsche. *Untimely Meditations*. Translated by Reginald John Hollingdale. Cambridge: Cambridge Univesity Press, 1983. This essay was originally published 1874. All further citations will be from this edition.
11. Here I am paraphrasing the title of Nietzsche's essay, "On the Uses and Disadvantages of History for Life", in *Untimely Meditations*.
12. Athenaeum Fragment 116, cited in Philippe Lacoue-Labarthe, and Jean-Luc Nancy. *The Literary Absolute: The Theory of Literature in German Romanticism*. Translated by Philip Barnard and Cheryl Lester. Albany: State University of New York Press, 1988, p. 83. First published as *L'absolu littéraire.* Paris: Éditions du Seuil, 1978.

13. Six of the lessons/chapters of *Elisabeth Costello* and its postscript had appeared in some form, typically in critical academic journals or as lectures (*The Lives of Animals)*. Of these, the last three chapters: "Eros", "At the gate" and the postscript, "Letter of Elisabeth, Lady Chandos", depart significantly from the style of the previous six sections, having the form of extended personal meditations on encounters with the radically other, or a radical othering of the self.
14. Jean-François Lyotard. *Postmodern Fables*. Translated by Georges van den Abbeele. Minneapolis: University of Minnesota Press, 1997, pp. 242–43. First published as *Moralités postmodernes.* Paris: Éditions Galilée, 1993.
15. The order of the publication of the last four lessons and the postscript are as follows: Lesson 5, "The Humanities in Africa" (2001); Post-script, "Letter of Elizabeth, Lady Chandos" (2002); Lesson 6, "The Problem of Evil" (2003). "Eros" and "At the Gate" appeared only with the novel itself, in 2003.
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Economicism and Nihilism in the Eclipse of Humanism

Pedro Talavera

Abstract: This article is based on the conviction that the major problems nowadays are not technical, but ethical, and are incumbent on *homo qua homo*. The origin of these problems is the advancement of economicism as a supreme interpretation of human and social reality, which means the primacy of the "market" and considering human beings in terms of what they have rather than what they are. Economicism emerges in "modernity" and assumes that everything that does not have market value is either devaluated or rejected. In consequence, the human being has been devaluated and has turned into a simple object of the market. "Postmodernity" mixes economicism and techno-scientificism (chrematistics and instrumental rationality) with nihilism (absence of values), giving way to a technological and decadent capitalism that has erased "humanism" and the very idea of the human being. Thus, we are in urgent need of a humanist recovery of the "human" based on a rehabilitation of ontology.

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1. Introduction

The thesis I shall attempt to defend sets out that the abandonment of the humanities is directly linked to the eclipse of humanism, which began with the economicist paradigm of modernity and was consummated with postmodern decadent thinking, which has largely adopted an anti-humanist and nihilist direction, sustaining the futility of the very idea of being human. Foucault puts this in terms that could not be clearer: "The discoveries of Levi-Strauss, Lacan, Dumezil not only erase the traditional view of man, but also, in my view, tend to render the very idea of man useless for research and thinking. The most burdensome inheritance which in turn has been passed down to us from the 19th century—and which it is now time to rid ourselves of—is humanism" [1].

Nevertheless a peculiar phenomenon has come about: the economicist reductionism of modernity has given rise to postmodern anti-humanism; but the nihilist nature of postmodernity, far from overcoming the enlightenment paradigm, has contributed to augmenting techno-scientific development and the omnipotence of the market, reducing human beings themselves to an object that can be technically manipulated and economically quantified.

The historical epoch, which is known almost unanimously as "modernity", came into being near the middle of the fifteenth century under the sign of the primacy of the "market". Economic modernization contemplated the individual as a being who exchanged commodities, was solely concerned with his/her own wealth and stressed the visual, the quantitative and the disjunctive. Its motto was perfectly portrayed by the Frenchman, Guizot, during the reign of Louis Philippe of Orleans: "*Enrichissez-vous*!" The market became the only social institution that had to be vigorously defended.

However, economic modernization maintained a degree of autonomy from the cultural sphere because of its different epistemological and anthropological foundations and by way of its distinct organization. In effect, cultural modernization, which came about at the end of the eighteenth century, displayed a clear sense of hostility towards modernity: it defended the supremacy of secondary qualities and subconscious impulses over the predominance of geometric rationality. Theophile Gauthier's motto of *l'art pour l'art* was directly aimed at Guizot's slogan, as was Oscar Wilde's quip in his play *Lady Windermere's Fan*: "A man who knows the price of everything and the value of nothing."

This hostility between economic modernization and cultural modernization became evident in the nineteenth century with the simultaneity of the defense of progress carried out by Spencer (the salient advocate of *homo oeconomicus*) and the spread of decadentism propagated by Baudelaire and Verlaine. However, the autonomy of these social spheres was slowly disappearing in so far as the economic world increasingly extended its power. At this moment, politics had abandoned all hopes of holding sway over the mercantile sphere, and it mimetically copied all of its procedures to the point that what was most important was the trademark and not the ideology. Culture and art, in turn, had become yet another element of consumption, something which is fragmentary and pleasant to juxtapose alongside that which is analytical and boring; aspects which are both characteristic of the age of production.

The advancement of economicism as a supreme interpretation of human and social reality produces hand-in-hand, on the plane of factual reality, the end of humanism and the success of post-structuralism and the poignantly called "*pensiero debole*" (weak thinking), which is none other than simple nihilism, the abandonment of rationality, and indeed of the very idea of the human being.

The most well-known advocate of "weak thinking", Gianni Vattimo, states that our culture has adopted Nietzsche's nihilist conception, which means accepting the death of God and, with it, levelling the foundations of supreme values [2]. The essence of this "nihilism" consists of finally reducing all "use value" to "exchange value", and in the final analysis, human beings themselves are reduced to and identified as "exchange value". In this way, all values, freed from their foundations, become equivalent and interchangeable, and all reality becomes available ([2], p. 28). Herein, we have the peculiar convergence of economicism and nihilism, which will be analyzed later on. When everything is reduced to "exchange value", all reality takes on the nature of money; in other words, it can be exchanged indistinctly for any other thing. The apotheosis of "exchange value" extended to the whole of life includes human beings themselves, whose singularity (humanity) is dissolved to become something that is available and interchangeable, radically dispossessed of any hope of absolute value that supposedly granted them dignity. In short, nihilism ends up generating the merchandization of what is human by reducing it to a mere "exchange value". Consequently, the absolute hegemony of economicism, which has been imposed on society as the *ultima ratio* for politics, culture, the arts and the economy itself, does not originate solely from a spillover of the thirst for wealth and well-being, but rather from the loss of what is human as an absolute criterion of reference; it follows that attempts to submit the market and finances to a supposed "business ethics" fail time and time again. Overcoming economicism (the globalization of "exchange value")

inescapably requires overcoming nihilism, something which can only be done from the perspective of rehabilitating humanism.

With this in mind, this article analyzes the causes through which economicism has ended up becoming the fundamental exponent of modernity, then the manner in which postmodernity has adopted a nihilist drift and converged with economicism. Finally, I shall draw attention to a series of proposals that could form the basis for a "new humanism" capable of overcoming the economicist and nihilist drift and in which thinking and action would once again revolve around the "human/non-human" axis. In other words, the possibility to state in intellectual terms what is "good" for man as a counter argument to that which dehumanizes him drains him of his very being and reifies him.

2. The Epistemological Revolution of Modernity

From the very appearance of the term, "modernity" has been intimately linked to the exigency of "exactness", of rigorous measurement [3]. This exigency has accompanied modernity throughout the centuries, thereby constituting the key element in its epistemological horizon. Indeed, the expression "modern" appeared for the first time (as Panofsky has stressed [4]) in the work of the great painter and art historian Giorgio Vasari (1511–1574) to designate the new way of painting paradigmatically as exemplified by Leon Battista Alberti (1404–1472) and Leonardo da Vinci (1452–1519) and which was characterized by its scientificity as opposed to the *maniera antica* of the classical painters or the *maniera vecchia* of the Byzantine artists.

Modernity came about in the Florence of the Medicis with the discovery of perspective by Brunelleschi, around 1420, of what he called *costruzione legittima.* Modernity appeared when the exigency of exactness present in the world of art was immediately copied in the scientific world, and it would subsequently be offered as the paradigm of all forms of knowledge. The "geometrization" (Euclidization) of art, which was introduced with perspective, would have profound consequences in the realm of general thought: it increasingly attempted to undervalue the oral in favor of the visual, the qualitative in favor of the quantitative or the analogical in favor of the disjunctive. To each of these processes there corresponds a salient figure: Leonardo da Vinci, Galileo and Descartes, respectively. I shall come back to this point, but I would first like to analyze what perspective implies, not so much for the history of art, but rather for the history of thought and *vis-à-vis* the conception of the world.

As Panofsky wrote in his book on perspective and in his book on the Renaissance, the dimension of perspective implies the belief in space, which is at the same time infinite and homogeneous. As he states: "Infinity is implicit in the fact that any set of parallel lines independently of their place and direction, converge onto a single point of escape" [5]. This was a new concept that had been introduced by Nicolas de Cusa and which was later developed by Descartes.

The requirement of perspective (or put another way, the requirement of exactness) tended to devalue the qualitative dimension of objects, favoring the exclusive consideration of distance over their symbolic value. As Lewis Mumford was very sharp to grasp in his excellent book, *Technics and Civilization*: "The space of the hierarchy of values was replaced by the system of magnitudes

[...]. Dimension no longer means divine or human importance but rather distance" [6]. This depreciation of the symbolic and the qualitative explains how the rump of a horse can appear in the forefront in Velázquez's painting *The Rendition of Breda*, something that was unthinkable in the pre-modern world.

Linked to this depreciation of the spatially qualitative is the reduction of the temporal sphere to the instantaneous moment due to the coincidence between exactness and instantaneity. As Ortega y Gasset points out, "Velázquez was determined to despotically set the point of vision. His entire painting was born out of a sole act of vision and all things had to strive in order to be able to arrive, as much as they possibly could, close to the visual line" [7]. This instantaneousness is the result of the radical break between the subject and the object, which also produced the loss of direct contact with things. This devaluation of the object is equally evident in Velázquez's work, as was pointed out in the book *Velázquez y la Modernidad* [8], constructed along the lines of Ortega's intuition mentioned above.

This unique perspective was based on the Euclidean reduction of geometry, the foundation of Western modernity. Therefore, it is not surprising that multiple perspectives should have returned to painting with the appearance of the new non-Euclidean geometries at the end of the nineteenth century [9]. However, now, it was a matter of continuing to expound on the consequences of the requirement of exactness within modern thought. This entailed, first of all, the shift away from the oral in favor of the visual.

This shift found a privileged place within the thinking of Leonardo da Vinci (1452–1519), the most brilliant artist of the different dimensions of design: painting, sculpture and architecture. In *Aphorism 326*, he writes, "The eye is the most noble of all the senses", since it is the sense that grasps objects with the greatest exactitude, whereas the sense of hearing is very inferior given its greater imprecision. Leonardo enters into the old debate introduced by Simonides of Ceos and Horatio on the hierarchy between poetry and painting, and he insistently stresses the superiority of the latter over the former, because only painting is science. Poetry is as fleeting as the auditory sensations, whereas visual sensations, according to him, are not fleeting [10].

As Kristeller [11] points out, this hegemony of the design arts, which would be unified by the very inventor of the word "modern", Vasari, is responsible for the disenchantment of the world, which has been accompanying modernity since its origins (supposing the latter is capable of being comprehended in its deepest origin) and which only appeared in its decline (when this radical penetration was missing). Indeed, the sacred in its unveiling is fundamentally united to the sense of hearing, since God can never be seen, whereas He can be heard. The rationalization form of knowledge leads to the profanation of reality: everything can be seen and therefore there is nothing sacred, as Max Weber so rightly pointed out in his *Wissenschaft als Beruf*: "Everything can be dominated by means of calculus and foresight" [12].

A further step in this modernizing process can be appreciated in the work of Galileo (1564–1642), for whom there is a shift from the qualitative to the quantitative, which accelerates the homogenization of reality. As he points out in his book, *Il saggiatore* [13], it is necessary to establish a radical separation between objective realities, which are susceptible to being known with exactness, such as numbers, figures, magnitudes, positions and motion, and what can only be

known subjectively and approximately, such as sounds, tastes and smells. Maintaining Leonardo's thesis, Galileo stresses that the senses of hearing, touch and taste cannot provide rigorous knowledge, but rather only confused and ambiguous knowledge, which is not worthy of being considered as scientific in nature.

In his excellent and short article "From the world of the "more or less" to the horizon of exactitude" [14], Alexander Koyré called attention to the important role that technical discoveries played in this process, such as the appearance of mechanical clocks, which enabled the exact measurement of time and the appearance of the telescope, in addition to the growing use of Arabic numbers and algebra, as compared to the impossibility of carrying out exact calculations with Roman numbers, given their complexity.

This entire process of modernization culminated in the work of the French philosopher René Descartes (1596–1650), who systematized and made explicit all previous developments. His "clear and distinct idea" is nothing else, but the dimension of exactness, which was being sought ever since the Florence of the Medicis. In Descartes emerges the notion of *subjectum*, with his aim towards certainty and the will of dominion, but closely linked to this, there is internal breakage and laceration. Indeed, the requirement of exactness leads to the sole acceptation of univocal concepts and to the elimination of analogous concepts in such a manner that the very subject appears to be radically split in two: as *res extensa* subjected to space and geometry and as *res cogitans*, or self-conscience, placed outside of space and time. "From that I knew that I was a substance the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing; so that this 'me,' that is to say, the soul by which I am what I am, is entirely distinct from body, and is even more easy to know than is the latter; and even if the body were not, the soul would not cease to be what it is" [15].

The most immediate and intimate reality, the psychosomatic unity of the human person, is an insuperable *aporia* in Descartes' work, starting from disjunctive and exact thought, which denies analogy. Descartes, in effect, felt obliged to solve this *aporia*, either by resorting to the supernatural explanation according to which body and soul would be like two clocks simultaneously handled by God or else in a more contradictory fashion according to the remainder of his philosophy by suggesting (in his letter of 28 June 1643, to Princess Elisabeth de Bohéme ([15] t. III, p. 43)) that time is better spent talking and resting, since thinking would only be capable of making one aware of the opposition between body and soul, but not of their relationship.

Throughout the modern period, univocal and exact thought as axes of thinking generated a number of unresolvable dilemmas as regards the individual and society. Indeed, the demand for identity and rejection of analogy and complementarity would end up declaring certain essential realities as incompatible once considered from a disjunctive perspective. From this disjunctive thinking, it was affirmed both the negation of identity of the individual in opposition to God (nominalism, Luther) and the negation of God in opposition to human reality (Marx, Nietzsche and advocates of atheism). Furthermore, other false disjunctives were raised: between the individual and society, opening the way to radicalism in individualistic and collectivist doctrines; between obligation and happiness, the sources of puritanism and hedonism, respectively; and various others [16]. This dislocation of the world resulting from thinking in terms of identity-opposition and not in terms of

difference-complementariness is precisely what the obsolescence of modernity reveals on the epistemological plane.

At this point, I would like to show that the main consequence of the modern view of the world, based on the exclusiveness of the exact and on the negation of analogy is "economicism". Everything that does not have a market value (exchange value) lacks value. This premise, however, generates a paradoxical consequence: it is precisely what is human, the genuinely human, which does not have a market value; from here, we have its unqualified devaluation and the advent of anti-humanist and post-humanist philosophies, which triumph today.

3. Economicism: The Hegemony of "Exchange Value" over "Use Value"

The shift from the oral to the visual, from the qualitative to the quantitative and from the analogical to the disjunctive, led to the devaluation of the aspects related to culture and politics in favor of strictly economic aspects, which then came to be considered as the basis of civilization. This can be seen by analyzing the inversion, which has been preached within modernity concerning human relationships, as they had been studied by Aristotle in his *Nichomachean Ethics* and in his *Politics* ([3], pp. 25–34).

Aristotle, in his *Politics*, established a hierarchy of human needs according to their importance and duration, giving rise to the distinction between politics and economics. The former referred to the highest order of needs, those related to "good living" and which touch on the need a human being has for recognition, immortality or permanence in memory. Such needs are usually attained by the exercise of the spoken word, since a human being is the only animal who has the power of speech [17].

Economics, whose etymological root is underlined by Aristotle, refers to the *nómos* of the *oikós*, of the home, and its primary focus is not so much relationships between people, but rather relationships between people and things. What is important here is the satisfaction of basic human needs, in this case either of a strictly biological and ephemeral nature on a daily basis, such as food, or something more cultural and stable, such as clothing and shelter. The basic activity that characterizes economics is utilization or usage (*crea*), and what Aristotle ponders in this sense is essentially care, good administration ("household management"), as he argued in *Nichomachean Ethics* [18]. From this, it follows that economics should so clearly appear to be linked to ecology and to the correct use of things for the satisfaction of needs. Equally, economics thus understood appears as a presupposition for politics. Without a minimum of goods, it is impossible to practice virtue. Without resources, as regards food, clothing and shelter, there is no room for thinking about recognition or aspiring to be remembered, except by inadequate means.

Chrematistics is quite distinct from politics and economics; its focus is to acquire and potentially accumulate goods by means of commerce ([17], 1256a–1257a). As compared to what happens in economics, the fundamental concept is not the "use value", the worth of a thing measured in terms of satisfying human needs, but rather the "exchange value", the purchasing power a thing has to enable one to acquire other things. Aristotle distinguishes between "retail chrematistics", which can be justified in order to acquire goods necessary for survival, and "wholesale chrematistics", which arises when the aim of augmenting one's goods and money has overreached the mere satisfaction

of one's basic needs ([17], 1258a).

Chrematistics, thus understood, leaves the door open for "*hybris*" (*impietas*, perversion) by conceding more importance to the "exchange value" (the sole value that money has) than to the "use value" ([17], 1258a–1258b). We have here a true perversion. Such a perversion reaches an extreme when money, already overly valued, is no longer a mere mode of exchange and is transformed into a creator of more and more money (this is where the Roman word *pecunia* comes from). Such is the function of profiteering loans, which, for Aristotle, denaturalizes economics: "Of all the types of traffic this is the most anti-natural" ([17], 1258b).

The change introduced in this point by modernity could not have been more radical. Karl Polanyi is fully justified in calling this change *The Great Transformation* [19]. Such a transformation is linked to the hegemony that the market acquires as the central institution of society. The market started to arise as a marginal activity of the poor and vagabonds on the outskirts of cities *foris burgos* (*faubourg*), from the eleventh century onwards, but the norms regulating it were still external to the market itself, based on ethics, especially the theory of the just price [20]. *The Great Transformation* only came about in the sixteenth century with the total independence of the market world *vis-à-vis* the ethical and social horizon. This was the result of using new juridical tools, such as bills of exchange, which appeared in order to avoid the canonical sanctions imposed against crimes of usury.

The hegemony of the market and the prevailing of chrematistics (accumulating money) over the real economy (use value of goods) constitute the nucleus of the new political philosophy, which modernity introduced. This radical change of perspective, as explained by the German economist, A.O. Hirschman, is consolidated on the basis of a new conception about the role of human passions in social life and of the effect—fostering or inhibiting—that individual interests exercise over them [21]. Classical thinking, in effect, always took into account the role of passions in the life of man. However, it maintained in clear terms the exigency of controlling all of these passions, so that the individuals can achieve completeness as human beings and with it their real freedom and perfection. Passions, as regards human impulses, had to be controlled by reason and subject to will. However, as confirmed by the majority of thinkers, from the Renaissance onwards, we witness a loss of the ontological and ethical perspective that leads to a situation in which the fundamental component of man is considered to be passion, and precisely for this reason, it is impossible to control all of them. From here on, what we see are attempts at a kind of cross play between passions in which the presence of some end up excluding the influence of others: "passions set themselves against each other and one of them can act as a counterweight for another" ([21], p. 34). This desire to use some passions against others is linked to the belief that they do not all play the same role in the conservation of social order. In other words, passions can be identified as more or less expedient and, on the basis of this, can be considered beneficial or pernicious in the social context: beneficial would be those that promote stability, allow themselves to be calculated and are pacific; pernicious would be those marked as representing the opposite characteristics ([21], p. 39).

This is the line of thinking that Hobbes follows in *Leviathan*. The basis of the social pact is, on the one hand, the elimination of violence of wild passions—such as thirst for glory or power—and on the other, the satisfaction that: "The Passions that encline men to Peace, are Feare of Death; Desire

of such things as are necessary to commodious living; and a Hope by their Industry to obtain them" [22]. Hobbes's political philosophy, by making fear of death and the profit motive the mainstay of social stability, offers a completely inverted view of classical political philosophy, which was based on freeing man from fear and searching for the common good [23]. In any case, what was to be an almost unanimous view among the authors of the period was the proposal that sustains fostering the so-called pacific and benevolent passions, among which the profit motive is given a prominent position (and the free commerce that facilitates this), to ward off the danger of pernicious passions, above all the thirst for power and sexual libido. All of them came to state that the search for personal profit is enormously beneficial for the stability of the political community, in that it corrects the principal defect in man: fickleness, as Machiavelli reveals in Chapter 17 of *The Prince*. In short, the search for financial profit accordingly appears as the best and most appropriate means by which to engender the stability and well-being of the political community ([21], p. 89).

Consequently, the desire to accumulate wealth (traditionally called greed) was no longer considered to be harmful and pernicious (a vice), typically associated with people who were detestable (the miser is a proverbial figure in literature) and was now considered to be a beneficial passion: one which guarantees the protection of interests, "self-interest". This new way of seeing the profit motive gave rise to a profound change in the mentality: to pursue "self-interest" becomes the inescapable premise of rationality, and those who do not pursue or defend self-interest do not act rationally and ostracize themselves from society. However, in the context of a society expressed in terms of the market, to defend self-interest means maximizing profit (financial profit) in all acts.

It was Bernard Mandeville, with the publication in 1714 of this famous work, *The Fable of the Bees* [24], who first gave form to this conceptual change (seventy years before Adam Smith developed his theory of the "invisible hand"), claiming that the general good emerges from private vices (such as greed), because the market converts the pursuit of personal interests into well-being for everyone (each person gets what they are looking for). This mentality impregnates all thinking in modernity and results in defining human beings in terms of their relationship with the market: in other words, like the *homo faber*: "the subject who produces in order to exchange". The definition of man as a "being who exchanges", put forward by Adam Smith, becomes paradigmatic: "Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog" [25]. This meant a profound change compared to the anthropological conception found in classical philosophy: the essence of what is human no longer lies in the order of being and is now displaced to the order of doing, the capability to create things that are not consumed, but rather used and exchanged. Benjamin Franklin was to define this in more precise terms: "Man is a tool-making animal" [26]. In other words, what is truly valuable is that which has a market value, which can be exchanged, *i.e.*, which has "exchange value". The general acceptance of this proposal converts the market into the center of social life and the mainstay of political action.

This hegemony of the market also had major repercussions for the triumph of the formalist conception of law. In an instrumentalist world that gives exclusive value to tools, it is logical that law only appears as justified to the extent that it can become yet another tool; that is, a means that serves different ends (in this case, at the service of the market). Economicism thus drains law of any rational and ethical reading of law and changes it into an instrument at the service of the class

that represents the development of the economy: the bourgeois economy. Adam Smith was most explicit when he claimed that the presence of what is legal can only be justified in terms of the defense of the owners against those who could potentially subvert their property. We can read this in his *The Wealth of Nations* that: "Civil government, so far as it is instituted for the security of property is, in reality, instituted for the defense of the rich against the poor, or of those who have some property against those who have none at all" ([25], Book III, chap. 2).

The primacy and exaltation of self-interest was also to result in investing in a moral ranking of wealth. In effect, classical thinking always defended the superior ethical value of poverty—to have the goods that are necessary for subsistence and to forgo what is superfluous to one's needs—proposing this as an ideal life from the stoics to Christianity [27]. The economicist conception of modernity proposes the very opposite: wealth is the ideal in life. The result of the subsequent influence of protestant thinking was to bestow wealth with a religious dimension, as illustrated by Max Weber, converting it into a sign of divine predilection [28]: the rich have been blessed by God, while the poor have been punished and repudiated and only deserve to be scorned. The poor are wretched. Those who do not have goods end up losing their dignity and being ostracized.

The wealth motive also ends up shedding its religious connection and secularizes itself ([28], p. 69) and, with it, liberating the market from all ethical ties. It was the neo-classical school towards the end of the 19th century that coined the model of the *homo oeconomicus* with which the economy finally divorced itself from ethics, identifying rationality as maximizing profit. This is a profit that has progressively become more calculable and predictable with the increasing use of mathematics in the economic sciences [29]. Therefore, personal interest and personal profit are consolidated as the most relevant motives of human action, whose legitimation lies in the belief that the egotistical behavior of everyone will lead to general prosperity.

This independence of the market with respect to ethics constitutes, precisely, the foundation of the modern science of political economy, a term that was rediscovered in the seventeenth century by Antoine de Montchrétien. However, the usage of this term is inappropriate, since for all intents and purposes, this "new science" is nothing other than the theory of trade and money, that is to say simple chrematistics. Its method is that of arithmetic, as pointed out in the title of the important work by Sir William Petty, *Political Arithmetic* (1676): only the visual and the quantitative count, that which can be measured and counted; the rest is repudiated [30].

This quantitative paradigm implies important consequences *vis-à-vis* the vision of human beings and in their relationships with nature. Firstly, the negation of differences and hierarchies among human needs leads to confusion between real needs and unbridled desire. This originates the conception of man as *homo oeconomicus*. What counts is the indefinite enrichment of individuals, since the well-being of society will be generated thanks to the famous "invisible hand" of which bourgeois economists have been incessantly speaking since Adam Smith and which is nothing other than the ideological and profane utilization of the idea of Christian Providence aimed at banishing the sentiment of compassion in view of the surrounding poverty. With the absence of a hierarchy among human necessities and by not appreciating anything except what is visible, accumulation becomes an instrument to attain an impossible and pathetic immortality: "[The] Modern individual cannot support economic equality because he has no faith in his own transcendence, in the symbols

of spiritual immortality; only physical value can provide him with liberation from death" [31]. Thus, accumulation appeared as the remedy for recognition.

As said earlier, the extent to which what is valuable is determined by "exchange value" means that all things finally lose their intrinsic value and are reduced to their monetary value. This produces a relationship between the subject and things, which is no longer based on ethical considerations—a good or bad choice—but rather, based exclusively on chrematistic considerations: more or less profit. The conception of the *homo oeconomicus* means precisely excluding all references to ethics and all value judgments from the sphere of choice by the subject and to identify rationality with decisions leading to maximizing profits. Adam Smith explains it in the following terms: "In all countries where there is a tolerable security, every man of common understanding will endeavor to employ whatever stock he can command, in procuring either present enjoyment or future profit. If it is employed in procuring present enjoyment, it is a stock reserved for immediate consumption. If it is employed in procuring future profit, it must procure this profit either by staying with him, or by going from him. In the one case it is a fixed, in the other it is a circulating capital. A man must be perfectly crazy, who, where there is a tolerable security, does not employ all the stock which he commands, whether it be his own, or borrowed of other people, in some one or other of those three ways" ([25], Book II, chap. 1).

The underlying idea that governs the behavior of *homo oeconomicus* is strictly as follows: those who do not maximize their profits (increase their earnings) are "perfectly crazy". Additionally, this maximizing can be quantified strictly in economic magnitudes: either through savings, accumulation or exchange. "Intelligent" (rational) decisions always lead to maximizing the profits of certain individuals, who are both egotistical and calculating. The problem lies in the fact that the *homo oeconomicus* model, reductionist by definition, was conceived for the study and research of the behavior of individuals in an exclusively economic context. However, modernity extends this model to include all human reality and takes for granted that everything humans do only makes sense "in" and "for" the market, and the basis for this rationality is predominantly economic and not ethical [32].

When utilitarian philosophy intruded into the sphere of economic analysis, it took this somewhat rudimentary interpretation of human behavior and raised it to the category of scientific analysis. In effect, the principle of utility proposed by Jeremy Bentham ("the greatest happiness of the greatest number") and his proposal for a new ethic based on "maximum pleasure and the minimum degree of pain" (good is equated with what is useful, and useful with what increases pleasure and minimizes pain) diverted the analysis of rational behavior towards a calculation of utility, that is, towards pondering the consequences of each decision: "Nature has placed mankind under the governance of two sovereign masters, pain and pleasure. It is for them alone to point out what we ought to do, as well as to determine what we shall do. On the one hand the standard of right and wrong, on the other the chain of causes and effects, are fastened to their throne. They govern us in all we do, in all we say, in all we think" [33].

From this viewpoint, those who are rational are those who make decisions in terms of "opportunity cost": each option (to be here or there, work on this or that) inherently and simultaneously entails some gain and some loss. Therefore, those who are utterly rational are those who know how to choose, in terms of opportunity that which provides them with greater utility (maximum welfare

and minimum suffering) between the various options possible. Maximizing utility thus becomes a criterion with a much greater bearing to justify rational decisions, although translating this into strictly economic terms continues to be a maximum profit and minimum cost as regards both production, as well as consumption of goods. In this way, the market not only makes this possible, but also forces individuals as regards their welfare to opt for a maximizing behavior. If the individual acts otherwise, this results in marginalization.

With the introduction of the utility calculation, economicism definitively excludes all moral references to human behavior and manages to reduce decisions to chrematistic terms, even those that are not directly in pursuit of economic profit, for example, desire for recognition, charity, altruism, the search for glory, honor, *etc.*, since the economic agent can be assigned utility for behavior that pursues these variables. In effect, utility translated into terms of maximizing pleasure can be achieved by owning goods, as well as divesting oneself of them. The determining factor is the amount of welfare that it produces for the subject. Those who commit suicide maximize because they value death more than life; the acetic values the simple life over consumption, whereas the monk values silence more than communication, *etc.*

The end result of reducing all reality to a calculation of utility also includes human beings themselves. This is how Gary Becker (Nobel Prize in Economic Sciences) saw it when he analyzed the behavior of the family in these terms, proposing that children should be considered "long-term consumption goods" that produce utility; the most expensive are those of a higher quality and facilitating their exchange [34]. In short, the explanation of human behavior from the premise of a rational agent that acts by maximizing its utility, however this may be interpreted, eliminates all manner of moral conception of human nature and opens the door to nihilism, which would be hallowed in the post-modern period. If we take a classic example, the decision to produce "canons or butter" (an entirely banal question) no longer belongs to the terrain of moral deliberations, but rather to the market. Put another way, the decision is qualified as rational to the extent that it responds to the calculation of utility designed to maximize well-being benefits. This is why the market (in the positive sense) ends up being qualified as a neutral mechanism; that is, something that is desirable not for ethical reasons, but rather for "technical" reasons, since it guarantees all individuals Pareto optimality.

The very idea of *homo oeconomicus*—the conception of human life as something that only has meaning in terms of the individual procurement of monetary gain—assumes that it is the rhythm of production, and nothing else, that guarantees the appropriate organization of society. Usage has no value, only exchange does. This form of social organization uses "exactness" as its model. The motto of the modern organizer is that society has to work like clockwork. From this, as Schumacher has pointed out, "the ideal of industrial Modernization would be to eliminate what is alive, including human life, and to transfer the production process to machines since these can work with greater precision and can be wholly programmed, whereas this cannot be done with people" [35]. However, in the meantime, while we have to continue relying on human labor, this work has to be regulated to the fullest. This gave rise to Chesterton's pointed remark that, "the modern planner is only concerned with workers in the same way as with clocks: when they stop" [36]. However, this concern is limited to voluntary slow-downs or strikes and not extended to forced lay-offs or

unemployment, since the latter is increasingly contemplated as a requirement of the system itself and needed to avoid greater break-downs.

Exactness, the condition of growth, generates (along with the concentration of capital) a detrimental effect on human beings. This can be observed especially in two spheres: the rupture of the balance between science and art, between work and leisure; and in the rupture between production and consumption. The first harmful effect can be seen by reading the works of Claude Henri de Saint-Simon (1760–1825), who is the prototype technocratic organizer. In his various writings, and most especially in his Industrial System, Saint-Simon points out the opposition between the useful work of scientists, engineers, bankers and industrial workers, who increase wealth by directly satisfying economic interests, and the useless work of parasites, such as philosophers, theologians or jurists, which is solely guided by sentiments and which limits itself to reproducing wealth, but without increasing it. Thus, whereas the former are good for something clear and precise, the latter are lost in empty realities [37]. Saint-Simon proposes conceding power to engineers and bankers, so that they can fight to eradicate all useless activities and favor imposing productive work. Their mandate would be beneficial, because their interests coincide with the interests of the collectivity ([37], p. 1044). It is a matter of having them, through their stimulus, convert society into an authentic "megamachine" dedicated to production. This would entail the increased division of labor, prescribed from Smith onwards, and a substantial increase in the number of working days. As Mumford recalls, until the beginning of the eighteenth century, more than half of the days of the year were feast days [38].

The other harmful effect would be produced between the model of the producer and the model of the consumer. This was developed by Alvin Toffler: "The same person who as a producer was spurred along by his family, his school and his boss to renounce to gratification, to be disciplined, controlled, restrained, obedient, to be a member of a team, was equally spurred along as a consumer to seek immediate gratification, to do away with discipline, to seek his own individual pleasure, in a word to be a completely different type of person" [39].

This contradiction of the "modern world" is due to its incapacity to distinguish between two realities that are apparently closely related, although, in fact, they are quite different: "poverty" and "misery". This distinction has been sketched with incomparable vigor by Charles Péguy himself in "*De Jean Coste*". Poverty, akin to Horatio's *paupertas*, would be the state in which one would have enough to live, without luxury, but with decorum. It is a type of purgatory that makes human beings understand their limits and opens them to love and care for others. Misery, akin to Horatio's *egestas*, is, on the contrary, a true hell that one lives through in a state of authentic despair with regard to tomorrow and from which it is urgent to free mankind [40].

Modernity is not capable of understanding this distinction due to its quantitative characteristic based on the criterion of "sufficiency" to satisfy needs. It can only distinguish between having a lot, wealth, a model to be emulated, and having little, a model to be avoided. This indifference regarding the distinction between poverty and misery impedes the struggle against the roots of the main present-day type of economic marginalization, unemployment, since it refuses to see this problem as the result of the lack of solidarity and the unjust distribution of both income and the number of working hours. In this manner, the new technologies serve to increase the misery of those who

cannot supply anything else but the "labor of the body", which is disdained as something unnecessary.

Economicism tends to reduce the dimension of need to the sphere of economic resources. It has also caused the devaluation of "caretaking", in accordance with the primacy of chrematistics. This is very closely linked to what has become known as "sexism": the lack of consideration for tasks that were historically entrusted to women. These tasks were directly related to configuring and protecting humanity in its dimensions of greatest indigence, and therefore, they were of capital importance. However, due to their lack of exchange value, they were considered inferior.

In the devaluation of caretaking, there is also the conception of human beings as *homo labilis*: the tendency to not see life as anything else but the occasion for immediate pleasure and, therefore, shunning anything that could imply abnegation, dedication or sacrifice *vis-à-vis* others. This hedonism, so closely linked to the chrematistic mentality, at best favored the bureaucratizing of such caretaking, shutting it up in more or less comfortable ghettoes and leaving the radical indigence of the human condition on the fringe out of range from social visibility.

The failure of "economicism" was already underlined by Fritz Shumacher in his most famous book, *Small is Beautiful*, published in 1973 with the significant subtitle: *A Study of Economics As If People Mattered* [35]. After the publication of his posthumous book, *A Guide for the Perplexed* [41], the value of his thinking became more striking. What is most fascinating about Schumacher's contribution lies in the courage with which he confronts the modern theories of the economists who consider the extension of the market to be a solution for all problems, whereas Schumacher stresses that the market itself is the source of the basic insufficiencies of modernity: "The market only represents the surface of society and its meaning refers to a momentary situation, such as it exists here and now. There is no deep delving into the essence of things or into the natural facts that lie behind them. In a certain sense, the Market is the institutionalization of individualism and of irresponsibility" ([35], p. 44).

Schumacher stresses that the greatest limitation of the market paradigm lies in its eradication of the qualitative, provoking important consequences in the comprehension of human affairs: "In the market, for practical reasons, there is the suppression of innumerable qualitative distinctions that are of vital importance for individuals and society and that are not allowed to come to the surface. Thus does the reign of quantity celebrate its triumph in the Market. There everything is made equal to the rest. To make things equal means to give them a price and to make them interchangeable. To such a point is modern thought based upon the Market that what is sacred (the person) is eliminated from life because there can be nothing sacred in something that has a price" ([35], p. 46).

4. Decadent Post-Modernity: Techno-Scientific Anti-Humanism and Economicist Nihilism

The current cultural situation continues to distinguish itself by the extraordinary influence of post-modern discourse, in its most decadent version, as a response to the (still open) debate on the crisis of modernity and whether the fundamental theses of the Enlightenment are still applicable: the absolute rationalization of the world and society by means of science, indefinite and irreversible historical progress, revolution as a fundamental method for liberating peoples and individuals, liberal democracy as the definitive form of political organization and the market as a guarantee of general well-being. The postmodern refutation of the Enlightenment thesis claims that, on the basis

of historical evidence, none of these prophetic expectations have been fulfilled. In contrast, the magnitude of the "perverse" effects caused are such that, on balance, the 20th century is a far cry from being qualified as the most positive in human history. This explains the scope and degree of deception expressed in postmodern thinking [42].

However, it is not that easy to reconcile this theoretical verification of the failure of modernity with the present-day spectacle of uninterrupted technological progress and the omnipresent market that facilitate and promote an opulent life-style in the West and a fascinating array of artistic and cultural movements of all kinds. The most lucid hermeneutics of this apparent contradiction is perhaps that posed by the anthropologist and sociologist, Arnold Gehlen [43], and which could be summarized as follows: the premises of Enlightenment are dead, but their consequences live on. The name he gives to this is "crystallization". Put another way, the two fundamental consequences of modernity live on, technological progress and the market. However, there has been an absolute disconnection between both realities and the common principles to which they responded in the premises of enlightened thinking: achieving the moral progress of humanity; and the definitive emancipation of the human being.

In effect, widespread education and culture has not brought about a greater understanding between individuals and peoples (nobody now thinks that the *sapere aude* promotes the total emancipation of mankind). In politics the liberal democratic and bureaucratic socialism systems are preserved, because they have managed to generate functional systems, entirely regardless of their meager power of conviction. The sciences and technologies find themselves confined within a non-modifiable system subject to techno-structure, but separated from their vital aspirations. We continue to see that, despite the immense scientific work in recent decades, they have not produced one single innovation comparable to those by Max Planck, Einstein or Heisemberg. It is only in the field of human biology and cybernetics where there have been substantial advances, but under an ambivalent and disquieting cloud (the manipulation of the genetic basis of humans and loss of intimacy). Finally, in the areas of artistic and cultural production, the last significant contributions date to around 1910; but this process of subjectivization of art has already fulfilled its main expressive potential. There is not even room to speak today of "avant-garde", because now there are no longer advances in anything, nor a resistance to make a break. According to Gehlen, we would have entered into post-history ([43], pp. 322–23).

From the context of this post-history state of affairs of consequences without principles (disconnection between technology-market-culture and humanist values) emerges the story that has made the deepest impression on the spirit of Western Europe: that offered by thinkers labelled "post-modern". This is a thinking that rises up against the hegemony of all-embracing, utilitarian and instrumental reasoning, but does not do so from an alternative rationality, but rather from a vital experience; that is, it acts as a spokesperson for a feeling of disenchantment, from the deception experienced by man today in light of the failure of enlightened rationality and, with it, the definitive failure of reason. Post-modernity, as stated by Lyotard [44], rather than a current of thought, is a "sensibility"; that is, an experience that has been forged in the heat of the profound cultural crisis fanned by the decline of enlightened reasoning. In this disenchantment and post-modern skepticism in the face of reason, two contributions fundamentally converge: that begun by the Italian aesthetes

(Vattimo, Castoriadis) and that which originated from the French post-structuralists (Barthes, Baudrillard, Deleuze, Derrida, Foucault and Lyotard). Although both movements, in their attempts to prevail over modernity base themselves on anti-humanist and nihilist proposals, it proves paradoxical that they finally take up (surely to their regret) the two most significant elements of modernity, techno-science and the market, and integrating them into this so-called "post-modern sensibility". As will be explained later, the former openly focus on techno-scientific reality, even as a path towards post-humanism. For their part, the French post-structuralists incorporate economicist logic implicitly by reducing the subject to the pure irrationality of desire and reality to a pure fragment.

4.1. The "Techno-Scientific Anti-Humanist" Dimension of Post-Modernity

Postmodern sensibility states that modernity has not only generated disappointment at a theoretical level, but also great practical disappointment, hence its utter failure. Modern reasoning, which was hailed as the salvation of humankind and the means for man to achieve happiness, after a century of hegemony, has revealed itself to be dominating, enslaving and destructive for humankind. Seen from its technical dimension, it has created machines of destruction; and from its theoretical dimension, it has abetted in the legitimization of any kind of ideology and means, as long as it reaches its ideals, or variations of these. We are not looking at the practical failure of a sound ideal; instead, we have arrived at the necessary and inevitable consequences of theory, since Enlightenment is none other than theoretical domination, which becomes technical domination. Put another way, the failure of modern reasoning is not due to the fact that the means chosen are wrong, but rather that the very dynamics of modern reasoning have generated these consequences due to its mistaken and paranoid attempt to dominate and subjugate all reality ([44], p. 22).

Postmodern sensibility confirms this "cultural climate", which reflects disenchantment in the face of the failure of scientific and technical reasoning that has dominated the modern world and is committed to dislodging this "all-embracing reasoning" from its hegemony over reality. Along these lines, it proposes adopting an anti-enlightenment approach, which it has no reservations in qualifying as anti-humanist, subordinating the subject to a process of "deconstruction" "unmaking". Think well, feel well, act well, according to this "episteme of unmaking", means rejecting the tyranny of totalities, because totalization in any human endeavor is potentially totalitarian [45].

To fight against totalizing reasoning basically means to fight against the subject that it has forged. In effect, post-modernity expresses an ontological rejection as regards the subject produced by Western philosophy and rooted in Cartesian "*cogito*", understanding that this is the artifice of instrumental, totalizing and dominating rationality; it is the subject of the "will to power" hailed by Nietzsche. This is the subject that the humanism of modernity has placed as the center and absolute reference of oneself. To de-construct this subject necessarily involves adopting an anti-humanist position, because, as Gianni Vattimo states, in postmodernity, man is no longer the center; he is heading towards an unknown, towards "X", or rather he is heading nowhere ([2], p. 23). In effect, it is humanism itself that has brought about the dehumanization of man: either because it has eclipsed humanist ideals in favor of man dominated by rationally productive techniques or because it has bureaucratized everything in social and political organization [46]. Olwald Spencer (1918) and later Ernst Jünger (1932) already admitted that our civilization was in decline given that our activities are

no longer those of creation, typical of an early age, but rather those of technical, scientific and economic organization, which culminate in the establishment of a domination, which, when all is said and done, ends up being military ([44], p. 16). Heidegger himself, in his famous *Letter on Humanism* (1947), argues that the disenchantment of the world, its enslavement in the direction of technics and the servitude of *humanitas* towards mercantile rationality are not attacks against humanism, but rather the outcome of humanism itself; the uprooting of all that is natural for that which is cultural, the will of human rationality to dominate completely what is real [47].

This deconstruction process of the subject requires the dissolution of the foundation and, consequently, abandoning humanism. In effect, both in technics, as well as in metaphysics or in humanism, one always discovers a search for the foundation upon which reasoning is built and which is arrived at through reasoning. All said and done, any attempt and search for foundation is nothing more than the affirmation of metaphysics, and this always generates violence and domination. Here lies the error of humanism, having assigned man the role of a conscious subject; that is, a foundation of himself. This is why Vattimo states in clear terms that postmodernity means absence of foundation; the definitive prevailing over metaphysics, without having to feel remorse. The crisis of modernity is not solved with criticism, or with a new foundation, or with a new humanism; the only solution is to do away with all of them ([2], pp. 45–46). Heidegger's anti-metaphysical position needs to be interpreted along these lines: not as a humanist yearning to return to be what we have forgotten, but rather as the history of a "long farewell to being", of an never-ending weakening of being, of a definitive prevailing over metaphysics. A radical "slimming of the subject" is a stage in the cure for humanism. The subject is a mask, a transmitted fable. This is no longer important: it is presence-absence in a society transformed more and more into a very sensitive organism of communication. In short, we inhabit a world that is no longer true, that has become a fable, and postmodern man has stopped being subject, has been left empty and has become a mask [48].

What postmodernity proposes is to promote what is human without a new humanism: "the possibility to truly facilitate all the "other" possibilities which make up existence" ([2], p. 30). The major values of humanism (being, truth, goodness, *etc.*) are fables, sagas, transmitted messages. One does not have to continue interpreting fables as truths, but rather "live the fabled experience of reality, and experience which is also our only possibility for freedom" ([2], p. 32). From here on, the door is left open to nihilism, which does not attempt to exalt absolute, total or metaphysical nothingness, but simply state the weakening of the founding being of traditional metaphysics. Vattimo defines this as the "situation in which man abandons the center to head towards X" ([2], p. 21). Postmodern man is nihilist, because he has understood that there is no meaning, there is no metaphysical foundation: "nothing remains of being as such" ([2], p. 22).

Techno-scientific reality, however, has great interest for this anti-humanist postmodernity, to the degree of considering it a powerful instrument for liberation and later self-construction of postmodern man. Science is not a fetish that is erected as a sole and definitive knowledge of reality, because then, "we would fall into the defects of metaphysics" [49]. Science must not set up fiction as reality, but rather it should help us to recognize that reality is fiction. In effect, the techno-scientific reality of the world, deprived of its dominating reasoning fetishist nature, takes on a liberating role, because it allows man to conceive of infinite possibilities of making and being made. Postmodern

man (who Vattimo calls overman), who clearly belongs to the techno-scientific world, "finds in science and in technics the framework of external security within which he can liquidate all the structures, intimate and external, of domination" ([49], p. 142). In other words, science and technics must be used by the overman to free himself from all conditioning, including biological and genetic and, thus, escape the domination and subjugation that the structures of society have exercised over him, which is a pure fable. As Gilbert Hottois pointed out [50], techno-science exhibits multiple emancipating and diversifying aspects: a creativity of possibilities that allows the true realization of the individual.

The well-known and controversial essay by the German professor, Peter Sloterdijk, *Regulations for the Human Park* [51], works along this liberating affirmation line of techno-science. Originally, it constituted a response to Heidegger's *Brief über den Humanismus* ("Letter on Humanism" [47]), on the fiftieth anniversary of its publication. The terms used in the text prove to be very revealing, particularly when defining humanity as a "human zoo park" and when speaking of "domestication" (*Zahmüng*) as the task of the new man, who must be like a "tamer of human beings". Defining himself as "simply Nietzschean", he restricts himself to stating the failure of humanism and pointing out a new scientific truth: the convenience of "a domestication of man by man" in which modern genetics would play a decisive role. Therefore, we would find ourselves faced with a new man who has to accept the new power he has over himself, namely biotechnology: the opportunity to reform the properties of the species genetically. Furthermore, all of this is without this new man being subject to a higher authority (God, fate, *etc.*) in the exercise of this new power. This new man has little in common with Nietzsche's overman. He has moved beyond questions of good and bad, not out of disdain for the established order, but because this order has dissolved, and this can be very clearly perceived in the area of new technologies. The new overman is the man of the new technologies, especially biotechnology. With this, Sloterdijk assures us that this is not an attempt to return to the Nazi eugenic techniques (he was obliged to clarify this point in response to harsh criticisms). The issue that the man of biotechnology is overman means that faced with a technical action, with no fixed regulatory limits, objectives or sufficient guidelines, there is only room for a liberating dimension that is not subject to the metaphysical prejudices of good and bad ([51], p. 19). Arguing along these lines, he speaks of "cold objective thinking" and not confusing the new man with the worst Nietzschean vision of the overman (a kind of gigantic and carnivorous dominator), but instead the individual who is able to come to terms with the absence of foundations. This man is strong enough, as Nietzsche wrote in his *Untimely Meditations*, to "choose for himself his own mask" in an indeterminate and pluri-cultural world [52].

As we can see, the anti-humanist orientation of postmodernity ends up drifting towards a post-humanist conception, firmly upheld by defenders of the so-called "biolitical revolution" [53], for whom the human species has become a concept that can be revised, if not obsolete. For example, Tristam Engelhardt argues along these lines when he states that: "in the long term there is no reason to think that only one species will come out of ours. There could be as many species as there are opportunities to substantially remodel human nature in new environments as reasons to refuse to do so" [54]. From post-humanist writers, others emerge from the perspective of relativism, such as Richard Rorty [55], for whom we have to abandon the task of "establishing" supposed

truths in ontology, metaphysics or religion, as Nietzsche had already suspected. Contemporary man has to go even further and renounce the idea that there are true or false answers to the questions we ask ourselves. He states that: "it is very likely that human creativity could soon run out and that in the future there is non-human world which eludes our endeavors to conceptualize" ([55], p. 178).

Gilbert Hottois [56] considers manifestations of human culture (history, art, philosophy, moral values, *etc.*) to be nothing more than attempts to symbolize or "encode" a reality in movement. Therefore, all concepts that accompany these attempts are relative, including the concepts of humanity or the individual. The attempt to fix and impose one of these concepts is completely contrary to techno-scientific development. What happens today is that philosophy can be seen as impotent and incapable of symbolizing or "codifying" the techno-scientific universe. He even speaks in ironic terms of the failure of deconstructive thinking (along the lines of Wittgenstein's linguistic games) to satisfactorily express being in the techno-scientific world ([56], pp. 112–20). This is why he proposes substituting philosophy for techno-scientific research and development linked to the market, since technics and money are the two major operators in the contemporary world: "It is the techno-scientific actors that continually invent and produce the future. Reality is de-constructed and re-constructed indefinitely under the sole driving force of technics and the market" ([56], p. 123). "Symbolic orders and hierarchies emerge in the chaotic space of global mercantile mobilization; they influence it for a given time and on a local basis, but cannot structure it in a lasting manner nor stabilize it at a global level. The power, liberty or desire for exchange and change know no limits" ([56], p. 159). Hottois ends by admitting that: "techno-sciences open up to a *functional* transcendence of the species: they allow for effectively overcoming the natural limits associated with the human condition." ([56], p. 163). In short, the anti-humanism of postmodernity has drifted into a post-humanism that has located the idea of techno-science in terms of the final horizon of thinking. The refutation of all foundation has elevated science above itself to the point of coming to be seen as a kind of substitute messiah, a "default" ideology for a post-human future.

4.2. The "Economicist Nihilist" Dimension of Post-Modernity

The nihilist climate of postmodernity is particularly evident among the French post-structuralists (Barthes, Baudrillard, Deleuze, Derrida, Foucault and Lyotard), whose thinking paradoxically (and perhaps to their regret) contributes to consolidating the economicist logic of modernity, which is discussed below.

Post-structuralism appeared in France in a climate of skepticism with regard to the possibilities of "changing the world" after the two-fold failure in May 1968: student protest and the "Prague Spring". This skepticism was precisely the constituent cause of its scant originality (for authentic creation to come about, a minimum of enthusiasm is required) and explains how inadequate its attempts were to overcome modernity, given the fact that its approaches are narrowly linked to modernity, as openly acknowledged by post-structuralists themselves.

The link between post-structuralism and modernity presents a two-fold dimension. First, the epistemological dimension: the dissolution of truth in "text", or in other words, the denial of reality within the never-ending process of interpretation. Barthes and Derrida have insisted, more than anybody else, upon this aspect. Second, the anthropological dimension: the dissolution of

consciousness in unconsciousness and the denial of the person in an indefinite number of masquerades. Deleuze and Foucault, in particular, have insisted upon this aspect. In both cases, however, the indisputable guides are the nihilism of Frederick Nietzsche and Stéphane Mallarmé ([3], pp. 86–90).

The post-structuralist authors propose "the text" as literary expression, a multidimensional aesthetic space in which a variety of styles (none of which is original) combine and are "contrasted" and in which the sign is dissolved in a nonsensical set of meanings, as opposed to the "work", which suggests an aesthetic whole fixed by an origin (the author) and an end (some represented reality or transcendental meaning) [57]. To support this primacy of the "text", they resorted to Nietzsche and Mallarmé as authors who defend an indefinite and unfinished interpretation, as opposed to Saussure, who had believed in the absolute existence of signs [58]. They draw an opposition between structuralist semiology and nihilist hermeneutics.

The reference to Mallarmé could not be easier or more clarifying [59]. In effect, for Mallarmé, writing is a mere game, in so far as "there is nothing before writing [...], no *primum signum*, nothing to imitate; everything is pure representation" [60]. This nihilism is what led Mallarmé to wish to replace the Bible with his "text" in which instead of order, memory and truth, what would appear is chance, randomness, necessity and games. "Literature returning to its source, which is art and science, would give us a theatre whose representations would be the true modern cult" ([60], p. 317). Derrida would exacerbate this playful aspect of writing by constantly resorting to "logomatics" and more or less ingenious play on words. The critique of the *logos* pays the price of reiteration and boredom.

Nietzsche, in principle, seems to be opposed wholesale to modernity [61]. Yet, his spirit basically coincides with that of modernism, a movement for which he declares his admiration in different passages for its principle of *l'art pour l'art*, which he considers to coincide with his own principle, whereby art is worth more than truth, due to its tendency to hide itself and to be opaque for the majority of people; in other words, for its elitism and its anti-democracy [62].

However, what is of special interest in Nietzsche for the post-structuralists as regards the epistemological aspect is that which he has in common with Mallarmé, such as his hostility towards what is finished and mature, which, according to Zarathustra, implies the "fear of life", in defense of what is fragmentary, and his view of philosophy as an indefinite interpretation [63]. It is this aspect that is stressed by Foucault [64]. In agreement with this view held by Nietzsche, "knowledge has not been made to understand but to make inroads [...]. The search for the origin does not found; on the contrary, it stirs that which seemed motionless, it fragments that which was thought to be united, it shows the heterogeneity of that which was thought to be in conformity with itself" ([64], p. 151).

The dissolution of truth in an indefinite interpretation that has no object constitutes the epistemological side of the same coin whose other side is the dissolution of the Self in the It. The attempt to unveil truth culminates in the unveiling of the subject, of the person. "The philological resolves itself in physiology" ([62], n. 20). Although the post-structuralist writers were influenced by the three "theoreticians of suspicion", Marx and Freud were accepted in so far as they were compatible with Nietzsche, that is to say, very weakly. Both were considered to be too mild when it

comes to proposing the liberation of unconsciousness or desire. In Marx's case, it is matter of going even further by proposing a change from *homo oeconomicus* to *homo ludens*. In Freud's case, it is a matter of inverting the relationship he established between the Self and the It in agreement with his affirmation of "where the It is, there should the Self be", and of replacing it with another in which the It is completely liberated. On this point, the post-structuralists show themselves to be the followers of the authors belonging to surrealism and to the Freudian Left, and particularly of Marcuse's thesis in *Eros and Civilization* [65]. However, their guide, as we have said, is fundamentally Nietzsche himself.

The unmasking of Nietzsche would be anthropologically tantamount to the suppression of one's face, in the same way that epistemologically it would be tantamount to the elimination of truth. Instead of an integrated Self, what appears is the Dionysian plurality of characters, the "child" as "innocence and game", or in other words "discontinuity, pleasure, appetite, violence, depredation" ([62], *Preface*).

Possibly the book that best reveals the decomposition, the detritus produced by the unconditional primacy of the principle of pleasure over the principle of reality, is that of Deleuze in collaboration with Guattari, *The Anti-Oedipus (Capitalism and Schizophrenia)* [66]. The dissolution of the Self, in turn, implies the dissolution of the recognition of the other. If the It is called to govern, then the other disappears in favor of a perverse and polyphorm desire. Here, all limits disappear, even the prohibition of incest, considered by contemporary anthropology as the universal taboo of taboos: the main manifestation of the passage from the animal to the human. By strengthening the dimension of desire, the recognition of the difference among individuals disappears. There is no room for the differentiation between a forbidden person (one's mother or sister) and a person who prohibits (a father or an uncle), but rather everything remains in a state of generalized indifference. Everything is indifferent and, therefore, everything is permitted. There is no room therefore for surprise when we consider that in the text what is exalted is the supposedly primitive savagery of an indefinite number of sexes, as opposed to any regulation of behavior, which would be anti-natural. Schizophrenia, stimulated by capitalism with its split between morality from the point of view of both the producer and the consumer, is not corrected, but rather indefinitely fostered as the sole exit in the face of paranoia, which would be provoked by the desire of personal integration and which would lead towards totalitarianism [67].

However, Nietzsche at times manifests his opposition to economicism. Thus, in both *Unfashionable observations* [68] and *The Dawn of Day* [69], he criticizes the world of appearance, of theatre, of representation, as something originated from the primacy of money, which requires a showcase. Moreover, in his *Genealogy of Morals*, he censures the belief in culpability as the mere imitation of a concept from the economic sphere: guilt is nothing else but a simple debt and the resentment that follows as a consequence of the primacy of chrematistics, which tends to think that everything has a price and that everything has to be paid for. For this reason, in *Zarathustra*, he recommends to his overman ("*Übermensch*") that he should "abandon the market" ([63], part IV, n. 1). As if this were not enough, the exaltation of the figure of the "child" as the key to the overman could make us think of a certain caustic critique regarding the enlightened ideal of "maturity", of "adulthood", of the "emancipation", of the *sui iuris*.

However, postmodernity and Nietzsche himself (and, of course, post-structuralism), far from opposing the logic of chrematistics, can be considered as a radical off-shoot of the same. Two of its dimensions show this clearly.

The first of these dimensions refers to the primacy of the will and the subject's power of disposal, precisely the key to the emancipating message of Enlightenment. The novelty is to be found in the fact that the emancipating dimension and the subject's power of disposal have passed from the world of property and things to the world of the body. The title-bearer of the right of disposal is not so much the *sui iuris*, but rather the "child", that is to say the unconscious, the desire. There would be no hostility whatsoever *vis-à-vis* the emancipating ideology, but rather an extension of the emancipating process of the desire. Voluntarism without barriers would lead to the (anti-) Freudian ideal of the total liberation of impulses. What is disposable, and therefore in the ultimate instance, what is alienable, far from being reduced, becomes extended. This unconditioned disposition of the bodily would be taken advantage of by commercial interests.

The second aspect in which we can find chrematistic logic refers to the primacy of what is fragmentary and what is disintegrated over what is global and whole. This was mentioned earlier when pointing out the defense of schizophrenia, which was proposed as the sole remedy against paranoia by Deleuze and Guattari, both of them following (in spite of themselves) the logic of capitalism. However, it can be seen as the result of applying a scientific-naturalistic methodology to the human being. The decadent view of the human being as something "worth very little", which appears in the post-structuralist writers, dissolves the notion of substance and cause and reduces individual to a "succession of sensations". All of this, however, was already to be found in Hume [70].

The fragmentation of the person into successive instances would be, in turn, something that was derived from the pure bourgeois spirit. According to Karl Marx (whilst submerging himself wholesale in that same spirit), this tends to destroy all that is permanent by converting it into the ephemeral and eliminating all that is sacred, thereby promoting the extension of indifference within the human relationships. As Jameson points out, postmodernity coincides with the logic of consumerism. In effect, the transformation of reality into images and the fragmentation of time into a set of perpetual present moments are a replica or a reproduction of the logic of consumer capitalism [71].

It is possibly in the sphere of politics where the unchanging and reactionary character of the late modernist authors is better revealed. Politics is incapable of being understood by the post-structuralists, among other things, due to their incomprehension of the institutional, which derives from the primacy of the unconscious and the instantaneous. It is not at all a matter of only criticizing those "institutions" (which would be perfectly legitimate), which from Goffman onwards are designated as "total institutions" (prisons, psychiatric hospitals, military barracks), in which the individual is totally molded, but rather a matter of casting aside all that is institutional, in so far as it implies the category of "duration". The juridical and the political would be pure repression, no matter whether they are the fruit of individual arbitrations, reflection or a collective consensus. Democracy turns out to be even more impossible in its two-fold appeal to the 'given word' and to the 'common good'. In effect, in agreement with Nietzsche, what is common to everyone is already

in itself something that cannot be good ("what is common is never a good" ([62], n. 43), and therefore, the search for consensus is in itself negative. Therefore, democracy cannot be anything except "decadence" and "self-deception" [72].

Both politics and art would be nothing other than simulation, mere fiction. However, politics would be so in a deceptive, fraudulent manner, at least for the masses, whereas art would be so in a declared manner. The pretension of the truth of politics is what makes it especially odious, whereas art would be directly lived as a simple invention. Politics is nothing other than pure representation, pure theatre. Representation as a simple game is inevitable, and it is absurd to be morally outraged by it. The post-structuralists believe that we have unavoidably entered the age of the comedian, of the clown, as Robert Musil had already pointed out in his *Essays* [73]. Additionally, in a more or less cynical manner, they take part in this "sad spectacle" by means of their opacity, their "logomachies" and their play on words. It is easily understood that elitism, the scorning of the masses and submission to the consumer society characteristic of the post-structuralists, should have been presented as the true postmodernity.

The gigantic echo reached by the post-structuralist authors in the Western World only demonstrates the urgent need for a "change in human mentality" based on opening the door for a "new humanism"; a new mode of thinking reality from a "non-economical perspective".

5. The Alternative Proposals to Postmodern Nihilism

As opposed to the nihilist trend employed by decadent postmodernity as an answer to the crisis of modernity, there are two other important lines of thinking, which, from radically opposed ideological positions, have attempted to offer a "humanist" response by re-affirming the identity of the subject and of values as a basis for building a just, rational and human society. The first concerns writers from the "Frankfurt School" who, following the ideological and methodological lines of critical Marxism, proposed a change to the epistemological paradigm, which leans towards reinstating enlightened reasoning as a primordial element for recovering the subject and the humanity of the subject. The second concerns writers who have been labelled "neoconservatives", whose thinking, essentially focused on the area of culture, considers a strategy of recovering Western spiritual values as a premise to re-incorporate a fragmented and disoriented society. Neither of these two lines of thinking, in my view, has managed to propose a sufficiently solid front against the relentless nihilist drift of Western societies under the indisputable primacy of technology and market.

The most forceful attempt to confront a crisis of modernity comes from the Frankfurt School of writers (C. Offe, A. Wellmer, J. Habermas, K.O. Apel), who continued along the lines of "critical theory" begun by Max Horkheimer with the publication of this book *Traditional and Critical Theory* [74]. "Critical theory" confirms the predominance of techno-scientific instrumental rationality in contemporary societies, which, in the words of Marcuse, has produced a "one-dimensional man" model, which has been reduced to a mere cog in the techno-economic wheels of capitalism and has ended up being dominated by consumerism [75].

The dense compilation by Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment* (1947) [76] and the later work by Adorno *Minima Moralia* (1951) [77] were the culmination of this

relentless criticism aimed at scientific reasoning as the sole foundation of human knowledge and practice that has taken place in the Western capitalist system. The critique of capitalism turned into a critique of Western civilization as a whole. Indeed, the *Dialectic of Enlightenment* uses the *Odyssey* as a paradigm for the analysis of bourgeois consciousness. In these works, Horkheimer and Adorno introduced many themes that have come to dominate the social thought of recent years; indeed, their account of the domination of nature as a central characteristic of instrumental rationality in Western civilization was given long before ecological and environmental issues had become popular concerns. The analysis of reason now goes one stage further. The rationality of Western civilization appears as a fusion of domination and of technological rationality, bringing all external and internal nature under the power of the human subject. In the process, however, the subject itself is swallowed up, and no social force analogous to the proletariat can be identified that will enable the subject to emancipate itself. Hence, the subtitle of *Minima Moralia*: *Reflections from Damaged Life* [77].

The most current representative writer following this line of thinking is Jürgen Habermas with his book *The Theory of Communicative Action* [78]. As is known, he believed that modernity is an "unfinished project", whose fundamental premises are still valid, but whose consequences today must be purged of reductionisms caused by the undue hegemony of instrumental rationality [79]. In the path of "critical theory", Habermas states that technical reasoning—instrumental or strategic reasoning—has been colonizing the other areas of human rationality, turning into the *raison par excellenc*e. He states that all of the processes of the "technification" of social life—politics, education, culture, *etc.*—illustrate the predominance of instrumental reasoning and, in tune with Adorno and Horkheimer, confirm that the intrinsic logic of "systemic" rationality is manipulation, the domination of the other by the other. The domination of nature becomes the domination of some human beings over other human beings and, finally, becomes a "nightmare of self-domination" ([79], pp. 151–59).

However, Habermas claims that the origin of the breakdown of modernity is not in rationalization as such, but rather in the failure to provide a "balanced" development and institutionalization of all of the dimensions of reasoning needed to understand the modern world. The solution, then, does not consist of renouncing enlightened reasoning, but rather rehabilitating other dimensions, which have been overlooked with the predominance of instrumental rationality. Emancipating projects in themselves are not harmful for humanity, but rather only insofar as they are invaded by manipulating and dominating reasoning. One has to "purge" this emancipating reasoning ("critical reasoning") from the manipulating bias of dominating reasoning, which should confine itself to its specific sphere of domination and control of nature. In other words, each of these dimensions of reasoning has to be linked to the specific interests pursued by human society. Put another way, "knowledge" and "interest" need to be linked. Knowledge that is constructed (scientific-natural, historical-sociological or philosophical-theological) has to be very closely related to interests (domination, relationship or emancipation) present in society ([78], I, pp. 175–81).

On the one hand, modernity has turned scientific-natural knowledge, which is a response to the interest in dominating nature, into knowledge *par excellence*, while relegating knowledge that responds to interests concerning relations (social) and emancipation to a secondary role or (even

worse) identifying these relations in terms of the former model. Consequently, social interaction and emancipation have been contaminated by unrelated knowledge and interests. The path that leads to solving the problems of the world today depends on liberating socio-historical knowledge and emancipating knowledge (and its corresponding practices) from a methodology and interests that do not concern them. In other words, when it comes to relations and emancipation, there are rational "alternatives", which are not manipulating and dominating. Here, Habermas proposes "communicative rationality", which is based on a primary and shared use of language ([78], I, pp. 264–65).

Therefore, how is market and economic rationality built into this framework? Habermas's answer is somewhat disappointing. Despite his critical posture, in the Marxist vein of confronting capitalism, he settles for relegating economic rationality to the specific sphere of "market interests", seeing the market in terms of a "subsystem" that is developed on the fringes of communicative rationality. However, other than being critical, he finds it difficult to explain how to confront the reality of a market whose instrumental rationality constantly breaches the limits of the economic framework. In effect, under the influence of N. Luhmann and particularly T. Parsons, Habermas makes an approximation of the capitalist economy, conceiving of it as a subsystem ([78], II, p. 234). Habermas's thesis holds that in the early stages of modernity, Western European societies had to confront a new systemic problem: material reproduction in a context of growing social complexity, which made coordinating economic social action unfeasible through communicative action. The mechanism that finally solved this problem was the institution of the capitalist market, which emerged unintentionally from the interaction of monologically-oriented individuals. However, it managed to achieve the status of an institution by making economic action and material reproduction possible in the new context of a complex society ([78], II, p. 247). The market emerged as a neutral mechanism coordinating individual economic actions, which were driven by egotistical self-interest. In short, it can be seen as institutionalizing "instrumental action", which proves functional for material reproduction in complex societies. It thus constitutes a new level of collective learning for human kind ([78], II, p. 249).

The capitalist market took shape in a process that could be described as natural. It did so by "disengaging" itself from the "life-world" (culture and values) as a self-regulated subsystem and by means of its own non-linguistic communication: money. This differentiation of the capitalist economy as a subsystem, in turn, implies a restructuring of the State in systemic terms, as a self-regulated subsystem working from the basis of "power". However, for Habermas (particularly in his later work, *Between Facts and Norms* [80]), the structuring of the State as a system, as opposed to the capitalist economy, would need to build a political foundation through the prevailing channels of democratic legitimation in modern societies. Habermas' diagnostic is that the economic subsystem, once differentiated from the "life-world", tends to transcend its own limits (driven by the capitalist class strategy to confront the working classes, as he somewhat hazily explains) and project itself again over the "life-world" colonizing it. In other words, substituting "money" for communicative action as a means of social integration ([78], II, pp. 465–89). This brings about anomie, demoralization and loss of freedom, which can be seen in late capitalist societies already studied by authors from a wide range of disciplines, such as E. Durkheim, M. Weber or Th.

Adorno. Habermas' criticism is thus limited to stating the excesses of the capitalist market economy, which has the tendency of going beyond its own sphere, coordinating instrumental action, and to trespass areas where it is should be prohibited, namely, social integration through communicative action. However, this is precisely the scenario in which we find ourselves: instrumental rationality, which is emblematic of the market, has burst its banks, and neither has Habermas found the way to hold it back, because money (the non-linguistic means of instrumental relations) proves to be incompatible with communicative rationality, which is characteristic of the "life-world".

Habermas' proposal had already met resounding criticism in his first work published by his disciple, Axel Honneth, *The Critique of Power* [81]. Honneth questions Habermas' adoption of basic suppositions of the systems theory, because to consider the economy as a subsystem cleanses it of all political and moral components, idealizing it as a sphere, which is solely characterized by its institutionalization and non-adherence to regulations and instrumental action ([81], p. 419). Despite this characterization of the capitalist economy as a subsystem in functionalist terms, Habermas tried to update the theses of Karl Marx and George Lukács concerning the inherent reification in capitalism. The result was clearly unsatisfactory, as it bestowed upon the economic system a character of non-adherence to regulations and the capability to govern itself, which placed it out of reach from critical capacity of democratically constituted social will ([81], pp. 373–81). For Habermas, the economic subsystem as such cannot be criticized or transformed by the politically organized collective. All that is left is to question its excesses, its transgression of the limits placed on it (the material reproduction of society and trespassing into areas that should remain off limits (symbolic and social reproduction). That is, Habermas managed to make a topic of functional and structural imperatives of the market economy at the cost of shielding them from any criticism and attempts to in-depth transformation, by conceiving this economy model in systemic terms. In other words, in terms of a consolidation that cannot be de-differentiated and furthermore neutral from the perspective of regulations, and so, it cannot be set against any regulatory principles ([81], pp. 394–416). In short, Habermas puts forward a kind of acritical theory of capitalism, since he is only theoretically fit to question the excesses, but not its constitutive structure.

It is precisely for this reason that Habermas encounters problems integrating the globalization phenomenon (with its multiculturalist and economicist reality) into the universalizing proposal of communicative rationality. Habermas readily acknowledges the radical novelty of globalization in *The Postnational Constellation* [82]. However, he does not accept the consequences that this radical change of the economic, social and political context has for his theory of communicative action, which is still designed as a contra-factual response to the challenges of social integration, which arise from the "legitimation problems of late capitalism" [83].

As is well known, for Habermas, societies have to be conceived simultaneously as a "system" (institutions, society) and as a *lebenwelt* "life-world" (the subjective world of values and culture), which provides the regulatory resources to set the moral standards of the system. Communicative action is what makes a point of rational connection possible (symbolic consensus) between the "life-world" and the formal world of the "system" constituting a common objective with universal pretensions ([78], I, pp. 179–80; [82], pp. 167–68). Habermas confirms the existence of a "world system" along these lines. However, he also states that the globalization of the "system" does not

run parallel to an adequate social integration of the "life-world". This proves to be extremely problematic for his thesis. In effect, the enormous fragmentation of the "life-world" (multiculturalism) obliges him to acknowledge that in the "world society", there is a systemic formalization, but not a social integration, which would provide identity. The result is an insurmountable dualism between "communicative action" and "system" that is unable to explain multicultural social links, not only in the global arena, but even in the national arena itself. In his theory, individuals and peoples who live in real interaction are effectively situated in different societies and in different "evolutionary states" to the degree that their "life-worlds" are different. However, this contradicts daily contemporary experiences. In summary, the originality of the recent globalization tends to break with the socio-evolutionary dynamic with which Habermas rationalizes both culture and society. Therefore, in this new scenario, in which various cultures live together in various socio-evolutionary stages, it is very difficult to conceive of communicative action producing social integration in the context of a socio-evolutionary process of progressive rationalization of culture and society. Furthermore, all of this does not take into consideration that the daily practice of social integration in first world cultures tends more towards a kind of "pragmatic irrationalism" rather than towards a socio-evolutionary process of rationalization.

Finally, as pointed out by Spaemann, his advocated methodology of "discussion free from domination" (*Herrschafstfreiheit*), which hardly goes beyond the pragmatic plane, is based on the fundamental categorization of the subject as pure relation. That is, communicative rationality ends up incorporating a subject into the system whose "life-world" (identity) is totally available, since the system favors consensus even above the subject itself: the discrepancy cannot easily be integrated into the system [84]. Additionally, to state that the identity of the subject is something that is substantially available does not constitute a very solid argument in the face of the nihilist direction posed by the postmodernists.

The second line of alternative thinking to the nihilism of decadent postmodernity is that argued by writers labelled as "neo-conservative" (neo-con), from the American arena. The intellectual roots of the neo-con movement can be traced back to the 1940s, with writers, the majority of Jewish origin, with a Marxist and Trotskyist background, such as Irving Kristol, Nathan Glazer, Daniel Bell, Seymour M. Lipset, Daniel Patrick Moynihan, among others. Liberal Catholics also joined the movement, such as William Bennett and Michael Novak, and then later, others, such as P. Berger, Th. Lukmann and J.R. Neuhaus [85].

In the 1960s, neo-con thinking burst on to the scene grouped around the journal, *The Public Interest*, founded in 1965 by Irving Kristol and Daniel Bell. It is in this publication that the neo-con began to cloak the traditional conservative opinions of the language of the social sciences and took up much of the theses of Leo Strauss, of Jewish origin and professor at the University of Chicago. Strauss' thinking is grounded in the idea that liberal democracy, with its emphasis on individual liberties, has led Western societies into decadence and disaster. However, Strauss did defend liberal democracy in the face of communism or fascism and publically aired his admiration for Churchill for opposing these totalitarian regimes. Strauss was deeply concerned that the philosophical crisis of modernity could undermine the Western world's confidence in itself. This accounts for his insistence on taking seriously and understanding the Western philosophical tradition [86].

Strauss taught that liberalism in its modern form contained within it an intrinsic tendency towards extreme relativism, which, in turn, led to two types of nihilism. The first was a "brutal" nihilism, expressed in Nazi and Marxist regimes. In *On Tyranny* [87], he wrote that these ideologies, both descendants of Enlightenment thought, tried to destroy all traditions, history, ethics and moral standards and replace them by force under which nature and mankind are subjugated and conquered. The second type—the "gentle" nihilism expressed in Western liberal democracies—was a kind of value-free aimlessness and a hedonistic "permissive egalitarianism", which he saw as permeating the fabric of contemporary American society [88]. In the belief that 20th century relativism, scientism, historicism and nihilism were all implicated in the deterioration of modern society and philosophy, Strauss sought to uncover the philosophical pathways that had led to this situation. The resultant study led him to advocate a tentative return to classical political philosophy as a starting point for judging political action [89].

For Strauss, the time had come for elite to rise up and prevail over the weakness and lack of social cohesion caused by relativism induced by post-Socratic philosophy. The main tool employed by these new elite would be an artificial mythology constructed around the notion that the United States enjoyed a unique and well-established destiny in the control of the ignorant masses through deception, religious fervor and perpetual war. This mythology, or "Straussian text", would have an "exoteric" meaning, accessible to the average reader, and another "esoteric" meaning, the true meaning aimed at its real target readers, namely the social hierarchy. For Strauss, the rebirth of modern societies had to be led by a caste of apt politicians prepared to spread these myths with conviction, the purpose of which was to furnish the lives of the ordinary people with purpose and meaning. In this enterprise, these politicians should back themselves up with absolute moral or religious values, so as to snatch society from the grips of relativism. A good politician, however, did not necessarily have to believe in these values, even those religious ones; appearances would suffice ([88], pp. 23–29).

One consequence of this proposal is reflected in the adoption of "American exceptionalism" as a political principal. This was a concept that had already been developed by Alexis de Tocqueville in *Democracy in American* and that for neo-con thinking constitutes a profound influence on American national identity, on occasions linked to the conviction of a providential destiny. In effect, the exceptionalism historically has been influenced by a messianism, both religious (God is on our side), as well as secular (our values and institutions are the best). As a consequence, the neo-cons legitimized the moral imperative of spreading this message to the rest of the world on the basis of this exceptionality of values and the American political system [90,91].

While neo-con thinking is mainly occupied with theorizing about foreign policy, its approach to economics leaves no room for doubt: free market and the development of capitalism, although without adopting the thesis of Hayek's radical neoliberalism, which entirely excludes all forms of public intervention in questions of the well-being of citizens [92]. His economic thinking lies in the separation between morality and market: the correct functioning of the market is based on the existence of strong moral convictions in individuals; but morality has to be looked for outside of the market and is only found in tradition. The market must provide individuals with material goods in an efficient manner, but lacks a moral criterion that can guide them along the right path in order to

satisfy their needs. The market is only part of human life, but proves fundamental, because the breakdown of the market causes social disintegration [93].

In effect, neo-con thinkers maintain the market principle as their main point of reference, that is the free exchange of goods is the principal factor for progress and social development. However, they point out that the capitalist system is not altogether good, because it is going through a "spiritual crisis" that is causing the breakdown of society. The fundamental ill of this system is the "liquidation" of ethics; in the elimination or disappearance of the traditional values that sustain the capitalist economy. This "liquidation" of ethics has resulted from a profound cultural crisis linked to currents in postmodernism that propose styles of life that differ from traditional styles of life: instead of promoting workers who are disciplined and embrace order, they encourage individuals who are not in the least productive and quite hedonist; just the opposite of what the system needs. Therefore, one has to put an end to this hedonist malaise and recover the "productivity ethic", order and discipline that would guarantee the smoother working of the market and avoid social disintegration. This accounts for their attempts to endow the market with post-enlightenment legitimation, channeling techno-economic rationality towards a new capitalism. It is an attempt to reconstruct the nexus between morals and market with the rehabilitation of forgotten values from the Western Tradition, which is found in Judeo-Christian civilization and interpreted in puritanical terms [94].

In order to culturally (morally) mend the (American) capitalist system, only a moral and cultural step backwards is entertained. That is, we have to recover the values of times gone by (the puritan religious tradition) typical of capitalism; but without the anachronisms. To this end, we have to reinforce the compensating intermediate institutions: family, Church, personal friendships and freely-formed associations. It is these that can help to recover the values of puritan ethics: order, discipline and capacity for sacrifice. Here, a person finds value and is driven towards a behavior of solidarity in the social setting [95–97].

As can be seen, the neo-con proposal of looking back towards values and traditions, which accompanied the expansion of American capitalism in its origins, proves to be adulterated from the start, because what is transcendental and decisive in this proposal are not values, but rather safeguarding the market. Values only play an instrumental role as a justifying strategy for the hegemony of the market, but without questioning the basis of this hegemony: the maximizing instrumental rationality of profit. Although it seems obvious that there is a need to impose moral values on the market, this is not the path to follow in order to overcome economist rationality; suffice it to say that the growing marginalization seen in advanced capitalist societies, the increasing economic inequality between rich and poor countries and, particularly, the open defense of the arms race expressed by somewhat more than a minority of these thinkers.

6. The Need for a New Humanist Story of "What Is Human": The Rehabilitation of Ontology

As has just been discussed, the weak alternatives to decadent postmodernity by the Frankfurt School and neo-conservative thinkers do not constitute real avenues to pursue in order to disable the reigning nihilism in society, which abandons human beings to the mercy of the manipulating and consumer games of technics and the market. In this extremely complex and growing panorama,

which is subject to the tyranny of "exchange value", a humanist recovery of "what is human" is an essential and urgent intellectual undertaking; one which would restore the subject's most genuine and originating identity.

In any case, as pointed out by the post-Jungian psychologist, James Hillman [98], to pose the task of recovering what is human nowadays, which would overcome anti-humanist criticism (a "post-modern humanism") means avoiding the "humanist fallacy". This consists of believing that man is the center and the measure of all things, in order to rediscover (as did Petrarch on the peak of Mont Ventoux, by Augustinian means) not man, but the spirit of man; and the spirit of man is not restricted to human experience, as its depth is, as Heraclitus pronounced, unfathomable. This is the great challenge to the humanistic recovery of what is human, if it is at all possible: to overcome the consequences of enlightened anthropocentrism, scientific objectivism, as well as irrationalist subjectivism, whose common denominator consists of reducing all that is real to empirical facticity. That is, to rediscover that the reality of what is human is not limited to what is bodily or psychologically human. If we are unable to connect with the transcendental dimension that bestows upon us genuine human identity, then all that is left is to endorse, along with Foucault, the definitive death of man (and with it, all humanism) and confirm the beginning of the Nietzschean post-humanity heralded in Sloterdijk's *The Rules of the Human Park*, which considers any attempt to understand the subject outside the scientific paradigm as futile, being the only paradigm that bestows upon us, through genetic engineering, the real capability to "tame man" and transcend our species as it is today towards the super-human and, thus, providing a remedy for the total failure of humanist values [51].

The prospect of developing a different narrative as regards what is human will only be possible, in my view, if we adopt the decision to "go back to the origin". This return should in no way be seen as a nostalgic or romantic conjuring up of the past, or as the patchwork of folkloric traditionalism. Neither is it an attempt in any way to evoke terminal authoritarianisms or late puritanisms. To go back to the origin responds to an attempt at radicality: to move forwards to the point of emergence. Additionally, the most radical for human beings is the meaning of their own humanity. Origin and meaning are two indispensable elements to connect with what is genuinely human. This tells us that to construct this new story of what is human must begin with recovering ontology. Basically, this consists of recovering the capacity to capture the meaning of human life and the ethical nature of actions. These are the two spheres on which I am going to focus.

First, the sphere of meaning constitutes the nucleus of what is most genuinely human, of what only the human being possesses. We are standing before the most fertile notion of contemporary thinking (phenomenology, hermeneutics, personalism, *etc*.), which we must continue to explore in more depth. Because of meaning, which is neither subjectivity, and its representations, nor actual reality, a common terrain opens up for human beings, a space for communication and for shared worlds. We humans live from meaning, because it allows us to share a common *logos*, which is at the base and precedes all manner of scientific and technological progress. The recovery of what is human has to pass through the stage of recovering meaning, something that we have "forgotten" and that we do not "remember", which is found precisely in a clouded human nature.

The concern for originating and for meaning was primordial in phenomenology and particularly

in the last of Husserl's works: *The Crisis of European Sciences and Transcendental Philosophy* [99]. It studies the roots of the loss of ontology in modern science, from Galileo to present day, on the basis of the double reduction of physics to geometry and this to algebra. It attempted to reach exactitude, but in return, meaning was lost ([99], n. 2). Faced with this situation, Husserl proposes recovering the originating reality from which science derives, since the realities that science excludes are the biggest issues for humanity: questions that imply the meaning or the absence of the meaning of human existence ([99], n. 4). Mathematical idealities attempt to substitute the real world: the world that is truly perceptible to us. Husserl calls it "life-world" (*Lebenswelt*) ([99], n. 34a–b). *Lebenswelt* is the world of pre-scientific and extra-scientific life. It is the real world according to our intuition that we experience as beings of flesh and blood, for which all scientific idealization, all technical construction and all sociological structuring have a posterior and derived meaning ([99], n. 34c–d). *Lebenswelt* is the "originating world of meaning" ([99], n. 34d).

The crisis of the sciences (and humanity) comes from having broken the link with this *Lebenswelt* realm of originating evidence and, with it, the loss of having lost its own *telos*, its finality. This is because meaning is signification and reference, as well as intentionality towards an end. The therapy proposed by Husserl is not the return to an exclusively pre-scientific life or the escape to an extra-scientific life. His program consists of rediscovering the transcendentality of a *Lebenswelt*, which brings together all the worlds—scientific, economic, sociological ([99], n. 53–54)—and developing a life-world ontology ([99], n. 51). The difficulties this task poses are evident, but its inspiring premise is still valid: the problem does not lie in the scientific, economic or sociological structures, but rather in their lack of meaning, because of their disconnection from the living world.

Martin Heidegger also undertook a vigorous search for the roots, the original. In his *Letter on Humanism*, he specified that "ek-sistence" (a concept different from existence) consists of "dwelling proximally to being" ([47], p. 232). This led him to point out that genuine thinking must reach the level of ontology, conceived in terms of the search for the roots, the encounter with the original, which is at the same time the search for the permanent of what establishes the human residing ([47], p. 237). Working from the original significance of dwell as to stay or remain, Heidegger finds the origins of the present crisis in the loss of that habit, and consequently, he concludes that "first and foremost it is necessary to learn to dwell" ([47], p. 241). The search for the original (*Ursprung*) and permanent (*bleiben*), the understanding of true human dwelling, leads to capturing the meaning. Additionally, this is the object meditative thinking proposed by Heidegger: a thinking that is questioned by meaning [100].

The major danger for human dwelling lies in the false belief that man is the only player in unveiling what is real. This supreme danger, more so than all the wars, and destruction lie in technics, because it converts everything into calculable and manipulable; and this is precisely the essence of materialism: not that everything is material, but rather that all entity is simply work material. "Unveiling" thinking (*bessinliche Denken*) that looks for the meaning, as opposed to mere "calculating" thinking (*rechnende Denken*) only attentive to manipulation, offers a profound understanding, even of the meaning of technics itself. Because technics also unveils the *phisis*, given that man utilizes it to bring to light what was in fact hidden in its cells and fabrics [101].

Genuine thinking in Heidegger finally leads to *dachten* (remember) and to *danken* (give thanks). Man warns that existing means for him to be at one with the "sacred", with the "divine". Only thus can man truly dwell on Earth, conjure up the danger of uprooting and find the path to authenticity (true self) [102].

Both Husserl and Heidegger find a powerful antecedent in Henri Bergson's proposal for the recovery of ontology. In *La Pensée et le Mouvant*, he records his opposition to those who attempt to marginalize man, in his daily existence, from the sphere of knowledge reserved exclusively for the sciences. Their concern for numbers and measurements renders them unable to answer themselves alone questions concerning meaning. From here, his statement that, "at least one part of our reality, *our humanity*, can be recovered in its original purity" [103].

In short, the construction of this new humanist story of "what is human" has to begin by re-proposing the centrality of meaning, which must be looked for in the reality itself, pre-scientific, of human nature and through meditative thinking. This is a thinking that wades through memory and that in the proximity of the sacred, reminding the human being of what it means to dwell in the world. This "dwelling in the proximity of the sacred" connects with another forgotten dimension of what is human: the "inalienable" essential constituent element dignity: the only transcendental foundation of human rights.

In effect, this meaning of the word "inalienable" has ever been linked to fundamental rights (the essential consequences of human dignity); however, the economicist mentality has downgraded and understood it in the weak sense of "inviolable" *vis-à-vis* others, but capable of being renounced by the subject himself. The "inalienable" was hinted at in the Roman conception of law when it referred to *res extra-commercium*, among which there was the inclusion of *res communes* and *res sacrae*. This intuition of the Roman mentality maintained a sense of limits to avoid chaos (*hybris*). The United States Declaration of Independence, Jefferson's doing, constitutes an extraordinary novelty in this respect, since the replacement of property by "the pursuit of happiness" allows us to understand the word "inalienable" in its powerful and rigorous sense. In effect, the renunciation of happiness seems much more anti-natural and absurd than the disposition of property. The admission of inalienable rights implies a conception of the person different from an isolated and self-sufficient monad and from the postmodernist conception of a "playful mask". It forces the understanding of the human person in agreement with its originating terminology as *prosopon*, as a being open to reality, as relationship with the origin, with others, with nature, with oneself ([3], p. 147). This idea of the connection between the inalienability and the grandeur of human beings means that the individual stops considering her/himself as pure unsatisfied desire, from the moment in which s/he opens up to others and experiences the fact that s/he is not sovereign, but rather the guardian and custodian of reality for her/his contemporaries and for the future generations.

To protect the "inalienable", we need to overcome the anthropological dualism between *res extensa* and *res cogitans*: the opposition between the individual will as a subject and the rest of reality reduced to a mere object capable of being manipulated at the mercy of that will and, therefore, entirely alienable. The body is not a tool or just another commodity that can be disposed of; it is not something that I have, but rather something that I am, as Gabriel Marcel, among others, conscientiously pointed out throughout his work [104]. The human body is not a thing. The individual

does not possess his or her own body as an alienable, relinquishable and divisible good susceptible to becoming the object of commercial transactions (the sale of sperm, ovules, organs, *etc*.). From this, it follows that we cannot speak of "rights over my own body" in the sense of free disposition, but rather as a right duty to its diligent and responsible use and care.

The road towards the ontological recovery of what is human, as we have seen, also touches on rediscovering the ethical dimension of human actions. In this aspect, the rehabilitating thinking of practical philosophy, inspired by Aristotle, has offered valuable suggestions. Robert Spaemann ([84], pp. 89–112), welcoming the distinction made by Alisdair MacIntyre [105], proposes removing reasoning from the certainty paradigm, into which Descartes introduced it and which has proved unable to confront the enormous complexity of the real, and re-introduce it into the truth paradigm. According to the certainty model, access to reality depends exclusively on the adequate method that guarantees objectivity. However, rationalization at all costs, typical of this model, has brought with it the greatest explosion of irrationality known to date. Additionally, the supposed humanizing transformation of the world has brought us an unprecedented height of dehumanization. According to the truth model, the radical and genuine is not objectivity, but rather reality. Additionally, we cannot automatically access the foundation of reality by the mere application of a rational method. Such access requires a laborious apprenticeship, which is fed from a long tradition of thinking. There is no science without history, education, research communities or ethical and political components: a science separate from these is a fiction. Our ways of knowing owe much to know-how or craftsmanship than pure speculation, exempt from historical and ethical connotations and motivations. The methodological ideal of the certainty paradigm implies univocal rationality, while the truth paradigm means an open and analogical use of reasoning. The first model attempts to offer security at the cost of reductionism; the second assumes uncertainty and contrasting hypotheses until hitting on the one that best fits reality, assuming vulnerability and the possibility of error, but giving priority to advances in the knowledge of reality in contrast to the obsessive justification of a thesis ([84], pp. 119–22).

This concerns substituting an epistemological paradigm (such as a basic model for the theory of truth) for an anthropological paradigm that is neither psychologist nor relativist. The difficulties run deep, because we are dealing with conceiving the truth as perfection of the person, and this proves incompatible with rationalism and subjectivism. Consequently, the recovery of ontology, as suggested by Alejandro Llano [106], implies re-establishing the original connection between truth and virtue; that is, between truth and perfecting the person. The idea of virtue is of central importance in the recovery of what is human, but it only makes sense from a perspective of practical reasoning, which overcomes the subject-object dialectic consecrated by rationalist ethics. For the terminal rationalism of our times, reality is pure facticity, a collection of external and demonstrable facts; while subjectivity is and empty and self-referential capsule. Reality is divided into two isolated worlds. In the first, we have rational calculation (rational choice): in the field of scientific, determinist and neutrally assessed evidence. The subjective, in contrast, would be the field of the irrational, where there is no place for the universal, because it is governed by the preferences, desires and feelings of each individual. This is the realm of moral emotion and spontaneity, which validates all of the options. In a panorama of this kind, the concept of "virtue" is completely bereft of meaning

if we understand it as growing in being when the person, in their actions, "follow the truth". Virtue is gaining freedom, which is obtained when the person orients his/her life towards truth. It is an anthropological gain, that is, a gain in the perfecting of the person, which is realized through acquiring habits. This concept of virtue is drifting today in the midst of great mistakes, but its recovery (as MacIntyre has pointed out ([105], pp. 204–44)) is of vital importance.

From the perspective of virtue, human beings see themselves as being able to grow cognitively and ethically, which remains a stable part of their person in the form of habits. It follows that the increase of cognitive and practical habits is only one way to grow in perfection and, with it, grow in freedom. Cognitive and practical habits are those that allow a person to "take charge" of the profundity of their human condition and their own historical situation [107]. The perspective of habits is that which allows for really overcoming the objectivity-subjectivity dialectic, because it appeals to an increase of the perceptive capabilities in the person, and this is manifest in the anthropological meaning that experience acquires in this context. In effect, scientific objectivism appeals to the "experiment", to the empirical verification of the fact. In contrast, the habit perspective (practical reasoning) refers to "experience", in the humanist sense, which is knowledge that deals with the context and the surroundings ([84], pp. 35–36). It is the sense in which we commonly speak of an "experienced person": not someone who accumulates theoretical knowledge or who shuts themselves within subjectivity, but rather who knows how to maintain within themselves the trace of their vital contact with the world and people, in such a way that they have learned to behave more appropriately and wisely. We are therefore talking of a knowing of things and of a knowing oneself: appropriating the real, respecting their own being ([107], pp. 137–38).

The central role of virtue in the humanist recovery of "what is human" is directly linked to the ethical thinking of Aristotle's. This is a thinking that underlines, at least, three fundamental elements of human actions. Firstly is the importance of the dimension of *praxis*, as distinct from *poiesis* (and this difference shows the way to overcome economicism and modern productivism). Secondly is the re-evaluation of the dimension of *ethos*, of experience, which leads to distinguishing the ethical truths as opposed to simply theoretical truths (this leads to overcoming ethical rationalism, which overlooks experience). Thirdly is the noteworthy role played by *phronesis* (prudence) as a fundamental factor in the formation of ethics (which leads to overcoming ethical emotivism and the division between reasoning and sentiments).

Aristotle tackles the difference between *praxis* and *poiesis* from the very first lines of *Nicomachean Ethics* ([18], Book I, No. 1). The starting point is the intentional nature of all human actions. However, he sets out one clear difference in the end, as some are the same actions (*praxis*) and others are certain works (*poiesis*). In effect, *poiesis* is the sphere of what in Rome was called *facere*: the type of activity carried out exclusively with an eye toward achieving a result, of a given thing that one attempts to give rise to; therefore, "the end of production (*poiesis*) is distinct from production itself". This means that "production (*poiesis*) is not an end in the absolute sense, but only something which is relative with regard to the creation of a given thing" ([18], Book VI, No. 5).

Praxis, on the other hand, refers to what was later called *agere,* that is, those actions that are realized for their own ends, that are none other than good practice (*eupraxis*) ([18], Book VI, No. 2). "In action what one does is an end (in the absolute sense), so a virtuous life is an end and the object

of desire is this end" ([18], Book VI, No. 5). However, the importance of the distinction lies in the more elevated character of *praxis* over *poiesis*, to the degree of stating in *Politics* ([17], Book VIII, 1325 b, 28), that the activity of divinity can be considered *praxis*, but never *poiesis*.

In effect, the primacy of *praxis* is what guarantees the superiority of the personal over the world of objects and, in this sense, is a way of overcoming the thinking of modernity, which gives primacy to technics and production, even for writers, such as Marx, who reclaim the notion of *praxis*, but, as Hanna Arendt reminds us, having lost its original sense and reduced to the concept of labor, which brings in its wake the reduction of man to *animal laborans* [108]. In the task of recovering what is human, it is important to avoid confusion between work and employment, which is the outcome of the predominance of instrumental reasoning. Hanna Arendt criticizes the exaltation of work as a central human activity, because of the risk of giving primacy, in economicist terms, to productive and lucrative tasks. However, she offers no alternative to her distinction between *labor*, *action* (praxis) and *work* in its technical or artistic dimension ([108], pp. 161–63). In my view, it would be more correct to state that there is no true human work without the *praxical* dimension or ethics. Human action is multidimensional and not only produces functional effects, but above all, it has to produce perfecting effects. The same subject can be a lawyer or an engineer and also the father of a family or a writer of short stories. The importance of reflecting on the fact that work is something more than employment lies in passing from one plane that is purely objective and functional to a dimension that is subjective and personal. Additionally, from this, it follows that the full sense of human work cannot be conceived from an anthropology impoverished by economicist pragmatism. The fundamental value of work is the anthropological perfecting, intellectual and ethical gain that is earned and extended through work (*praxis*). When this aspect is systematically marginalized, this causes an absence of theoretical tension and ethical enthusiasm, and then, creativity diminishes, while conformity increases: everything tends to come to a halt. This is the most renowned pathology found in consumer societies ([108], pp. 137–39). It follows that overcoming economicism lies in the line of an anthropological interpretation (not instrumental) of work. The added value of work is, foremost, gaining human perfection above and beyond economic performance (although this is advisable). It follows that in the task of recovering the human, the social recognition of the humanist value (ethical and sapiential) of work is fundamental; this has been considerably obscured with its merchandization. From this point of view, what is decisive for progress in productivity is not money, but rather an increase of theoretical and practical habits. For there to be more work, we have to work better, and in order to work better, we have to think better and make better decisions. This is not incompatible with technology; quite the opposite: the connection between technology and humanism is the major challenge today: to establish a proper relationship between ethics and technics that would guarantee the true perfecting of the individual ([106], pp. 137–38).

In this same sense of the primacy of *praxis*, one has to understand that ethics does not belong to the sphere of "*logos apophantikòs*", which concerns things that are necessary (such as geometry, algebra or metaphysics), but rather, ethics belongs to the sphere of "*ortos logos*", to right reasoning, which deals with the contingent, about what can be another way ([18], Book II, No. 9 and Book VI, No. 4). Aristotle's right reason implies the possibility to humanly reach perfection, since this means

a permanent rectification of intention to accommodate desire and the search for good in each case. For this reason, practical truth, as opposed to theoretical truth, is never totally true, because it always allows for "even better". All of this implies that in ethical life, it is impossible to theoretically know principles independently of their practical application. In other words, the ethical model can only be personified *el hombre esforzado* (*Spoudaios*), he who has brought up to date to the maximum all of the powers and has interiorized the habit of ethical and dianoetic virtues ([18], Book II, No. 1). It also follows from here that in Aristotelian thinking, prudence (*phronesis*) takes on a fundamental importance, which involves the link between ends and means, between rationality and emotivity, thus overcoming rationalism and logical empiricism. Of course, reasoning has an important place in ethics, but this is not the same type of reasoning that operates in purely theoretical matters (that which cannot be otherwise), but rather practical reasoning, which has to take into account the circumstances ([18], Book II, No. 1) and which requires dialogue and argumentation, not demonstration, as already pointed out by S. Toulmin [109] and Ch. Perelman [110].

Additionally, a final consideration: When we seem to be heading for a post-literary culture, the need proves even more pressing to rediscover the fruits of reflecting on the original and genuinely human content in classic, ancient and more recent texts. It is in these that we find set out the figure of the *homo civilis*, the good man, the good citizen, who knows how to keep himself from the excesses of the *homo oeconomicus* and the corruption of the "*zoon politikon*". On the basis of this literary wisdom, I propose the rehabilitation of the *homo humanus*, who undertakes the greatness and profundity of his *humanitas.*

Conflicts of Interest

The author declares no conflict of interest.

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59. The critic and translator Barbara Johnson has emphasized Mallarmé's influence on twentieth-century French criticism and theory: "It was largely by learning the lesson of Mallarmé that critics like Roland Barthes came to speak of 'the death of the author' in the making of literature. Rather than seeing the text as the emanation of an individual author's intentions, structuralists and de-constructors followed the paths and patterns of the linguistic signifier, paying new attention to syntax, spacing, intertextuality, sound, semantics, etymology, and even individual letters. Theoretical styles of Jaques Derrida, Julia Kristeva, Maurice Blanchot, and especially Jaques Lacan also owe a great deal to Mallarmé's critical poem" (Barbara Johnson. 'Translator's Note' to Stéphane Mallarmé." In *Divagations*. Translated by Barbara Johnson. Cambridge: Harvard University Press, 2007, p. 301).
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61. Frederik Niestzche. *The Case of Wagner, Nietzsche Contra Wagner, and Selected Aphorisms.* Translated by Anthony Ludovici. Edimburg-London: Foulis, 1911 (free online 2007), n. 6.

62. Frederik Niestzche. *Beyond Good and Evil*. Translated by Judith Norman and edited by Rolf-Peter Horstmann. Cambridge: Cambridge University Press, 2002, annotation number 254.
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64. "What is philosophy for him except a sort of philology without end that is forever developing, a philology that shall never be pinned down? And if interpretation can never end, this simply means that there is nothing to interpret. There is nothing absolutely primary since deep down everything is interpretation. Each sign is in itself the interpretation of other signs, and not the thing being offered to interpretation" (Michel Focault. "Nietzsche, la généalogie, l'histoire." In *Hommage à Jean Hyppolite*. París: PUF, 1971, pp. 145–72).
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Climate Change and Virtue: An Apologetic

Mike Hulme

Abstract: The prominent Australian earth scientist, Tim Flannery, closes his recent book *Here on Earth: A New Beginning* with the words "… if we do not strive to love one another, and to love our planet as much as we love ourselves, then no further progress is possible here on Earth". This is a remarkable conclusion to his magisterial survey of the state of the planet. Climatic and other environmental changes are showing us not only the extent of human influence on the planet, but also the limits of programmatic management of this influence, whether through political, economic, technological or social engineering. A changing climate is a condition of modernity, but a condition which modernity seems uncomfortable with. Inspired by the recent "environmental turn" in the humanities—and calls from a range of environmental scholars and scientists such as Flannery—I wish to suggest a different, non-programmatic response to climate change: a reacquaintance with the ancient and religious ideas of virtue and its renaissance in the field of virtue ethics. Drawing upon work by Alasdair MacIntyre, Melissa Lane and Tom Wright, I outline an apologetic for why the cultivation of virtue is an appropriate response to the challenges of climate change.

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1. Introduction

The prominent earth scientist, and 2007 Australian of the Year, Tim Flannery closes his recent book *Here on Earth: A New Beginning* with the words "… if we do not strive to love one another, and to love our planet as much as we love ourselves, then no further progress is possible here on Earth" ([1], p. 281). This is a remarkable conclusion to his magisterial survey of the state of the planet under a changing climate. After surveying the deep history of life on Earth and humanity's increasing influence over it, the solution Flannery arrives at is not more knowledge—more striving after science and technology—but a striving after love.

Flannery is not alone amongst contemporary environmental scientists in valorising love. The ecologist Brendon Larson in the peroration to his book *Metaphors for Environmental Sustainability* reflects: "I can return to the ramblings in the natural world … falling in love with it, and thus wanting to express that love ... in the most apt words I can" ([2], pp. 228–29). And we don't have to look much further to locate other prominent environmental scientists and social scientists whose concern for the future of climate on Earth leads them to invoke other human virtues. Sheila Jasanoff in her essay, "Technologies of humility", published a few years ago in the journal *Nature*, explains her call for humility as "a plea for policy-makers to cultivate, and for universities to teach, modes of knowing that are often pushed aside in expanding scientific understanding and technological capacity" ([3], p. 33). Alastair McIntosh uses the subtitle "climate change, hope and the human condition" to his 2008 book *Hell and High Water*, where for him "Hope is about setting in place the preconditions that

might reconstitute life and then getting on with it" ([4], p. 250). And then there is anthropologist Tim Leduc in *Climate, Culture, Change* suggesting that "wisdom may be the most fundamental factor that inter-disciplinary climate research needs to clarify, as it responds to [climate] warming" ([5], p. 40).

Love, humility, hope and wisdom; in my pursuit of understanding climate change and what it signifies for the world, I am interested in these apparently orthogonal interventions by such authors as they contemplate the state of climate and the fate of the Earth. In all the climate models I have examined, used and criticised over 30 years I have not yet come across a variable for love or an equation for calculating humility. The thermometer may have been essential to tell the story of a warming world, but environmental scientists have not yet invented or seen the need for a hope-ometer. What is it then that draws such scientists and scholars to place the fate of the planet in the hands of such intangible human qualities? These are not qualities that feature in the usual discourse of climate change conducted by political scientists, economists, engineers and environmental scientists—even if they are familiar to virtue ethicists.

In this article I explore this—perhaps surprising—acquaintance by climate and environmental scientists with the ancient idea of virtue. And by virtue I adopt the definition offered by theologian Tom Wright: "practising habits of heart and life that point toward the true goal of human existence" ([6], p. 12). Drawing upon work by Alasdair MacIntyre, Melissa Lane and Tom Wright, I later outline an apologetic for why the cultivation of virtue is an appropriate response to the challenges of climate change. Contrary to the novelist Ian McEwan who claimed with regard to climate change that "Cleverness got us into this problem and I don't think virtue is going to get us out of it" [7], I suggest that virtue may be the most enduring response that we have. But before developing this apologetic I need to explain the dead-end we have reached with regard to climate change. Why have we—and by 'we' I mean knowing politicians, scientists, entrepreneurs, campaigners, citizens—failed to reign-in humanity's growing influence on the world's climate? Why do we talk up climate change, but play dumb when challenged about the response? Why has another global gathering of politicians, diplomats and negotiators—most recently at Warsaw in December 2013—again prevaricated and stalled?

2. "The Plan"

For more than 25 years the conventional view has been that an international political solution to climate change can be negotiated if driven by the engine of science. That is, if a strong enough scientific consensus on the causes and consequences of anthropogenic climate change could be forged and sustained, then the compelling force of such rationality would over-ride the differences in worldviews, beliefs, values and ideologies which characterise the human world. Such a scientific consensus would bring about the needed policy solutions. This is the "If-then" logic of computer programming, the conviction that the right way to tackle climate change is through what Dan Sarewitz at Arizona State University has called "The Plan" [8]. And there are those who still believe in this project. They excoriate others who obstruct and obscure this pure guiding light of rationality—a position adopted, for example, by Naomi Oreskes and Erik Conway in their recent book *Merchants of Doubt* [9].

From the vantage point of 2014 we can now see that the credibility of such a narrative hinged on a set of circumstances peculiar to the late 1980s and early 1990s. These included: (i) the belief in

the "end of history" and the triumph of (neo-)liberal democracy; (ii) the seeming continued marginalisation of religion in public life; and (iii) the emergence of a globalised environmental science. This latter enterprise secured its first big success in 1987, when the predictive power of the newly minted Earth System science was co-opted by the Montreal Protocol on Substances that Deplete the Ozone Layer. It was the convergence of these circumstances in the years around 1990 that helped fashion the conventional climate change project—"The Plan"—and allowed it to surge forward with optimism.

At the time it seemed entirely reasonable that with one of the last "enemies" of progressive Enlightenment liberalism having been swept away (*i.e.*, communism), a new irrepressible world order would emerge. And it would be one that would now fully exploit the predictive power of fruitful globalised science. The putative threat that a burgeoning carbon-fuelled humanity—thriving, ironically, through the fruit of this very same Enlightenment—was posing to climatic stability would be defused. This project would demonstrate decisively the force of scientific rationality over the fading and divisive powers of religion and ideology. Scientific consensus would forge political consensus and political consensus would yield victory. And victory would be the Salvation of the planet.

3. Failed Salvation

This "salvation project" has now run its course, abjectly halted by a combination of the events of December 2009 (the COP15 meeting at Copenhagen and the Climategate fiasco) and the world financial crisis. Even though the project still has its believers, the world has seen another climate conference—COP19 in Warsaw—pass away. The Kyoto Protocol remains alive—but only on a life support machine—and the haggling amongst developed nations over $100 billion of new funding for mitigation and adaptation investments in developing countries is yielding very little. The old-guard believers in "The Plan" are dwindling in number and many are reluctantly and uneasily shifting their beliefs. The world of Rio+20 in 2012 looked and felt very different to the one George H W Bush (senior) inhabited when he made his way to Rio de Janeiro 20 years earlier. Instead of the end of history, what we are witnessing is a flowering of the irrepressible diversity of human beliefs, ideologies and scepticisms. This flowering is manifest in various ways: (i) around the world in resurgent religious confidence and vitality; (ii) on the internet through increasingly combative exchanges; and (iii) in the West through a deep questioning of the capitalist neo-liberal paradigm. There is no better example of this latter mood than The Dark Mountain Project in the UK, which announces itself as "the new cultural movement for the age of disruption" [10]. This diversity of human beliefs and aspirations is irrepressible because of the foundational human need for alterity: the need to define ourselves in relation to 'the other'. Cosmopolitanism has its limits.

Far from the end of history, then, and the inexorable onward march of the secular project, we are witnessing an overdue reconsideration of the place of rationality in human knowing. There is a challenging re-examination underway of the role of religion in the public sphere [11,12]. Secularisation has taken an unexpected turn. New forms of deliberation and decision-making which accommodate entrenched plurality—both religious and ideological—are having to be invented. This is well illustrated by Bruno Latour's 2013 Gifford Lectures, "Facing Gaia: a new inquiry into natural religion" [13].

We need to recognise that two climates have changed since the late 1980s: local cultural, economic and political climates have changed as much as has the global physical climate. Not surprisingly, cumbersome international efforts at dealing with climate change have been increasingly wrong-footed by these new cultural and political dynamics. And in the vanguard of those who have realised the futility of more of the same tired programmatic climate change agenda are some progressive environmentalists. These fall into two camps.

On the one hand are those like Ted Nordhaus and Michael Shellenberger in the United States who announced a few years ago "the death of environmentalism". At the Breakthrough Institute they have inspired a new breed of climate pragmatists who are promoting a universal call for human dignity in development to be at the centre of a new re-constructed climate policy agenda. On the other hand are those environmental thinkers who realise the need to engage in more direct public argument over cultural values, in particular to question the dominant extrinsic values which drive material consumption. This is epitomized for example by Tom Crompton's work with the UK environmental NGOs and his strategy document *Common Cause: The Case for Working with Values and Frames* [14].

These two reactions to the sterile politics of climate change—to the futility of "The Plan"—adopt different reasoning and language. But they are united in their conviction that scientific knowledge about climate cannot be the primary motivator and driving engine of change. Indeed, the more trenchant critics would now argue that the product of climate science—uncertain predictions presented as a solidified and settled consensus—has perhaps acted as much as an obstacle as it has a spur to policy enactment. Science has done what it can. It has shown us the extent of the interpenetration of the human and the material—"we are without nature" [15]; the Earth's climate is now a prosthetic to humanity. And yet we remain confronted with the limits of our programmatic responses to climate change, whether they be political, economic, technological or social engineering. Climate change is a condition of late modernity, yet it is a condition which modernity does not know how either to alleviate or to live with.

4. A Disposition, Not a Plan

It is in the context of this historical trajectory and these cultural dynamics of environmentalism that I suggest a different direction. In my pursuit of the idea of climate change I want to focus attention on the ancient idea of virtue, the possibility that the "wickedness" of climate change as a problem demands a flowering of human "goodness". Some of the language that I adopt will seem far away from the usual vocabulary of climate change—"tipping points", "two degrees", "emissions trading", "low carbon economy", "climate adaptation". But listen carefully to the new voices speaking in the desert—some of whom I mentioned at the beginning—and one will hear a new language emerging around the fringes of climate change research, discourse and action… the language of empathy, story-telling, trust, wisdom, humility, integrity, faith, hope and love. I want to suggest that this is a vocabulary which, carefully deployed and realised, constitutes a re-discovery of virtue.

I need to be clear. A focus on human virtue is not a political programme. This is no techno-fix for climate change, no system for Earth governance, no exercise in social engineering. And the argument that I make reaches beyond a narrow naturalistic (utilitarian) approach to ethics and morality, such as recently developed by Sam Harris in his book *The Moral Landscape* [16]. Those who were

disappointed with my earlier book *Why We Disagree about Climate Change* [17] because they interpreted it as evasive, will probably continue to be disappointed. Indeed, the seeds of my current line of thinking were already sown in *Why We Disagree*, as environmental commentator Richard D North astutely observed in his review of the book: "Mike Hulme's point is that Man's response to anthropogenic global warming ought to transcend thinking about agency, efficacy or instrumentality. Anthropogenic global warming ought to be the catalyst for a redesign of Man, rather than of a human attempt to redesign the climate he lives in. Anthropogenic global warming should thus be seen reflexively. It's about what anthropogenic global warming works on Man, not what Man works on climate" [18]. So I am certainly not offering to "solve" climate change, nor even suggesting it can be solved.

But the position I develop allows, I believe, the secular project to engage with climate change—at least the secular project as defined by philosopher Charles Taylor. In *A Secular Age* [19], Taylor argues that the dilemma of secularism is not how to manage, position or suppress religion. Rather it is a problem of how diversity, plurality and alterity are recognised and respected in political decision-making in contemporary societies. This is true even in cosmopolitan societies. Perhaps it is true *especially* in cosmopolitan societies. In conversation with Taylor in 2009, sociologist Craig Calhoun remarked: "The public sphere is … a realm of cultural formation in which argument is not the only important practice … creativity and ritual, celebration and recognition are all important. [The public sphere] includes the articulation between deep sensibilities and explicit understandings and it includes the effort—aided sometimes by prophetic calls to attention—to make the way we think and act correspond to our deepest values or moral commitments" ([12], pp. 132–33).

At the end of *Why We Disagree*, I drew attention to the very acute dilemma climate change presents us with. It is the challenge of embarking on a global project of climate management (or even engineering) when the very values required to design and deliver such a project are deeply contested. It is a dilemma which science is powerless to resolve. Worse still; by seeking to use science as the primary means to resolve the dilemma, we are obscuring the nature of the dilemma itself. Climate change thus operates as the exemplar of a much wider conundrum with which political philosophers and science studies scholars continue to struggle: what sources of authority are adequately founded, and appropriately transcendent, to justify and empower political projects which reach beyond conventional jurisdictions? There are a variety of responses to this conundrum as it applies to climate change. My response here draws upon humanist values and traditions, both religious and non-religious. It recognises the limitations of modernity and recognises the multiplicities of knowledges (different rationalities) that remain potent in the world today. It extends my horizons beyond the natural sciences and social sciences, with which I primarily worked in *Why We Disagree*, towards the environmental humanities, in particular the deployment of virtue ethics alongside geographical sensibility and imagination (see also Sandler and Cafaro's book *Environmental Virtue Ethics* [20]).

5. Virtue

I mentioned before that for some environmental commentators, such as Tom Crompton, the challenges of climate change and the failure of "The Plan" has led to a public questioning of values. But for others, the searching has gone deeper. For them, the idea of climate change has been

less a catalyst for re-shaping human values than it has been a provocation to re-discover the nature and practice of what we may call, along with the ancients, human virtue: this tried and tested exercise in contemplation, self-discovery and human living. Or, in the words of Calhoun above, "to make the ways we think and act, correspond to our deepest values or moral commitments". Taking seriously the challenges to human well-being raised by climate change, some entrepreneurial humanists and theologians—and, more surprisingly, some scientists such as those with whom I opened this essay—have asked us to contemplate anew virtues such as wisdom, humility, integrity, faith, hope and, above all, the virtue of love.

So let me sketch out an apologetic for such calls to virtuous living as they apply to climate change: to show how the exercise of virtue can transform both the quality of public deliberation and the efficacy of the human individual as a public actor (*cf*. [21]). Practicing virtue can offer substantive, instrumental and normative benefits for dealing with the challenges of climate change. *Substantively*, through the exercise of virtue public knowledge of climate change will be modified, if not transformed. *Instrumentally*, when contributing to public discourse and deliberation about responses to climate change, the exercise of virtue can inspire and deliver change. And, *normatively*, in the personal realm it is right and good to be virtuous: virtue is indeed the true *telos* of Man. I start by emphasising the relevance of individual virtue when engaging with the idea of climate change, drawing upon Christian tradition and particularly the work of Tom Wright, ex-Bishop of Durham and now professor of New Testament and Early Christianity at the University of St. Andrews, in his book *Virtue Reborn* [6]. I then very briefly engage with two other more collective applications of virtue philosophy as advanced by particular authors: the idea of civic virtue, persuasively laid out by political scientist Melissa Lane in her recent book *Eco-Republic: Ancient Thinking for a Green Age* [22] and virtue ethics, made popular in recent years by the Catholic philosopher Alasdair MacIntyre in his classic work *After Virtue* [23], and recently reviewed by Guy Axtell and Philip Olson [24].

Some words first, then, about the exercise of individual virtue in the context of climate change. There are of course many lists of human virtues, from that of Aristotle onwards. I am not particularly interested in a close scrutiny of the different logics behind these various lists, other than to note that they share one common feature: they encompass those qualities which, if owned, will enable an individual to secure *eudaimonia*: a state of blessedness, happiness, well-being. Whether they be Aristotelian, Pauline or more contemporary, virtues are recognised by the prevailing culture as enabling human life to be lived at its best. I wish here to consider the virtues of wisdom, humility, integrity, faith, hope and love, and I offer a brief word about each in the context of climate change.

There has been a resurgence of interest in the idea of wisdom, both as embodied in traditional human cultures or religions, but also as understood as a form of knowledge in its own right. We might approach the virtue of wisdom through the idea of *phronesis*—practical wisdom or "expert knowledge in the fundamental pragmatics of life" ([25], p. 188)—as popularised by social scientist Bent Flyvbjerg [26] and by Alasdair MacIntyre. Or we might approach wisdom as psychologist Robert Sternberg has done in terms of balance [27]—the wise person knows how to weigh competing interests and strategies across the temporal, the narcissistic and the geographical dimensions of living. Either way, paying greater attention to the search for, and the exercise of, wisdom counteracts deficiencies in modernist and reductionist forms of knowledge about climate change.

Particular forms of knowledge or technology may also be critiqued through the virtue of humility. Humility draws attention to the limits to scientific knowledge, especially such knowledge of the climatic future with its essential openness and indeterminacy. Various authors have valorised humility in this context and contrasted it with displays of hubris in much climate science research, writing and advocacy. This contrast is revealed most acutely perhaps in the new discourse of planetary climate engineering, as Clive Hamilton has shown [28]. More broadly, Sheila Jasanoff makes the case for humility in the design of climate policies: "Policies based on humility might: redress inequality before finding out how the poor are hurt by climate change; value greenhouse gases differently depending on the nature of the activities that give rise to them; and uncover the sources of vulnerability in fishing communities before installing expensive tsunami detection systems" ([3], p. 33).

Third, integrity is an important virtue in the context of trust. This was acutely observed in the controversies surrounding the emails released from the Climatic Research Unit at the University of East Anglia a few years ago. Were climate scientists to be trusted for the quality of their work and for the integrity of their dealings with colleagues and opponents alike? What norms and values guided their behaviour and were these recognised to be virtuous in wider cultural settings? The virtue of integrity also draws attention to the eternal human struggle for personal lives to be lived with honesty or, in the language of social psychologists examining climate change and pro-environmental behaviours, by closing the "value-action gap": we do not execute what we profess. Attention to such matters would, for example, draw upon ideas of professional and practice-centred virtue ethics [29].

Faith can be considered a virtue and it too plays a central part in relationships of trust. And faith is an integral part of the scientific endeavour as much as it is central in social relations. More than a virtue, faith becomes a necessity. An examination of faith becomes an examination of the relationship between belief and doubt, between "certainty" and "uncertainty". Faith is the way in which humans navigate between the poles of dogma and ignorance and it applies to secular or personal knowledge as much as to religious or spiritual knowledge. We can see quickly how this becomes relevant in the context of climate change knowledge and discourse. But in the context of responding to climate change this raises the key question "Faith in what?"—in science, technology, political authority, democracy, deities, the idea of progress?

And so faith is inseparable from the virtue of hope: Faith in what? Hope *for* what? Hope is one of the most important of virtues, even if it goes largely unrecognised in Aristotelian or other secular lists. Hope captures the human relationship with the future. If human knowledge is inescapably bound up with the notion of faith, then our relationship with the future is written in the language of hope (see [30]). Of course we may see the general future—or our own personal future—as hopeful or hopeless, but the virtue of hope captures something about the unquenchable human desire for something better. Hope, then, is a virtue which needs nourishing, in both public and personal settings.

Finally there is the virtue of love. But what is love? When Tim Flannery invoked love at the end of his book *Here on Earth* he most likely was thinking of the idea of biophilia—literally, the love of living things—introduced by Edward O Wilson in his eponymous 1984 book [31] and further developed by Steve Kellert at Yale University. But love is multi-faceted and perhaps ineffable, as countless human thinkers, poets, prophets and song-writers have explored through the ages. C S Lewis offered his own attempt to grasp the complexity of love in *The Four Loves* [32], in which he

laid out a Christian typology of love according to affection (*storge*), friendship (*philia*), sex (*eros*) and charity (*agape*). Love in the forms of *philia* and *agape*—and its close companions, compassion and self-sacrifice—needs cultivating in public and private spheres.

6. Civic Virtue and Virtue Ethics

Let me now consider how this commitment to virtue as a guiding disposition in response to climate change can operate in different settings. First, the idea of civic virtue: the cultivation of personal habits which can transform the success of the community. In *Eco-Republic*, Princeton scholar Melissa Lane revisits Plato's model for defining the relationship between society and the individual—what Plato called "the city and the soul". At the heart of Plato's argument was that the exercise of individual virtues—the pursuit of the good—in public life matters profoundly for the well-being and stability of a just society. Or as the Jewish proverb from about 500 years before Plato claimed: "Through the blessing of the upright a city is exalted, but by the mouth of the wicked it is destroyed" [33].

Lane extends Plato's argument in two ways. First, she shows how in the contemporary world "the city" embraces material planetary ecologies, most notably the climate, upon which human sustenance crucially depend. This is the eco-turn of Plato's Republic. Second, she contends that the guardianship of civic virtue is not the preserve of Plato's elite—the wise rulers—but is a role to which all participants in the Republic are called. This, then, is the democratic turn. And this requires a more virtuous, engaged and demonstrative role for individual human agency in the demos. (This argument is also developed by Colin Farelly [34]). Here virtue ethics and discourse ethics meet. As Tom Wright describes in *Virtue Reborn*, "We are going to need [virtue] in the days to come, as world population increases, food sources and supply chains present new problems and the world's climate changes alarmingly. We cannot assume that the whole world will steadily become more and more dominated by Western-style liberal democracy, with people meekly voting every once in a while and doing their own thing between elections" ([6], p. 201).

And then finally a brief mention of virtue ethics and climate change. From MacIntyre's classic defence of virtue ethics [23] let me highlight two points which I think are relevant for thinking about climate change. First is his historicisation of the arguments among the three main families in ethical theory—consequentialist, Kantian and virtue-based. For MacIntyre, consequentialist and deontological ethics in Western tradition have become detached in recent centuries from any larger moral narrative in which they may originally have been grounded in. For him they have lost authenticity and power as a consequence. This is an outcome of modernity, the same modernity—we might claim—which has placed humans as controller of the Earth's climate. And as contemporary climate ethicists such as Dale Jamieson and Stephen Gardiner have argued [35,36], a condition created by modernity requires a response guided by more than the ethics of that same modernity. Or to quote Einstein: "We can't solve problems by using the same kind of thinking we used when creating them". The second point to emphasise is how, for MacIntyre, morals and virtues can only be comprehended through their relation to the community from which they arise. Rather than deriving our principles of justice from behind an imagined Rawlsian veil of ignorance, which detaches and abstracts us from our social relationships and cultural commitments, MacIntyre's virtue ethics commits us to derive our ethics from within

these inter-human matrices of meaning and belonging. And for me this offers a more credible, situated and plural way—not necessarily an easier or more universal way—of thinking about the intractable ethics of climate change.

7. How to Proceed?

The above comments are only an initial outline of arguments from an ex-climate scientist that may be put forward for a virtue-based engagement with the challenges raised by climate change. For some I am sure the cultivation and exercise of virtue is just too abstract, too philosophical, to count as 'climate change action'. Indeed, as Zyl observes, "Critics of virtue ethics have argued that its focus on character rather than action, as well as its rejection of universal rules of right action, renders virtue ethics unable to shed much might on the question of what ought and ought not to be done in specific situations" ([37], abstract). Surely something more ambitious and programmatic is called for? "It is Hulme again indulging in defeatism and quietism", I hear them say. "He is running away from the real challenges of climate change". But let me finish with a few short reflections on two different practical traditions for cultivating virtue—one ancient and religious, and one contemporary and secular—suggesting that the cultivation of virtue is in fact far from abstract, even if it doesn't stop climate changing.

The ancient tradition I offer comes from the Christian faith. Bishop David Atkinson has explained how climate change challenges Christian theology and practice: "the questions posed by climate change reach to the heart of faith: our relationship to God's earth and to each other; the place of technology; questions about sin and selfishness, altruism and neighbour love; what to do with our fears and vulnerabilities; how to work for justice especially for the most disadvantaged parts of the world and for future generations" [38]. A Christian response to climate change therefore involves the community of believers, in theological terms 'the body of Christ'. And since one of the abiding goals of Christian community is the pursuit of holiness, Christians need to ask how virtue can be acquired and exercised? Or as Tom Wright puts it, "How can we acquire that complex 'second nature' which will enable us to grow up as genuine human beings" ([6], p. 220). Wright then offers a virtuous circle in which five elements work together to cultivate character: community, stories, scripture, practices, examples. One can recognise in this schema elements that are not unique to Christian tradition. They are ones that can be developed in many different cultural settings by paying attention to: the wisdom of the past; human life stories or myths; rituals which reinforce connectivity and commitment; community which reaffirms individuals' self-worth.

And to emphasise the universal appeal of such a virtuous circle, let me cite a modernist equivalent. This comes from the writings of the philosopher Alain de Botton and his recent "Manifesto for Atheists: ten virtues for the modern age" [39]. For de Botton "the project of being good"—of being virtuous we can say—"is as vital, or even more important than the project of being healthy" [40]. Or by extension we might paraphrase, "being virtuous is even more important than stopping climate change". His ten virtues for the atheist to cultivate include patience, hope, forgiveness and sacrifice and at least partly resonate with both Aristotle and St. Paul. There is "no scientific answer" de Botton says as to which are most important, "but the key thing is to have some kind of list on which to flex our ethical muscles" [40]. And how this is to be done bears a strong resemblance to Wright's virtuous

circle: partaking in ritual, belonging to community, being inspired by human stories of faith, hope and love.

8. Conclusions

I have suggested that there is a renewed interest from environmental scientists and environmental social scientists in the idea of virtue and, in particular, its relationship with the sorts of questions which the challenges of climate change ask us. This interest is also evidenced, for example, through the work of environmental virtue ethicists such as Phil Cafaro [41]. I have given a short account of how the conventional plan of climate salvation is failing and how this failure has led to this new exploration of an ancient idea. I have given some token arguments of how the individual virtues of wisdom, humility, integrity, faith, hope and love have relevance as we comes to terms with the condition of a prosthetic climate and I have connected these to the collective projects of civic virtue and virtue ethics. Finally, I have suggested that the cultivation of virtue is a very practical ambition and one which can draw upon religious tradition and resources, which themselves can be partly replicated in secular contexts.

My approach to climate change taken here may seem strange to those who see the dangers of climate change as large, immanent and totalising. (Although I am not convinced this is the right way to frame these risks). And the approach may seem irrelevant to those who believe these dangers can be diffused only through various programmatic policy interventions. Yet the possible magnitude and urgency of these dangers can only be judged relative to other dangers facing people in the world, to our value commitments and to our own sense of what matters deeply. And the record to date—as I have shown—can only lower ones expectations about what conventional programmatic policy intervention around climate change can deliver.

I am suggesting something different. Rather than putting science, economics, politics or the planet at the centre of the story of climate change I am suggesting that we put the humanities—our self-understanding of human purpose and virtue—at the centre. When we talk about climate change we should not start with the latest predictions from the climate models, nor whether we have passed some catastrophic tipping point; nor whether or not the Intergovernmental Panel on Climate Change should be trusted. We should start by thinking about what it means to be human. What is the good life and what therefore is an adequate response to climate change? The issues about human life on a changing planet are firstly humanistic and not scientific, as recognised by the European Science Foundation's recently completed Responses to Environmental and Societal Challenges to our Unstable Earth project (note the implication in the project acronym, RESCUE, of a still-needed salvation). The Anthropocene, they concluded, "creates a completely novel situation posing fundamentally new questions, including issues related to ethics, culture, religion and human rights, and requiring new approaches and ways of thinking, understanding and acting." ([42], p. 13) This goes well beyond the capabilities of "integrated knowledge systems" or the "processes of Earth system governance", themes beloved by the global change research community.

My purpose in drawing attention to the idea of virtue is to appreciate the insights of the humanities and the relevance of the world's religious faiths for thinking about climate change actions. Although there are existing initiatives which seek to do this more broadly around religion and ecology

(e.g., [43]), and there are recent examples of edited collections and books which explore religion and climate change [44–46], the large international global change research programmes tend to be either unaware or else distant from them [47]. Reacting to the idea of climate change is about understanding and cultivating the human imagination and developing an acute sense of good character as the *telos* of Man, as much as it is about applying the instruments of reason and technology. I'm not sure that this is exactly what underlies the global conversation about "the world we want" which was an outcome of Rio+20; but perhaps it is at least a step in the right direction. We need to ask what is the *telos* of Anthropos; what is the goal of Man—or what are "the aspirations of all citizens" as the call from Rio+20 put it? Is it about (human) survival—at any cost? Is it about sustained economic growth or maximising human longevity? Is it about social justice or securing some notion of political freedom? What I am suggesting here is that we need a more explicit Aristotelian contemplation on the good life, the nature of well-being and the cultivation of virtue. The question then becomes less "the world we want" than it is 'the people we should be'.

This may well not be an easy argument to take. It requires a brave move to doubt the efficacy of solutions-oriented programmes to climate change—market fixes such as emissions trading, techno-fixes such as climate engineering, behavioural fixes such as social marketing, political fixes such as Earth system governance or even ethical fixes such as utilitarian or deontological ethics (see [48] for an argument against the latter form of programmatic universalism). And yet the cultivation and exercise of virtue is something that all of us humans can do. Indeed, perhaps it is something that all of us are called to do—to realise Calhoun's "unused intuitions that are somewhere buried", to sustain the mutual evocation of goodness and human dignity that alone transcends our diversity. Climate change provides us this opportunity. As the esteemed Emeritus Professor of Geography at the University of the Wisconsin-Madison, Yi-Fu Tuan, has argued recently, "the good shall inherit the Earth" [49].

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Conflicts of Interest

The author declares no conflict of interest.

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Present Teaching Stories as *Re-Membering* the Humanities

Vicky Gunn

Abstract: The ways in which Humanities scholars talk about teaching tell something about how we interact with the past of our own discipline as well as anticipate our students' futures. In this we express collective memories as truths of learning and teaching. As cultural artifacts of our present, such stories are worthy of excavation for what they imply about ourselves as well as messages they pass onto our successors. This paper outlines "collective re-membering" as one way to understand these stories, particularly as they present in qualitative interviews commonly being used to research higher education practice in the Humanities. It defines such collective re-membering through an interweaving of Halbwachs, Ricoeur, Wertsch and Bakhtin. It proposes that a dialogic reading between this understanding of collective re-membering and qualitative data-sets enables us to both access our discursive tendencies within the Humanities and understand the impact they might have on student engagement with our disciplines, noting that when discussing learning and teaching, we engage in collectively influenced myth-making and hagiography. The paper finishes by positing that the Humanities need to change their orientation from generating myths and pious teaching sagas towards the complex and ultimately more intellectually satisfying, articulation of learning and teaching parables[1].

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1. Prologue: Tales of Belonging or Alienation?

> "It is not easy to describe the distinctive nature of scholarship in Humanities. We do collaborate all the time, of course; it's just that most of our collaborators are dead." ([1], p. 149).

And so the tall tale is told: An exaggerated, humorous, if short, narrative with which I can identify. It is alluring, draws laughter from slight embarrassment, helps me feel part of a community which accepts I spent a decade of my intellectual life in relationship with Bede (died CE 735). In short, through the sharing of a narrative with which I can identify, I am welcomed into a broader set of relationships. As Sally Munt suggests: "when people find themselves in a narrative, this is a momentary identification which is perceived as instrumental: a process of recognition occurs which functions through relationality to place the subject in a web of identification with subjects more like herself." ([2], p. 5). Stories connect us; offer virtual and material intimacies; are the "substance" of generations within the same, self-identifying, community (adapted from [3], p. 25).

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[1] This paper came together after I delivered a keynote presentation at the Higher Education Academy's 2nd Annual Arts & Humanities Learning and Teaching Conference: Storyville: Exploring narratives of learning and teaching. I aim to capture the tone of this keynote's "performance" in order to catch the spirit as well as the content of its delivery.

Yet, simultaneously, the sentences above create and make public imaginary limits on how the Humanities seem to understand themselves. They enclose the nature of our collaboration in a rhetoric of uniqueness (uniquely indescribable but somehow linked to an interaction with the dead), cultivating boundaries of inclusion and exclusion. For some, the story becomes a tale of happy-ever-after and, for others, it becomes a *bête noire*. After all, the story conveyed above, if viewed in dramatic terms, could be read as the tale of the necromancer: the 'dead text' is the focus of our epistemological desires rather than humanity. Anxiety about this, for example, is writ large in Mikhail Epstein's manifesto on the transformative Humanities [4]. But what if you prefer a story in which the interactive creativity of the Humanities is better described as flying with dragons than sleeping with the dead?

From the outset, we need to remember two vital and simultaneous aspects to tales: they can function *personally* to ameliorate loneliness (allowing me to recognize others like me and assume a broader accord) and *socially* (communicating boundaries to be traversed by those who are not—*yet*—like me). The idea that 'narrative is ontological' (Munt [2], p. 5), means Humanities' scholars must address the question of whether our daily communications, including those about how, what, and why we teach, invite students to come into communion with us or act to exclude. Our tall tales have an impact. If Munt is right and stories allow for identification with and recognition of one another, which in turn results in a coherent web or network, our stories (and not just our practices) about learning and teaching have the capacity to foster both belonging and alienation. As such those of us dwelling in history, classics, literature, philosophy, theology have an ethical responsibility to analyse them and consider their possible effect on our students' learning (as well as the conceptual construction of our disciplines).

2. Introduction

Debates about what the Humanities are for and what it is they should teach and foster in universities seem to have become ubiquitous in the last decade [1,4–7]. From this has come a burgeoning literature expressing why the Humanities "matter" [8–10]. Maintaining a legitimate sense of place within universities at the same time as responding to transformations in both our research processes and teaching environments has created, in some, a sense of crisis. For others, however, it presents an opportunity to revisit the material world within the Humanities [11] as well as the space for propagating new genres and disciplines ([4], p. 290), and reforming the undergraduate curriculum [12,13]. In responding to the identification of where enhancement to learning and teaching needs to occur if we are to attend effectively to the, "*why the Humanities matter*" agendas, it has provided fertile fields from which to harvest swathes of qualitative data (See [14,15] as examples of this). This is perhaps particularly true of those of us who work in the advancement of higher education but are still embedded/wedded to our work in the Humanities' disciplines in the traditional sense. For all, a perception of crisis, or at least the need to change, drives an underlying sense of urgency.

In the abounding discussion stories about learning and teaching are told and some of these tales provide the basis of this paper's orientation. I start from a pragmatic place: Stories about what a Humanities education is for and why it matters emerge as much informally and locally in conversations as much as globally through publications: how do these stories impact subsequently on our students perceptions of what being in the Humanities means in terms of imagining the discipline

and studying within it? How might these students come to work for themselves and *for the good* of the Humanities from their understanding of these stories? Arguably, the implied cues in our discussions function as part of the inter-subjective canon of disciplinary socialization. They are an aspect of the day-to-day level of organizational cultures and as such play into the "technologies of the self", conducting personal adoption and incorporation of certain narratives so that membership can be felt and shown. This is not to deny student agency (through rejection or transformation of the stories) or to reify the idea that we are the dominating force in their undergraduate lives (and thus that they inherit our stories because of that dominance), rather it is to point out the potential of our stories to have unintended directional power via relational networks. What is inferred from our stories open and close avenues of academic pursuit and consequently influence degrees of engagement and inclusion. As such, where our students' learning is concerned, we evade their symbolic power at our peril.

The question is, of course, how do we construct a convincing interpretation to critique our own discursive tendencies and their apparently panoptic powers? To date, higher educational studies on such tendencies rely heavily on inductive research methods primarily dependent on qualitative interviews without exploiting any Humanities' theoretical paradigms at the coding and analysis stage. As such a trick is being missed: as 'insider researchers' of our own practice, Humanities theories have much to offer in terms of helping us to understand ourselves as much as our texts. This is not to refute the importance of qualitative data as an intellectually fecund resource (and indeed two such data-sets will be referred to here because of what they can illustrate [14,15]). Rather what is stressed here is that to gain more robust pictures of what might be happening, where disciplinary contexts have themselves produced theories about how cultures operate, it is effective to bring them into dialogue with inductive methods focused on capturing our experience as academic teachers in the Humanities.

From this place, the pivot of the article is: An underused but effective heuristic tool for accessing how our university-based stories about pedagogical instruction are both composed locally and function socially is *collective re-membering* (both the notion of and mechanisms behind how memories can be social, collective, delineated spatially, and replayed outside of their original time-space frames) and the theorizing underpinning it. We should embrace it as such when trying to understand present disciplinary conversations about learning and teaching, as well as how cues taken from them might impact on our students' futures.

3. Method and Outline

To create a structure from which to explore how we might come to say the things we do in qualitative interviews (arguably the artifacts of such conversations) and what, in turn, might be inferred from the content of such narratives, I concentrated specifically on writings about collective memory: Recruited for the key protagonists were: Maurice Halbwach's, *The Collective Memory* (1980), *On Collective Memory* (1992) [16,17]. Added to these were cameo but relevant roles to be played by components of Paul Ricoeur's, *Memory, History, Forgetting* (2004), James Wertsch's (2002) concept of *collective remembering* and Bakhtinian (Bakhtin, 1986) notions of speech genres [18–20]. The method which unfolded symbolizes a promiscuous polymathery on my part and,

from the outset, I acknowledge that liberties may have been taken with the scholarship of others to create an interpretative framework. Structured interdisciplinary reading inevitably transfigures the material on which it has drawn. Consequently, for specialists in the original canons, its results often seem lacking in rigour and thus intellectually irritating. However, the emphasis in this paper is on the transformation of the components into a slightly different whole through their interweaving. To explore the implications of these interwoven readings, what follows is divided into the following sections:

- A theoretical methodology that draws together: the nature of our qualitative data around learning and teaching, the concept of collective memory, evidence of the limited geography in which we come to construct narratives about pedagogy and instruction, and the potential to identify particular speech genres within the data-sets. This means that to understand how our stories are constructed we need to combine the social theorizing of Halbwachs and Ricoeur, with the anthropological observations of Wertsch, and Bakhtin's concept of speech genres. In the interpretative dialogue between these works, four closely mingled assumptions about what might be present in qualitative data related to learning and teaching emerges: Firstly, stories of significance (even if apparently mundane) are recalled in interviews; secondly, we re-member (recollect, recognize ourselves and others, and re-materialize) the teaching context when we reflect on what we consider to be important about the links between teaching and learning in such interviews; thirdly, *re-membering* involves not only our individually separable perceptions and experiences but, via the process of recall, also the framing of them through an interaction with a culturally shared repertoire of concerns, sentiments, and problem-solving approaches that link us to our disciplinary predecessors as well as current colleagues; fourthly, and consequently, that the concept of collective *re-membering*, predicated on the "irreducible tension between active agent and cultural tool" [19,21], is a pragmatically useful interpretative device when considering our findings. As a result of such a theoretical methodology, it is asserted that the phrase *collective re-membering* is of more use than collective memory when we consider our present teaching stories.
- Two short case studies which illustrate the implications of the theoretical methodology when exploring the types of stories Humanities' lecturers seem to build and maintain in conversations about aspects of their teaching: Firstly, myths about transformational reciprocity in our discussion of research-teaching linkages and, secondly, saints' lives or sagas of inattention and suspicion around institutional-level educational agendas such as employability and global citizenship (particularly referred to collectively in the UK and Australia under the rubric of "graduate attributes' agendas"). These examples present story categories that emerged whilst I undertook two qualitative research projects around how research-teaching linkages and graduate attributes respectively currently operated within the Humanities [14,15] and a brief reference to each of the data-sets introduces the case studies purely to establish the scene. Whilst by no means the fulcrum of this paper, the gathering and interpretation of these projects' related data represent the back-story of the more theoretical discussion outlined here.

- A final section raising the question of whether we erect and excavate *simultaneously* the wrong stories in our current designs of qualitative research when studying learning and teaching. This section concludes that it would be better to cultivate different types of narratives within the research process (particularly those being used by lecturers in the disciplines to understand teaching practices). If we want to capture the nuances of our experience as academic teachers of the Humanities, we actually need to shift the narratives/narrative resources on which we have come to depend when talking about learning and teaching.

In the spirit of storytelling and deliberate playfulness that lay behind this article's first outing as a conference keynote, I have also pressed Herodotus into service to provide illuminating metaphors. I have thus co-opted his description of Babylonian customs to emphasize or elucidate points. I ask my readers, therefore, to imagine they are travelling along the Euphrates to Babylon, where a river of interpretation runs through a city built from the fired bricks of primary and secondary sources.

4. Theoretical Methodology: Unravelling the Narrative

4.1. Plot 1: Excavating the Emic Foundations of Our Stories: Bringing Qualitative Data Together with the Concept of Collective Memory

Forms of qualitative inquiry, with narrative at their heart, dominate the higher education (HE) learning and teaching landscape. The prominence of the single, semi-structured interview is embedded across the journals which deal with higher education practice-based research. In particular, over the last decade, a significant amount of *emic* material has been recorded and analyzed in terms of the outcomes of research-teaching linkages across Anglophone and European universities [22]. The Humanities have certainly not been immune to this trend [14,23]. Through our conversations *with and as* educational developers and researchers we have arguably been reflecting back local customs, meanings, and beliefs, rather than illustrating our material practices and how these might be contradictory or dissonant to our narratives about those practices [24]. These conversations are only concerned with communicating the meanings we ascribe to our actions, harmonizing ideal and experience and giving only one side of an insider's view [25]. Through them we tell our stories.

Additionally, the ascription of meaning is part of the constant dialogue between individual memory and the socio-cultural tools which help in its formation. As Ricoeur observes, "it is essentially along the path of recollection and recognition that we encounter the memories of others" ([18], p. 120). Our stories tell of how we make meaning of teaching situations and in so doing generate recollection, recognition, and thus to a certain extent re-materialization through conversation. Our recall of such stories in interviews is thus in part informed by collective (and in this case, often disciplinary) memories. With regard to making meaning of current learning and teaching situations and what we value as important, this suggests the possibility of uncovering a shared repertoire of concerns, sentiments, disciplinary morality, and phraseology that links our narratives to the past. In effect, it suggests a Halbwachs-like underlying mechanism operating between our contemporary experience and that of our disciplinary predecessors. Thus, what we say in qualitative interviews is a location not only for the excavation of our individual story but also the collective *re-membering*

retained in the story. Our transcripts hint at the past beyond our immediate experience, expanding the time-frame in which the story was generated. (Reflecting on Halbwachs, Ricoeur refers to this as a widening of the temporal horizon of younger generations, [18], p. 394).

4.2. Plot 2: Discovering that Collective Memories are Constructed in the Public Square

If collective re-membering fashions our stories into a form of archaeological artifact, we need to excavate the factors involved in the propagation of a commonly shared repertoire that links the contemporary generation of disciplinary academics to the past. Here, Herodotus can help. When describing Babylonian customs, Herodotus notes that the sick do not consult physicians but rather, if someone is ill, they are laid in the public square and if the passers-by have had a similar ailment or know someone themselves who has had the disease, they: "give him advice, recommending him to do whatever they found good in their own case, or in a case known to them." (Herodotus, *Histories*, 1:197). We have a similar process when it comes to learning about how to resolve issues in teaching. Studies make it quite clear that when we have a problem-solving situation in our classrooms, we are highly likely to prefer the example or advice of an associate to abstract theory or empirical findings ([26], p. 116).

Like the Babylonians, when it comes to teaching, rather than going for a robust evidence-base, Humanities academics enter the disciplinary public square to see how colleagues made meaning out of an apparently similar situation. In this we encounter a context where how we remember the circumstances and what is important to value is directly influenced by the "interruption" of our colleagues. In turn, those colleagues may well be recalling what they heard previously. This process is similar, then, to Halbwach's notion that collective memories are "recalled to us through others even though only we were participants in the events" ([16], p. 23). We have the original experience, but in discussion with others, there is the potential for a collectively influenced reframing. How we make sense of the circumstances becomes entwined with the register of sense-making of our predecessors as well as our contemporaries.

4.3. Plot 3: Finding the Public Square Turned into a Disciplinary Gated-Community

The prologue noted how stories can function to invite in or exclude those who encounter them, which raises the question of whether our collective re-membering operates in such a way that the public square conversations increasingly occur within a virtual fence, one that includes and excludes. The work on significant conversational networks about learning and teaching analyzed in Roxä and Märtensson [27,28] demonstrates how the bulk of conversational "passers-by" in the public square are drawn from our immediate disciplinary circle. The resultant network is based on trust, privacy, and shared intellectual problem-solving regarding teaching. What this means is, we have a clique to whom and from whom we construct our understanding of teaching. Our insularity can turn the public square into a virtually gated community.

Given that collective culture will orchestrate forgetting as well as re-membering, the skewing of our meaning-making towards a dominant or authoritative narrative within it becomes more probable [29,30]. This is not to deny the role of contestation and mediation within the process, which

Halbwachs failed to address ([30], p. 379) and is increasingly the focus of debate [19]. Instead, it is to indicate the possibility of repetitions across generations that would result in a shared repertoire (sometimes regardless of changes to the material circumstances) because of the apparent legitimacy and authority associated with collective memories.

Recognizing this is important because, if Boyer and Wertsch ([31], p. 113) are right, the cultural "tools" represented in such repetitions express a particular agenda or goal (an implicit plot perhaps) without seeking recourse to explicit standards of veracity (as is witnessed when our discourse slips into nostalgia, for example). Indeed, if we examine what our qualitative data-sets suggest about our agendas related to the links between research, teaching and graduate attributes, what is exhibited maps onto evidence of how collective re-memories function, including:

(1) Toleration of distortion (such as inconsistencies between espoused over-all beliefs about learning and teaching and the narrative resources used to illustrate what we mean);
(2) Smoothing over of paradoxes;
(3) Inattention to omissions. In re-narration, for example, problematic and ambiguous content is often omitted ([32], p. 15). For Halbwachs this is one of the ways we deal with "inconvenient memories" ([17], p. 50);
(4) Assimilation of our senior colleagues' memories. This may "widen our temporal horizon", giving us access to practical wisdom evolved over time, but it might also imprison the conversations in a passive persistence of first impressions ([18], pp. 394, 427), circumscribing criticality and consequential expertise acquisition;
(5) Amalgamation of phantoms which allow our immediate past to be linked to decontextualised beliefs about disciplinary predecessors we have not known. These phantoms often help locate our identity in a more positive history of the discipline. This process, in turn, can lapse into nostalgia and stereotyping, suppressing negative aspects of the longer past in the service of the kind of people we are or assume ourselves to be (see: [21]). These phantoms, in effect, enable us to engage historical representations to provoke and solidify particular identity-oriented affect and meaning (see: [33], p. 16). In this such phantoms lead to:
(6) Provision of forms of moral regulation.

In the process of translating practical wisdom from one situation to another, the plot may be subtly driven by established frameworks so that sight of the need to be creative is lost. Moreover, the translations cultivate a portfolio of narratives that exclude those who fail to accept the incorporated distortions, impressions, phantoms, and moral regulation.

4.4. Plot 4: Inviting Bakhtin to Reflect on Babylon's Gated Community

A consequence of the observations above is the direct relationship between collective re-membering and, to use Wertsch's phrase, narrative resources, which assist in shaping the way we think and speak about issues in teaching ([21], p. 120). Simply put, within our interview transcripts we have evidence of a qualitatively identifiable academic discourse genre which incorporates such narrative resources. This discourse genre occurs in the liminal space between primary speech genres

(as defined by [20], pp. 60–62) and secondary discourse genres (of particular relevance here is the secondary literature produced about the nature of a given discipline that could be characterized as manifesto-like: ([20], p. 62; [34]). This liminal discourse genre, articulated in the light of work by Hengst and Miller, Maingueneau and Hyland [34–37], is discussed more fully elsewhere ([38], pp. 75–77). In short, however, it:

- Represents a phase before formalization;
- Relates to how the speaker brings their *Self* into play with their discipline;
- Captures cultural and moral themes;
- Is developed in a relatively unmediated communion within specific significant networks in the disciplinary teaching arena and consequently is generative of a gated community.

More specifically, these liminal discourses absorb academic desires and values which in turn can be transferred through interpersonal reception. How students engage with them explicitly relates to the key point of this paper: stories can appear to be invitations "in" or seem to reject and as such, we need to understand what they look like and how they seem to operate amongst the student body if we are to really come to grips with student disciplinary development.

4.5. A Little Comment on Method Used

If there are inherent connections between such a liminal discourse genre and collective re-membering, relevant narrative forms generated through communication processes are worthy of critique. In terms of relevance to this paper's subsequent focus on the types of stories which represent narrative forms of collective re-membering, the important point to note is: such a genre plays a role in both reflecting back primary speech genres and generating forward the more formalized texts identified as part of secondary speech genres (e.g., manifestos). Effectively, this is a dialogic process in which the local gets projected outwards and the global reflected back inwards. It is because of this process that, when we come to look at the story types, secondary texts relating to arguments about the nature of the Humanities are compared with the interview data.

With all these interwoven ideas in mind, the key question becomes: what in our story types suggests the embedding of collective re-membering and its attendant sense of recognition and identification? Ideally, we should be able to observe shared concerns, sentiments, disciplinary morality and even phraseology. There may also be a hint of an extended time-frame, suggestive of the incorporation of our predecessors' experiences. In terms of excavation, our interpretation is underpinned by an understanding that there was an original impulse behind the development of such collective re-membering, an original need that generated a way of dealing with or justifying a particular situation which subsequently became a fixed conversational object. Arguably, a dissonance between this fixed object and associated explanations might hint at an artifact of collective re-membering and thus should be the target of critical attention (otherwise we might indeed be caught in the passive persistence of first impressions). The two case studies below attempt to illustrate this and also suggest why being aware of such story types is of importance for our students' engagement with our disciplines. The first case study draws together insights from a qualitative

research project based on 7 semi-structured interviews from the Humanities in Scottish universities [14]. The 7 interviewees were two Historians, one Classicist, one Philosopher, two Theologians and one person from Film and TV Studies. The second case study reflects on 5 semi-structured interviews, one each from Classics, English Literature, Theology and two from Celtic Studies, all at one research-intensive institution in Scotland [15]. Both case studies explore particular propensities in the qualitative data sets as well as the secondary literature on the nature of our disciplines: a leaning towards myth-making in terms of the pedagogy of the Humanities being intrinsically reciprocal and an inclination to saga-making with respect to educational agendas that we associate with any emphasis on the utility of higher education.

5. Case Study 1: Myths about Transformational Reciprocity in Our Discussion of Research-Teaching Links—Playing like Vampires?

The first of the liminal discourse genres to illustrate are teaching myths. A key story we retell in the literature to describe the nature of our scholarship suggests that the link between research and teaching is based on a fundamentally transformational process which is a "multi-dimensional, mind-altering experience" rather than a vocational one ([39], p. 10) and is achieved through conversational/dialogic reciprocity. I found a similar assumption present in the transcripts that I gathered as part of the 2008–2009 Research-Teaching Linkages project [14]. As one of my interviewees summed up: "on the Arts side of the university we are not engaged in vocational training. We are engaged in developing multi-sided people who can engage with a whole range of different problems and techniques such as information retrieval, constructive engagement/critical engagement with information, sifting information and also making judgments on the basis of the past or past experience." (Historian).

In bringing that data-set together with the secondary discourse genres, it became clear that reciprocal conversation is behind this development and occurs between three inter-linked groups: our texts, our colleagues and our students (not necessarily in that order of importance).

5.1. Reciprocity with Our Texts: When does Collaboration with the Dead Become Necromancy?

From the outset I noted the extent to which it is possible to identify with Collini's notion that our scholarship has a relational element with those who died generations and centuries ago. Additionally, anyone who has spent time reading, contemplating and changing their ideas about disciplinary canons in the light of Gadamer [40], will argue (and I am one of these people) that interpretative hermeneutics related to how we read our texts, also change how we read ourselves, which in turn affects the direction of our lives. Add to this our engagement of students in the process and there is clearly the potential for a triangular collaboration of present-day minds, historical intellectual activity, and creativity. Yet, as Epstein notes, in our focus on our texts, have we turned away from humans? Have, "to a certain extent, the Humanities stopped being human studies and become textual studies, ...criticism rather than creativity and suspicion rather than imagination?" [4]. If this is the case, do our claims to a holistic rather than a purely textual hermeneutic approach reflect a collective re-membering more than a present-day actuality? What is clear is that the Humanities are developing

students' ability to make qualitative judgements about the type and nature of information, what is much less clear is how this is turned to questions about humanity. We are not quite necromancers, yet, in our fixation with creating analytical frameworks to think originally about our texts and the curation and categorisation of the canon of our disciplines inherent in this, have we been led away from bigger humanistic questions? Have we become so centred on original ways of thinking about the text that questions of human *being* and *doing* are side-lined in our teaching?

5.2. Reciprocity with Colleagues: Back to the Gated Community in Babylon

I admit that this was not a particular feature of the interviews I undertook, but is a common thread in current debates about managerialism and the loss of collegiality across the Humanities [41]. I think there is another aspect of the Humanities myth lurking in this discussion and we need to ask ourselves: what do we really mean by collegiality in the Humanities? Perhaps we actually just use "collegiality" as an antonym for corporate purpose ([42], p. 78) rather than as a description of the quality of our relationships. How for that matter are polymaths collegial? In terms of the notion of gated community mentioned earlier, the key point to acknowledge is that our peer-based social networks operate through hierarchies of status [28]. This means that dominant and subordinate cultural tools play out dependent on the systems we use to legitimate them (and the value we place in those systems). We need to be far more critical about our claims to collegiality as they, more than other stories here, relate to collective re-membering that not only accepts distorted pictures of the present but also passes on distortions from the past.

5.3. Reciprocity with Students (2008–2009 Data-Set): Mutual Metamorphosis or Thought-Vampirism?

The reciprocal and often transformative relationship of mutual conversation between participants in disciplinary exploration is a central myth of the Humanities identity. In our secondary discourse genres, the dialogue between students and staff which moves our disciplines forward is typically described as being dependent on novices as much as experts. In all of this, dialogue is an inter-dependent, balanced, shared process, where students and staff play equally important, if different, roles. The novices bring fresh eyes [43], freed from the universalizing effects of socialization into disciplinary norms. In this, the conversation between staff and students is an interwoven web between research and teaching (Jan Parker is a particular proponent of this sense of mutuality ([44], p. 23), but see also: [45,46]). Indeed, an extension to this perspective sees students as the subversives upon which critical reinterpretation is reliant, because they are not so dependent on established disciplinary paradigms [43].

On reflection, however, *how* this reciprocity manifests is unclear. Indeed, it was the lack of clarity around this notion of reciprocity in the research-teaching linkages data-set that first started me wondering about how collective influence with a past as well as in the present might be playing out within the Humanities. When discussing the pedagogic environments in which dialogue occurs, the academics divided into two groups:

- Those who perceived the importance of dialogue but who teach in more didactic manner/learning environments; (Historian; Classicist);
- Those who perceive the importance of dialogue and use learning environments most likely to foster interaction between themselves and the students; (Both Theologians).

In this apparent dichotomy one would perhaps consider the second group as most congruently aligned with respect to dialogic belief and practice. Yet, the same academics' views of the student members in the dialogue as participants in the research process evoked common themes that did not consistently overlap with the perceptions of the pedagogic environment. Thus:

- Students were fully participatory and informed the final research product of an individual lecturer. As the philosopher commented: "I see all the lectures as conversations and I want to know what people think about the idea because they have fresh minds." (Philosopher). One of the historians we interviewed also noted that his research-content-based teaching was still very much a two-way process, from which he benefitted, suggesting that he gained through, "Being challenged, students asking questions that are difficult and things that I hadn't thought of and would need to go and check out…." (Historian)
- The students were participatory because of the amount of their engagement with the subject, but they did not significantly influence the lecturer's research output (Film and Television Studies).

Additionally, the forms that the dialogue takes, as expressed by the interviewees, were rarely articulated as two-way conversations. Even where the lecturer stated explicitly that it is a two way process, probing elicited a range of strategies, most of which relate to the lecturer *doing something for the students* rather than the students working alongside the lecture:

(1) Empathy through expertise: (Classicist) "being a researcher…enables you to see what a first year student encountering a classical text for the first time will in fact need and actually that's the real research-teaching linkage at pre-honours level—the idea that you are sufficiently far on in your grasp of the subject to be able to put yourself in the place of the person who is encountering it for the first time…" and help them unpack the subject through that understanding.

(2) Facilitating connections: (Theologian) "…we [the researcher] are also making new connections that aren't immediately apparent for the students…what I am seeking to do is to teach the students a process and use my own experience as a researcher/writer to make that available to the students…I'm really trying to make connections for the students…. essentially what students are getting is my fresh thinking about how the whole area is developing…" (At the same time this Theologian clearly sees student process as more than just excitement: "it's [his teaching] very much on that model of personal engagement in the sense of not just engaging the student in being excited about the subject but the actual student's experience being a resource of authority and actually a data source…it's not just about mining a theological tradition".

(3) Setting the parameters of the discussion: "Oh the process [of research-led teaching] is two way. …it's interesting because over the last couple of years I have talked to the consciousness class about the need for emotions [in the studies of consciousness]…it's a two way process, you tease ideas out together. I got much more out of the paper yesterday when I was talking to the students than I did when I was reading it by myself…" (Philosopher).

What is clear from the interviews is that the myth of dialogue is an ideal with far more variable embodiments in practice and most of these embodiments suggest a misalignment between perception and practice. In the tall tales captured in my interviews with staff, fresh, unfettered minds clearly feed both our thinking and our publications. Such nurturing is at the heart of our originality. Yet, our shared narrative resources suggest a misalignment between:

- Firstly, the spoken importance of the dialogic relationship in which the novice is critical: lectures are conversations and we want to know about student thoughts because, "they have fresh minds";
- Secondly, a narrative resource incorporating the sub-plot of the power of our own research interests to determine content and sometimes process. Thus, we make the connections not immediately apparent for the student, which means students are getting our "fresh thinking about how the whole area is developing…".
- Thirdly, the implication, from the recalled direction of intellectual creativity, that it is less two-way mutuality and more uni-directionality, with us (and the disciplines we embody) being the beneficiaries. We might note that research-content teaching is still very much a two-way process but one, nonetheless, from which we benefit explicitly. Our gains come through being challenged and, through that challenge, "getting so much more out of our own reading". So the students ignite our new understandings, but is this a shared process? And, perhaps more to the point, how do we show them that it is?

In terms of identifying an example of collective re-membering, what is evident here is an incongruence between reciprocity and our understanding of how students are involved in that relationship. In the hope of reciprocity we omit the common experience of delivering something *to the* students, but then reintroduce it as we try to explain how such reciprocity manifests. The critical question we need to ask, is from where did such a discourse emerge and why? I noted earlier that underneath collective re-membering may be a justification of a way of managing a situation that then becomes a fixed object. Arguably, the discourse of reciprocity has arisen out of perceived crises with the place of the Humanities in the university, particularly in this case the massification of higher education that has lead to an apparent *de-interpersonalisation* of Humanities' pedagogical approaches. What we are left with are the phantoms of concern and sentiment of reciprocity, but when we try to explain these we fall back into common phrases that indicate the importance of us as deliverers of ideas, with students' "freshness" providing a particular sense of what they bring to the disciplinary equation.

This then, is a collectively reinforced myth of metamorphosis induced through dialogue woven through a narrative from which we could infer that we "suck the fresh minds of the young" to maintain our intellectual fecundity. Our sub-plot hints that we might actually be vampires-of-thought rather than just half of mutual epistemological growth. What does this mean in terms of this paper's

opening statements about how stories function? If this narrative is operating socially for our students as well as personally for us, how does it influence their learning behaviours? How does such a story interact with the practical realities of the classroom to cultivate a sense that, despite a myth of mutuality, originality in our disciplines emerges from the expert drawing on the students rather than through a more equal collaborative activity? Do our students think they need to become vampires to be original? This becomes even more problematic when we realize the moral value we place on originality, with the sense that its absence from someone's thinking is evidence of conformism, lazyness, and a lack of intellectual authenticity [47].

When discussing the ideas behind this keynote with a friend from Psychology, he pointed out that relationships can be experienced as personal and yet not be interactive [48]. If we perceive it personally, if it touches us, it has an essence of reciprocity, but this is not necessarily an essence others in apparent relationship with us feel. Our myth of research-teaching linkages as being jointly reciprocal, the fresh minds of novices, and the consequent generation of originality in our and the students' thinking is a story we relate to on a personal level, as are the notions of collegiality and collaboration with the text. These are storylines that reflect *our inner world* of hope, intent, and assumed affinity.

However, as social "instruments", the storylines simultaneously construct *communication outwards*, drawing from both one's personal psychology and also the collective when recalling how we achieve links between research and teaching. What seems to be expressed in our myth is an internal dialectic between shared recognition (leading to reciprocity), on the one hand, and self-assertion (leading to control and ownership), on the other [49]. Our myth captures and projects outwards an inevitable tension between the expert's need to be recognized at the same time as recognizing students' intellectual independence [50]. How this functions to constrain a sense of equality (and attendant social solidarity) is a key question in terms of student engagement and our hopeful narratives offer students a much less inclusive encounter with us than we, perhaps, realize.

6. Case Study 2: Graduate Attributes, Saints' Lives or Sagas of Inattention and Suspicion—Anti-Neoliberal Ascetics?

The second of the liminal discourse genres relevant here are those narratives which contain a peculiar mix of individual intellectual heroicism (as defined by the discipline and focused on originality) and hagiographical conventions. These pious teaching sagas (for want of a better name) seem to operate as ways of re-membering what makes our disciplinary views about what we should teach unique and quasi-essential. In effect, they enable us to define ourselves through particular virtues and, though not quite the abstinence fuelled rhetoric of the fourth century (CE) ascetic, they illustrate what we believe is necessary to renounce in the cause of the Humanities. There is, thus, an implied "purposeful lifestyle" incorporated into the sagas and we should at least be aware of the potential this has to influence student choices. These narratives are seductive in their simplicity, arranging disembodied, morally-laden tropes into texts about what it is or is not appropriate to favour.

When it comes to how these teaching sagas are expressed in the secondary literature, the hagiographical tropes tend to divide into three inter-dependent clusters: firstly, a continued reflection back to a monkish vocation, with the "culture of the West once again saved by ascetics" ([7], pp. 10, 42);

secondly, an underlying assumption of the morally superior non-vocational as opposed to vocational [6]; and, thirdly, education for a social good rather than for profit [5]. Arguably, such tropes paradoxically obscure and materialize Humanities' cultural phantoms at the same time, particularly the ones that attempt to mark them out as being part of a unique vocation that should not be compromised through attachments to material advantages. Indeed, useful discussion of the genealogy of such phantoms can be found in ([8], pp. 59–88). Of course, the inconvenient memory omitted from this secondary genre is that academics in the Humanities are already tied into systems of material advantage: state, beyond-state, and increasingly student sponsored.

Where the pious sagas are manifested most strongly in that liminal space prior to expression in the secondary sources is in relation and often opposition to ideological agendas around employability, entrepreneurialism and, perhaps less obviously, global citizenship. How they play out in the dataset that I gathered on graduate attributes [15] is through a conversational rhetoric of vague inattention, suspicion and ambivalence. Phrases relating to entrepreneurialism and work-related learning often make it clear that it is (inattention) or should be (deliberate inattention born of suspicion) at the bottom of any taxonomy of attributes undergraduate students might be working towards in the Humanities. As the Classicist commented: "'Equipped for Global Citizenship?' I tend to be suspicious of anyway…how are we defining citizenship?... I would probably not take it much into consideration except to the extent that a bureaucrat was obliging me to. Even them I might try to simply frame other goals that I have in such a way as to appear to fulfill that requirement. I don't especially want students to be career aware, I tend to be relatively suspicious of that phrase."

The acknowledgement behind this is that it just "doesn't seem to easily fit" or is not something explicitly being pursued (One of the academics from Celtic Studies noted: entrepreneurial is quite hard to fit into Celtic Studies straight off."), though it emerges from knock-on effects of the students' studies (This Celtic Studies scholar went on to state: "entrepreneurial, global citizenship and ethically-minded—they're not things that I teach on a surface level or that I particularly encourage my students towards…I think they're kind of knock-on effects of what I'm doing but it's not something I am consciously striving for."). Phrases relating to global citizenship portray it as a potentially worthy goal in some cases or just impossible to deliver in others. For the English literature scholar there was a sense that employability and entrepreneurialism where of importance but best developed through extra-curricular activities. Their reaction to Global citizenship was, however, unequivocal: "Global citizenship makes me feel slightly nauseous, just the term; I mean it's nonsense, we're not global citizens." Interestingly, amongst the students I interviewed, there was a similar lack of perceived importance of entrepreneurial and work-related attribute development, but much more of a sense that being prepared to become ethically minded, global citizens was critical. If they had ideological concerns about employability they did not about global citizenship.

I propose that, for some academics, narratives of inattention and suspicion are converted into renunciation hagiographies which, in their turn, gain legitimacy through publication. This is not to deny the imperative of the Humanities to challenge and critique both ideological positions and compliance-oriented educational demands. Nor is it to valorize naivety. It is, instead, to reflect that the translation from suspicion to renunciation has the power to lead us away from responsibilities to our students and their futures. Yet these very responsibilities can only be effectively engaged with

through the mechanisms valued by the Humanities: critical creativity, in depth textual analysis that allows us to anticipate possible and probable consequences for our futures, and imagination. Academics interviewed for my projects were not articulating particularly heroic *tropes*, more typically they were either expressing overt negativity or neutral non-engagement (except where they were already working within a more applied paradigm such as practical theology and archaeology). The critical issues for me in this are two-fold:

(1) Suspicion, ambivalence and neutrality hint at a lack of responsibility for directing undergraduate experience beyond the gated communities. In a world of limited resources, deflecting responsibility and avoiding the real opportunities for creative engagement in problem-solving is becoming increasingly unsatisfactory if not downright unethical.
(2) By not engaging formally in the discussion about our students' broader futures, certain voices which claim to be authoritative in the Humanities get disproportionate cover about what we are doing and how we are doing it (See: [8], p. 63). This includes voices that make very Anglophone assumptions which fail to recognize the complexity of social, cultural, environmental, and economic needs across the globe.

Ultimately, critical, creative transformation in which imagination and thought are harnessed to solve as well as identify intellectual and practical challenges need not be dependent on stories that negate either the vocational or the material. But how can we tell and value new tales?

7. Are We Excavating the Wrong Stories?

I realize that the previous sections paint an overly pessimistic picture of our myths and sagas. This is, of course, a deliberate attempt to ferment debate. In the methods used, I have generated a noir tale all of its own. I want to clarify now what I have been hinting at all along: some of the shortcomings, at least in terms of the content and narrative resources of the stories, actually relate to *how the stories come to be told*. The method of qualitative interview upon which we have come to depend encourages an unbalanced privileging of myth and saga. These genres in their turn smooth over how we understand ourselves, harmonize the real-life paradoxes of learning in the Humanities, silence divergent views, and replay the past through all the foibles and avoidance of inconveniences that make up collective re-membering. The tales in the transcripts can become the collective memories. These stories may assist in the integration of fragments of experience into a coherent whole, but in their re-narration they incrementally change the plot of what we think we experienced. Having given these stories credibility and legitimacy through our reliance on the method (and the demands on us to publish the related outcomes), we are involved in a process of collective forgetting tied to constituting our secondary discourse genres. Myths and sagas are being reified.

What is needed now is a method that rebalances our narratives towards tales of paradox. In other words, we need a way of telling our stories so that conventions about learning and teaching are disrupted and dissonances brought to the foreground. This is already being recognized in teacher education [51]. From the work of scholars in theology and religious studies, moreover, we know that myth has a complementary narrative form, the parable. This is a form of story that challenges our preference for idealized worldviews and the related process of converting the mythic into a reality [52].

It has a brief, concentrated plot that troubles the reader, taking them beyond their comfort zone of understanding, to new insights [51]. Through a pattern of data collection which requires the articulation of parables about the links between research, teaching and broader attributes in the Humanities, we might establish a form of qualitative inquiry that captures more fully the nuances of our beliefs and practices. This would shift our focus from immediate recall and its associations with collective re-membering, to a more satisfying, complex, and ultimately authentic way of making sense of the power of learning and teaching in the Humanities.

8. Conclusions

And thus our time together on this particular Babylonian plain draws to a conclusion. The Euphrates has been transfigured into a pathway of local personal memories interacting with the clay of collectively crafted brick remembrances. Comfortable myths and sagas unearthed from academic discourse are, however, as potentially exclusive as they are hopefully inclusive and their symbolic implications need to be exposed. In such a vein it is perhaps no surprise to find that Herodotus' description of Babylon is itself more folktale than accurate depiction. Yet generations of scholars pursued studies intending to assert his reliability, even as other forms of evidence emerged to demonstrate his limitations [53]. Beguiled by the harmonizing flourishes of the story, we can be seduced into considering it as *the* rather than *a* truth.

The need to critically interrogate myths and sagas around learning and teaching, their emergence from our daily acts of speech and recall, and their connection with the place of the Humanities in the academy is important. Finding a method to do so is surely a Humanities' imperative, especially as the material worlds of scholarship, knowledge generation and curation change, but also given the increasing calls for us to reassert our role within the realm of human (as well as) textual studies. To assist in critiquing our own stories, we might need to draw on, metaphorically speaking, another Babylonian custom. With a certain degree of relish, Herodotus notes that, "at some point in her life every woman of the land is required to sit in the sanctuary of Aphrodite and have sex with a strange man" (Herodotus, *Histories*, 1:199). For us to really break the cycle of gated communities and reductive rather than expansive collective memories, we too might need to interact intimately (intellectually) with strangers, seeing the temple of Aphrodite as the edifice in which interdisciplinarity and interprofessionalism are fostered.

9. Epilogue

Stories invite in but can also repel. In so doing they generate networks of recognition and alienation. For me, learning and teaching in the Humanities is about soaring with dragons whilst teaching others to fly, rather than being a necromancing, vampire-of-thought under the tyranny of a suspicious mind. However, perhaps a parable would illustrate that flying with dragons *and* suspicion-fed, thought vampirism are both integral parts of an Humanities education, providing a paradoxical context from which we and our students can be cultivated to achieve great things.

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Conflicts of Interest

The author declares no conflict of interest.

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"Without an Analytical Divorce from the Total Environment": Advancing a Philosophy of the Humanities by Reading Snow and Whitehead Diffractively

Iris van der Tuin

Abstract: This article develops a philosophy of the humanities by reading C.P. Snow's famous thesis of "the two cultures" through the early work of Alfred North Whitehead. I argue that, whereas Snow refers to Whitehead's *Science and the Modern World*, he ultimately paves the way for a reductive interpretation of humanities scholarship, which is a move that can be repaired by delving into Snow's own reference to Whitehead following a diffractive reading methodology. This way of reading was first formulated in the context of feminist epistemology (but can be found elsewhere and under different names) in an attempt to generate constructively conceptual rather than closed hermeneutical readings of theoretical texts by making the reading dynamic and open-ended (in Karen Barad's terms: reading their insights "through" one another). As such, reading diffractively shies away from relying on classification and is playful with the past, present, and future of the humanities. The article argues that the diffraction of Snow and Whitehead hinges on theories of "beauty" and will demonstrate (with Whitehead) that humanities scholarship originates in a total environment in which works of art—as the subject matter of humanities research—stand out and preserve themselves as "enduring objects".

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1. Introduction

The work of C.P. Snow (1905–1980) is a standard reference for "the humanities". His concept of "the two cultures" situates the humanities *vis-à-vis* the sciences and stages a mutual and hierarchical misunderstanding between the two scholarly fields. Just like the famous distinction between *Geisteswissenschaften* (the humanities) and *Naturwissenschaften* (the natural sciences), a distinction between the scholarly disciplines (together encompassing *Wissenschaften per se*) made by the German philosopher Wilhelm Dilthey (1833–1911), Snow's work has gone down in history as a disjunctive affair. However, as Michel Foucault has argued, "[…] throughout the nineteenth century, from Kant to Dilthey and to Bergson, critical forms of thought and philosophies of life find themselves in a position of reciprocal borrowing and contestation" ([1], p. 162). In other words, Dilthey's differentiation between the methodologies of *Verstehen* (understanding) and *Erklären* (explaining) is hardly sustainable because the two disciplinary realms mentioned above spill over into one another (*i.e.*, they are

excessive)[1]. Snow's text "The Two Cultures" is unclear as to whether the distinction that is introduced in it is desirable. For this reason, Snow published a "second look" upon the matter just a few years after the delivery and publication of his groundwork. In this text, Snow refers to a text written by Alfred North Whitehead (1861–1947) and, I will argue, that this reference provides the key to encompassing observations such as Foucault's into the way in which we tend to think of, and lecture about, the humanities (even when this is done in Snowian terms). This article asks the following questions: to what extent are Snow's two cultures excessive? Must we add to Foucault's analysis about the impossibility of fencing in the thought traditions of the nineteenth century and conclude that Snow did not manage to contain his twentieth-century classification? Phrased differently, is the search for the demarcation line between "the humanities" and "the sciences" flawed?

In this article I close-read Snow's work following the procedure of "diffractive reading". My goal is to come to an understanding of a philosophy of the humanities that is not predeterminedly (or rather: whig-historically, that is, falsely progressive) confined to the way in which textbook accounts of humanities philosophies and methodologies represent both the humanities as such and texts supporting its difference from the sciences. Karen Barad has developed the methodology of diffractive reading in conversation with Donna Haraway [3,4]. The latter completed the toolbox of semiotics (consisting of "syntax", "semantics", and "pragmatics") with "diffraction" in order to affirm how "interference patterns can make a difference in how meanings are made and lived" ([4], p. 14). This description of diffraction demonstrates that the aspiration is to grasp differences that cut across the well-known hierarchical patterns of capital-D Difference. In other words, while the stifled and stifling patterns of gender, sexuality, ethnicity, *et cetera*, are confirmed, also confirmed is the fact that difference is—at the same time—differently constructed and experienced. Diffractive reading, then, reads for these different differences and does so in ways that are "respectful of the entanglement of ideas and other materials in ways that reflexive methodologies are not. In particular, [the] method [is] attuned to the entanglement of the apparatuses of production, one that enables genealogical analyses of how boundaries are produced rather than presuming sets of well-worn binaries in advance" ([3], pp. 29–30). This way of reading generates constructively conceptual rather than closed hermeneutical readings of theoretical texts by reading their insights "through" one another. Hermeneutical readings can be closed because either "the text" is given a label that comes to overcode it, or its "genre" is put in a lineage based in sequential negation, or both. As such, diffractive readings—and we can infer that some readings deemed hermeneutical are in fact diffractive—shy away from relying on classification, which is considered an illegitimate importation into scholarship. The methodology can also be found outside of the context of feminist epistemology. Steven Shaviro for instance does not use the term in *Without Criteria* but makes the following succinct statement:

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[1] Whereas the German term "*Geisteswissenschaften*" seems to cut across the dichotomy between the sciences and the humanities as it stirs questions about the scientificity of the humanities, Dilthey's subsequent distinction between "*Verstehen*" and "*Erklären*" re-installs the gap and *Geisteswissenschaften* is, therefore, part and parcel of the nineteenth-century Western birth of the disciplines, notwithstanding the interest Dilthey had in sociology, which weakens the dichotomy in the same stroke [2].

> In this book, I have tried to establish a sort of relay between [Alfred North Whitehead and Gilles Deleuze], so that each of them helps to resolve difficulties in the work of the other. […] I am less concerned with *reconstructing* Whitehead's thought precisely than in delineating the outlines of the *encounter* between Whitehead and Deleuze, an encounter that changes our apprehension of both of them. ([5], p. xiv, p. 27, footnote 9; emphasis added)

Diffractive readings—which one can begin purposefully or "stumbles upon"—can free texts and insights from sedimented interpretations (prompted by "the canon") and implement de-sedimentation in such a way that texts and their insights remain available for future theoretical work on a particular topic (here: the humanities)[2]. The diffractive reading methodology allows for scholarly work to remain in movement, because it does not follow its canonical confinement or—worse—wholesale dismissal.

By choosing a diffractive reading strategy, I situate this article on the intersection of the two topics of this special issue of *Humanities*: philosophy of the humanities, on the one hand, and, on the other, theories of time and temporality. I demonstrate how—just like *life* in the late eighteenth century—it is another classical theme—namely *beauty*—that forms the hinge point of the freeing of Snow or, rather, the humanities. It will shortly become clear that I need the work of Whitehead for this and that Snow himself has paved the way for this. I evaluate the importance of my discussion for the contemporary humanities at the tail end of the article, when I discuss the following questions: what can the changing landscape of the humanities today gain from my discussion of twentieth-century canonical sources? To what extent should we argue that this landscape—with its new denominators of the "environmental", "medical", "digital", "post-human", "blue", *et cetera*, humanities—is changing at all?

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[2] Gregg Lambert has reminded me of the fact that Jacques Derrida ([6], pp. 10, 86) used "de-sedimentation" in *Of Grammatology* as something like a synonym of "de-construction" (according to which the destruction of a text or oeuvre, or an idea or set of ideas is *not* a demolition). Although the differences and similarities between diffraction and deconstruction—both in the work of Derrida and as a result of its (flawed) canonization (as a methodology)—are still to be researched, I wish to mention here that the diffractive methodology involves the deliberate or accidental study of at least two texts/corpuses at once (which could possibly lead to a dissimilarity with deconstruction) but that Barad—in a conversation with her colleagues Vicki Kirby and Astrid Schrader—moves to Derrida in her later work [7–10]. An important first observation with regards to the similarities between deconstruction and diffraction could be that whereas diffraction is explicit about its methodological status (one can purposefully begin a diffractive reading of text A and text B, as suggested by Barad; see e.g., [3], p. 232), its workings are as immanent as deconstruction's workings (one can also "stumble upon" a diffractive reading, when text B *presents itself* to the reader while immersed in the reading of text A and as *intrinsically connected to*—even *part and parcel of*—the latter text; here "intertextuality" is echoed and a study of the differences and similarities between diffraction and intertextuality is in place). The following summarizing statement by Derrida (quoted in: [11], p. 6) suits diffraction perfectly fine: "Deconstruction is not a method or some tool that you apply to something from the outside […] Deconstruction is something which happens and which happens inside; there is a deconstruction at work within Plato's texts, for instance". The quote goes well with diffraction, because as soon as a text is diffracted by another text, it has always/already been affected. My previous work has explained this with the strange temporality of Althusserian interpellation [12]. Kirby has made clear how the strange causality of Derridean *différance* can be used to the same effect (see [13], p. 292).

2. Reading Snow through Whitehead

C.P. Snow's "The Two Cultures" is the transcript of his Rede Lecture held at the University of Cambridge on 7 May 1959. The transcript has become a much and heatedly debated text—published first in the same year as the lecture was given—that is firmly secured in our collective consciousness for its description of the widening gap between scientists and literary intellectuals, and its plea for an educational reform that would close the gap so as to produce responsible scholars and citizens. Snow, himself both physicist and novelist, argued:

> Literary intellectuals at one pole—at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension—sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding. They have a curious distorted image of each other. Their attitudes are so different that, even on the level of emotion, they can't find much common ground ([14], p. 15).

Snow's frustration is with the literary intellectuals in particular; these humanities scholars (who later on became known as "theorists") do not understand processes such as the industrial and scientific revolutions, and have nothing to add to the urgent question of poverty as perceived by Snow.

In "The Two Cultures: A Second Look", Snow refers to Alfred North Whitehead's 1925 *Science and the Modern World* as one amongst a few exceptional examples of scientists embracing not only hard-core scientific issues, but also issues of worldly concern (including aesthetics) ([15], p. 53). The last chapter of *Science and the Modern World* neatly seconds Snow's concerns as we encounter Whitehead claiming:

> Another great fact confronting the modern world is the discovery or the method of training professionals, who specialise in particular regions of thought and thereby progressively add to the sum of knowledge within their respective limitations of subject. […] This situation has its dangers. It produces minds in a groove. But there is no groove of abstractions which is adequate for the comprehension of human life ([16], pp. 196–97).

Mirroring Henri Bergson, who has argued in *Laughter: An Essay on the Meaning of the Comic* that "the mind crystallising in certain grooves" ([17], p. 32) distorts sound knowledge production in a way that is *comical* owing to the fact that "a mechanism [is] superposed upon life" ([17], p. 28), Whitehead's plea is one for a different education. However, Whitehead argues not only for a socially relevant education, like Snow, but he also pushes the issue of beauty to the limit, whereupon he is enabled to formulate his educational wishes from an angle significantly different from Snow (and coming close to Bergson, whose metaphysics is based on a "creative evolution"). Whitehead's angle is particularly relevant for a project of establishing a history and philosophy of the humanities that does justice to a (changing?) humanities landscape as it seems to be able to circumvent the fact that history and philosophy of science are generally predicated on the humanities as their constitutive outside.

Mathematician, logician, and philosopher, Whitehead draws attention to the fact "that we neglect to strengthen habits of concrete appreciation of the individual facts in their full interplay of emergent values, and that we merely emphasize abstract formulations which ignore this aspect of the interplay of diverse values" in the educational context ([16], p. 198). Thus—and here my diffractive reading takes flight—whereas Snow ([14], p. 22) stresses "how beautiful the thinking is" of the physicists and Nobel Prize laureates T.D. Lee and C.N. Yang[3] in terms of the violation of "[i]ntuition, common sense" ([14], p. 22) thus prompted, Whitehead upholds an opposite take on intuition by claiming it to be the preferred alternative to intellect and common sense alike in the Bergsonian sense. (Bergson has famously argued that rational objectification as well as habit "spatialize time" and have no eye for the fact that the temporality of phenomena may materialize in a myriad of ways, wherefore linear time and the teleology implied reduce the durational phenomena under study.) Albeit that Whitehead, in *Science and the Modern World*, is ambiguous about the relation of his own work to Bergson's (see e.g., [16], p. 52), his Bergsonism is not only to be found in the distinction of intellect and common sense, on the one hand, and intuition, on the other. He also argues that "the very nature of things" consists of "the spirit of change" and "the spirit of conservation", which is to say that "[t]he character of existent reality is composed of organisms enduring through the flux of things" ([16], p. 201). This comes close to Bergson's "upward" and "downward" movements expressed in *Creative Evolution* and *The Creative Mind* [19,20][4]. Whitehead's plea is that "[t]he center of gravity of the other side of training should lie in intuition without an analytical divorce from the total environment" ([16], p. 199). Deeming this total environment *originary*, Whitehead makes a case for schooling in art and aesthetics, because "[g]reat art is the arrangement of the environment so as to provide for the soul vivid, but transient, values" ([16], p. 202). This is how Whitehead, standing on the brink of a new phase in his work (*cf.* [22], p. 114), wanted to interfere in the problem of minds in a groove, the problem, that is, of the two cultures.

Snow associates beauty with the simplicity of the physics theorem, while Maura C. Flannery, for example, has argued that beauty (in biological science) can be intensity, complexity, unity, form, or rhythm [23], and Whitehead too is explicit about the reductive nature of the notion of beauty that we came across in the work of Snow. First of all, Shaviro has remarked that in Whitehead a certain *reductionism* underlies a statement about "the beauty of [physics] theorems, the elegance and internal self-consistency of its mathematics" ([5], p. 15). This kind of privileging of beauty seems to deeply subvert the common-sense epistemology of natural science as representing the theory and practice of neutral and distant scholarship, but when the privileging proves to be so central, have we actually thought through how the beautiful affects our notions of truth and objectivity?[5] This question goes further than historical studies of science allow us to go, because, whereas these studies prove the messiness of (f)actual scholarship[6], they often assume a projectivism (*instead of* an objectivism)

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[3] Lee and Yang got the Nobel Prize in 1957 for proving the violation of the fundamental and purportedly absolute law of parity conservation. See [18].

[4] The relation between Bergson and Whitehead is contested, as can be concluded from [5,21,22].

[5] See for a recent discussion [24].

[6] Steven Shapin calls this how science is "never pure" [25].

that generates an unreal opposition between the impact of beauty and a deeper layer of theorization. An example can be found in James W. McAllister's *Beauty & Revolution in Science*:

> I presume that the value to which the aesthetic appreciation of scientific theories refers does not reside in the theories themselves but rather is projected into theories by individual scientists, scientific communities, and observers of science. This amounts to the claim, which I think is very plausible, that we cannot fully describe a scientific theory's aesthetic value without referring to the effect of properties of that theory on scientists or other observers ([26], p. 31).

What we see here is that whereas the theories themselves are deemed agential (theories are agents which have an impact on scholars and the general public, following Barad's definition of the agential contributions of "a host of material-discursive forces—including ones that get labeled 'social', 'cultural', 'psychic', 'economic', 'natural', 'physical', 'biological', 'geopolitical', and 'geological'—that may be important to particular (entangled) processes of materialization", see [3], p. 66), they are also shielded from aesthetic appreciation. In the end, a theory itself has nothing to do with aesthetics. According to Whitehead's attempt at non-reductionism, language is a fundamentally creative process that asks for a pluralist rather than a static perspective ([5], pp. x–xi). Accordingly, we might ask how the theorems of physics are able to contain what we presume they fully capture. Thus, second of all, "'beauty' and 'creativity' are for Whitehead entirely generic notions" that "apply univocally and indifferently to all entities and to all forms of existence" ([5], p. 155). Locking up beauty in artificial (static) language, like Snow does and McAllister too, is not a solution to the problem of the two cultures, but rather its foundation. The question of beauty is, for Whitehead, an intuitive and—to use a term of Félix Guattari [27]—"transversal" one.

Where Snow endorses a reductive take on the intuition—common sense—intellect triad, upholding "beautiful" intellectualism at the expense of intuition (and common sense), we see the first signs of him keeping up the binary that he set out to shift (a shift that this article attempts to push to the limit). In "The Two Cultures", as well as "A Second Look", Snow reflects upon the problem of dualism in an attempt to undo the suggestion of his own argument being bewitched by the power of dialectics. However, it is only by reading Snow and Whitehead diffractively that the bottom of this issue is reached. After all, it is the *performative* nature of any academic practice that is taken advantage of in a diffractive reading, whereas a *reflection* implies a gesture that is itself dichotomous in terms of the word-world and subject-object relations, as well as in terms of quarrelling philosophical schools. A reflection (subject, word) is never enough should one wish to shift the (oppressive or liberating) power a certain structure might have over one's writing. The only option is the plunge into reality, going along with writing as a creative activity that embraces the total environment, instead of considering it to be a representational activity that presupposes the possibility of neat linguistic capturings of "this" or of "that" (object, world). This also shifts the notion of reflection, the conclusions of which must be affirmed as always/already carried away by the creative force of reality and the writing practice. We will soon see that it hasn't been enough for Snow to claim repeatedly that "[t]he number 2 is a very dangerous number: that is why the dialectic is a dangerous process" ([14], p. 18; [15], p. 55).

Snow's argument centers on his ethnographical insight in the two exclusive communities of scientists (exploring nature) and humanists (exploring and bringing forth culture). When he describes the impoverishment of the latter, he states:

> They still like to pretend that the traditional culture is the whole of "culture", as though the natural order didn't exist. As though the exploration of the natural order was of no interest either in its own value or its consequences. As though the scientific edifice of the physical world was not, in its intellectual depth, complexity and articulation, the most beautiful and wonderful collective work of the mind of man. Yet most non-scientists have no conception of that edifice at all ([14], p. 21).

Albeit actively searching for messiness and even possibly discovering what I will below call a "metaphysics of naturecultures", this quote demonstrates that Snow remains attached to what Whitehead in one of his Tarner Lectures from 1919, also held at Cambridge, coined is "the bifurcation of nature". In the citation, Snow lays out a strong idealism and anthropocentrism. After having engaged with Whitehead's *Science and the Modern World*, it is hard to conceive of the benefits of teaching humanities scholars about value as *imposed on* a near-mute natural world and the mind-centeredness of projecting beauty into scientific theories. The affirmation of the exploration of the natural order "in its own value or its consequences", *potentially* paralleling Whitehead's take on value as "*belong[ing] to the order of nature*" ([22], p. 157; emphasis added) instead of being "paradigmatically human" ([22], p. 156), has not been pushed to the limit by Snow. He wrote "A Second Look" in part because he had been accused of showing approval for the observed distribution between natural science and the humanities. How can the work of Whitehead bring Haraway's "more promising interference patterns" ([4], p. 16) to Snow's influential thesis? For including the fleshing-outs of natureculture metaphysics in a history and philosophy of the humanities it is not enough to look at Snow alone. We will have to be attentive to Whitehead's self-positioning too. What does it mean that Whitehead says that "'[v]alue' is the word I use for the intrinsic reality of an event" (quoted in: [22], p. 156)?

3. From a Natural Philosophy…

In "Theories of the Bifurcation of Nature", the Tarner lecture as published in the 1920 essay collection *The Concept of Nature*, Whitehead differentiates between the extreme and intermediate forms of bifurcation theory. The extreme form makes use of a strict causal model that revolves around "mind" and "nature". Whitehead observes that it apparently proves to be extremely difficult to consider nature in its totality. There are always "two natures" or "two divisions, namely […] the nature apprehended in awareness and the nature which is the cause of awareness" ([28], pp. 30–31). In causal terms, Whitehead talks about two different tracks following the example of a confrontation with a fire:

> Unless we produce the all-embracing relations, we are faced with a bifurcated nature; namely, warmth and redness on one side, and molecules, electrons and ether on the other side. Then the two factors are explained as being respectively the cause and the mind's reaction to the cause ([28], p. 32).

A natural scientist led by bifurcation theory is only to go into "the cause of the fact of knowledge" ([28], p. 32) and, therefore, she works from a fundamental idealism as she assumes to have mind on one side—a mind that can only deal with its own products, which is a Kantianism—and nature on the other. This is another way of saying that we can only go into "relata" ([28], pp. 33, 35), whereas Whitehead himself wants to express how "[b]eings do not preexist their relatings" ([29], p. 6), *all-embracing* relations.

Whitehead argues that "there is but one nature, namely the nature which is before us in perceptual knowledge" ([28], p. 40). Albeit that *The Concept of Nature* differs significantly from *Science and the Modern World*, the beginnings of the notion of the "total environment" as originary are discernable in the former too, as Isabelle Stengers infers that in the former publication,

> [n]ature is […] neither knowable—definable, for instance, as a system of relations between entities—nor unknowable, the famous "mute reality" upon which we project human, linguistic, or social categories. […] Nature is that about which relevant knowledge may be produced. If we pay due attention to it, we can learn, discern relations, and multiply entities and ratios ([22], p. 106).

Whitehead does not work with a foundational knowing subject ("mind"). He is interested in "situating the mode of attention that gave rise to the bifurcation of nature in a way that verifies that it is always possible to discover more in nature, but without ever discovering in it that which would enable what is known to be 'explained'" ([22], p. 107). In the work of Whitehead, ontology and epistemology are fundamentally intertwined, which stirs what Barad has called an "onto-epistemology" [3]. His aversion to explanation is based in its dualist character. (Here we see that Whitehead moves beyond the Bergsonian intellect—common sense—intuition triad; Whitehead affirms intellect too because it can be reconfigured following the answer to the question: what did a certain intellectual stance have to assume in order to have materialized as such? Since the unraveling of this assumption will always uncover a certain embodied situation, Whitehead is able to affirm intellectualism).

The intermediate form of bifurcation theory is what Whitehead summarizes as "the theory of psychic additions", which leads us back to McAllister's interpretation of beauty as projected into theories. The intermediate form of bifurcation theory is founded upon the Cartesian/Lockian distinction between primary and secondary qualities and assumes that "the nature we are discussing is always the nature directly known", which is celebrated by Whitehead, but at the same time, unfortunately, "it holds that there are psychic additions to nature as thus known, and that these additions are in no proper sense part of nature" ([28], p. 42). It is important for our discussion that Whitehead phrases the former in terms of space, time and matter—that which is configured according to "spatiotemporal positions" ([28], p. 43), or Euclidian grid lines [30]—and the latter in terms of "artistic additions of colour, warmth and sound" ([28], p. 43). Here we see, not only the historical and systematic origins

of the "crude materialism" that triggered eighteenth-century Romanticists and nineteenth-century vitalists—a materialism that is a non-exhaustive opposite of idealism—but also how philosophies of science have made the humanities into their own and their object's constitutive outside (the extreme form of bifurcation theory) or their inferior Other (the intermediate form).

Whitehead's reflections on the bifurcation of nature apply to his plea for "natural philosophy" instead of scientific philosophy or philosophy of science as we know it. The latter are mind-centered enterprises, whereas Whitehead, who still claims to be anti-metaphysical here, insists on a philosophy that embraces "the coherence of things perceptively known" ([28], p. 29) and positions itself *in* reality so as "to discuss the relations *inter se* of things known, abstracted from the bare fact that they are known" ([28], p. 30). It is here that we find a take on the adjective "natural" that is not based on the exclusion of the artistic. Such exclusion covers the seductively scientific: fixed space and time, and mute matter. However, Whitehead says that "data as they occur in the scientific laws do not relate all the entities which present themselves in our perception of nature. For example […] it leaves out colour as perceived" ([28], p. 46). It is apparent, then, that Whitehead does not fall back onto dualism, but rather pushes every philosophy—the philosophies of natural science and of the humanities included—to a natural philosophy[7].

By ascertaining how nature *involves* the artistic (color, sound, texture, *et cetera*), Whitehead circumvents any dualist remainder. Nature pertains to that which is studied by natural science and the humanities, not as schismic, but *in their entanglement*. And since this "one nature" is *prior* to or *beneath* emergent scholarly, societal, and aesthetic values (including classificatory renderings of scholarship, unequal power relations, and matters of taste) because it is or expresses value *itself*, Whitehead can easily affirm that "[t]he real question is, When red is found in nature, what else is found there also?" ([28], p. 41). When the sky turns red, what happens on an affective and on a celestial and electromagnetic level? And when we see the workings of two patches of red on a canvas, what is aesthetically and luminescently at work?

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[7] It is with an alluring 1801 quote of Friedrich Wilhelm Joseph von Schelling that Whitehead ends his exposition: In the "Philosophy of Nature" I considered the subject-object called nature in its activity of self-constructing. In order to understand it, we must rise to an intellectual intuition of nature. The empiricist does not rise thereto, and for this reason in all his explanations it is always *he himself* that proves to be constructing nature. It is no wonder, then, that his construction and that which was to be constructed so seldom coincide. A *Natur-philosoph* raises nature to independence and makes it construct itself, and he never feels, therefore, the necessity of opposing nature as constructed (*i.e.*, as experience) to real nature, or of correcting the one by means of the other (quoted in: [28], pp. 47–48). Should one decide to construct a genealogy of the contemporary humanities based in natureculture metaphysics, inclusion of Romanticism must therefore be secured.

Thus, Whitehead also upholds a strong belief in science. He "assume[s] as an axiom that science is not a fairy tale" ([28], p. 40) but is not susceptible to anything ascribed by Snow to the men of science or, alternatively, to Snow by us. In fact, the case of Whitehead, in both practice and theory, diffracts Snow's account because Whitehead is himself a scientist that does not buy into the do's and don'ts of his supposed culture[8] and, on a more fundamental level, he should not be asked whether he has ever read Shakespeare ([14], p. 22) because his engagement with science *is* his engagement with art, precisely *because* his engagement with science is an engagement with one nature, the embrace of the total environment as originary. Whitehead demonstrates how Snow's suggestion that "the scientific edifice of the physical world [is] the most beautiful and wonderful collective work of the mind of man" is predicated on an impoverished take on natural science and nature *per se* and that Snow's solution of the two-culture problematic is also impoverished, or even non-existent, as it is not played out on the onto-epistemological level. Beauty cannot only be in, or of, the theorem.

Snow states that "[t]he scientific process has two motives: one is to understand the natural world, the other is to control it" ([15], p. 56). Apart from the fact that the humanities are completely left out here, this statement confirms a dialectic between fundamental and applied science[9]. It should also be noticed that Snow's model is one of explanation (*Erklären*)—predicated on subject-object and word-world distinctions—whereas Stengers puts it differently in *Thinking with Whitehead*:

> Where scientific materialism postulates localized entities as the ultimate reference for all explanation, the philosophy of the organism [which is how she refers to Whitehead's work in this quotation] will ask that the concepts to be constructed exhibit the way nature "explains itself" ([22], p. 144).

Whitehead works with a much more expansive starting point *vis-à-vis* Snow. When nature explains itself (*cf.* [9]), there is no room for *a priori* distinctions. Snow, however, is convinced of the fact that a "clashing point between two subjects, two disciplines, two cultures" generates creativity and that there is little of such clashing happening around him ([14], p. 23). Here we see that Snow employs a logic of relata and that Whitehead's one nature or total environment is nothing but an afterthought or consequence for Snow. The latter's discussion of the work of those literary intellectuals that *have* tried to understand industrialization by immersing themselves in nature—Henry David Thoreau's 1845–1847 Walden experiment is an example Snow mentions pejoratively ([14], p. 28)—makes clear that Snow considers it to be impossible to encounter the industrial (or the

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[8] Whitehead strongly compromises the famous idea about "scientific communities" of Thomas S. Kuhn (see [31])—which is related to Snow's "cultures"—when he states of minds in a groove that "[t]his criticism of modern life applies throughout, in whatever sense you construe the meaning of a community. It holds if you apply it to a nation, a city, a district, an institution, a family, or even to an individual. There is a development of particular abstractions, and a contraction of concrete appreciation. The whole is lost in one of its aspects" ([16], p. 197). This demonstrates that purely descriptive historical work on paradigm-sharing scientific communities is never enough or always/already partial as in "biased".

[9] As it happens, Snow states that "technology is the branch of human experience that people can learn with predictable results" ([14], p. 40). Note that this sentence was written around the same time as Gilbert Simondon formulated his ideas about the fundamental *unpredictability* of technological progress [32]. According to the latter, the potentials of human/non-human, organic/inorganic systems only get to be determined when clicking together.

artificial, the artistic) in nature. Thus, in conclusion, whereas Snow points forward to a "third culture" of socially relevant scholarship in the fields of among others social history, political science, and "social arts such a architecture" ([15], p. 58)—which reminds me of the actualized scholarship boosted by the liberalization of Higher Education around May 1968—it would have been more beneficial for him to follow up on his own reference to Whitehead, who situates nature, as it were, as a forethought. This is not to say that Whitehead has been pushed to the limit in my discussion (*cf.* [22], p. 111), but, then again, that was not my concern. It has been my concern in this article to demonstrate how his modest and early-career "nature [is] what we are aware of in perception" ([28], p. 28) revolutionizes Snow's "two cultures" with their grooved minds on the most fundamental level and stimulates, what can be called, a "non-reductive naturalism", an umbrella concept that serves a natureculture metaphysics.

4. …through the Study of Beauty…

The consequences of Whitehead recommending the study of art are similar to how his take on the beautiful ultimately cracks the code of Snow and affords a generous engagement. Snow's reductive notion of beauty lays bare how he falls back onto various dualisms, whereas Whitehead is able to propagate *by way of an answer to Snow's problematic* what Haraway has called "naturecultures" and Bruno Latour "collectives" via the (projected!, not undertaken) study of art [29,33][10]. Art is affirmed here to be quintessential to shaking off what prevents us from reaching the nature "that we are aware of in perception". Through an art work, as no other, we encounter nature as one—a nature that is mind-independent (exit extreme form of bifurcation theory) and includes what used to be called primary and secondary qualities (exit intermediate bifurcation)—because a work of art makes itself known *from* the total environment that is originary. With Whitehead, the fact that art has become overcoded as Culture with a capital C (art as an allegorical affair which can only be appreciated when its metaphors can be understood and explained) becomes as reductive as physics theorems because "[a]esthetics precedes cognition" ([5], p. 16) in natural science *and* the humanities. The encountering of an artwork thus precedes the meanings that make a work a piece of art worthy of scholarship (*cf.* [35]).

As an intuitive habit[11], aesthetic experience in Whitehead revolves around the notion of value. Stengers affirms that Whitehead's take on value—precisely one of those notions that we usually consider to be of Human origin or to be constitutive of the exceptionally Human—has to be integrated in the order of nature ([22], p. 156). She explains: "Value is required by an author capable of using the same term, whether in reference to an electron, a living organism, or an industrial firm. The organism has now come into contact with its requisites" ([22], p. 157). In other words, value has nothing to do with transcendence or psychic additions; rather, it is the condition of possibility of

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[10] Somebody who has undertaken such a study is Whitehead's student Susanne K. Langer. See, e.g., her 1953 book *Feeling and Form*, which is dedicated to Ernst Cassirer [34]. Later in this article it will become clear that this reference to Cassirer is food to future diffractive readings or we can conclude that Langer's book itself is a diffractive reading of Whitehead and Cassirer.

[11] Note that Whitehead also shifts the pejorative rendering of habit that we find in the work of Bergson. However, we must not forget that the famous reconfiguration of habit by Félix Ravaisson [36] has been appreciated by Bergson, an appreciation we find in the latter's lengthy *in memoriam* of Ravaisson written in 1904 (see [37]).

concept formation unaffected by dualism (*cf.* [38]). Value "is what is realized by all that exists, in the sense that what exists succeeds in enduring, succeeds in maintaining its individual way of gathering-together, that is, of making things hold together in a determinate way. Value indicates success in and for itself" ([22], p. 157)[12]. The active work of art (not the Subject or its supposed opposite of the mute object) is paradigmatic here as this work stands out in the total environment and preserves itself; it is the perfect example of a Whiteheadian "enduring object" ([5], p. 18) or what Latour calls, with reference to the sciences, an "immutable mobile" [40]. The work of art exhibits a gathering-together of everything that we are prone to singling out as ingredients put in *inter*acting boxes by the skillful artist or the masterful scholar. Therefore, the gathering-together is *prior* to or *underneath* the differentiation that unquestionably happens when the artwork affects a viewer (whether a scholar or not)[13].

The gathering-together produces something enduring or immutable through the *intra*-active[14] workings of color patches on a canvas, oxidized bronze for a sculpture, or words in a poem. Such a process of actualization does not contradict the originarity of what happens *inter se* relating luminescent patches, molecules, or words. The gathering-together provokes the enjoyment of vivid values. Whiteheadian process scholar William Dean, for example, states about a poem of William Carlos Williams:

> The problem confronted by such a poem is not that of understanding, of explanation or of establishing the rational relation among the logical subjects—wheelbarrow, rainwater, and white chickens. Rather, the problem is that of sheer knowledge, of how to accede linguistically to the aesthetic value in the sheer relationality and facticity before one's eyes ([42], p. 109; *cf.* [43], pp. 51–53).

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[12] Lambert calls this gathering-together "the creation of a territory with the work of art" [39].

[13] Étienne Souriau explains that this process is also at work in the studio of the artist. Making a sculpture, the artist does not plan, but rather, *encounters* his work: "A pile of clay on the sculptor's base. An undeniable, total, accomplished, thingy [*réique*] existence. But nothing of the aesthetic being exists. Each hand or thumb pressure, each stroke of the chisel accomplishes the work. Don't look at the chisel, look at the statue. With each act of the demiurge the statue little by little breaks out of its chains. It moves towards existence—towards the existence that will in the end blossom into an existence that is intense, accomplished, and actual. […] Often there is no warning: up to a certain point the finished work is always a novelty, discovery, or surprise. So that's what I was looking for! That's what I was meant to make!" (quoted in: [41], p. 310).

[14] A term coined by Barad [3].

Enjoying vivid values comes with perception. But this perception does not start in the mind, or from the Human, as there would be nothing to take account of without the active involvement of the piece of art[15]. The proposition that reveals itself in this process is perceptual knowledge or that what we are aware of. Gathered together and thus standing out in the total environment, Williams' poem with its intra-acting words *makes a mark* and even the viewer qua viewer is a result of this process, again and again. This self-explanatory nature is not dependent on a Subject for the marking ("This work of art represents…") nor are we looking at an external, purely contingent, meaningless physicality (no mark, no perception; no perception, no mark). (Here and now we are knee-deep in Whitehead's philosophy and can only recognize the inclusive level from which Snow's distinctions have come about).

Rightly, Shaviro, in *Without Criteria*, situates such Whiteheadian work on the level upon which stalemated subject, instrument, and object are mangled (onto-epistemology) and he goes as far as claiming that "[i]n the vast interconnections of the universe, everything both perceives and is perceived" ([5], p. 27). Perception, therefore, gets an expansive meaning:

> Clear and distinct human sense perception […] is one sort of prehension. A new entity comes into being by prehending other entities; every event *is* the prehension of other events. All this applies […] not only to the encounter between subject and object, but also to encounters between one object and another, as well as to what is commonly called the "identity" of the individual subject ([5], p. 29).

Shaviro explains that this inclusive "prehension", which is at the basis of the gathering-together, does not prompt a "representational correspondence between ideas and things" ([5], p. 144, footnote 1), but that "adequacy is a goal that we will never fully reach" ([5], p. 145; *cf.* [46], p. 43)[16]. As a goal, "[a]dequacy has to do with extension […] it continually needs to be constructed, in the ongoing process of philosophical speculation" ([5], p. 144, footnote 1) and, by implication, in all ongoing naturalist processes.

It is here that we have to position Shaviro's endorsement of the Kantian beautiful, at the expense of the latter's sublime. The beautiful is not about "the rupture of appearances and the emergence of a traumatic 'Real', but rather [about] the 'purposeful adaptation of Appearance to Reality'" ([5], p. 160).

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[15] Again, this process is also at work at the poet's desk. As Virginia Woolf wrote in *Orlando*: "He was describing, as all young poets are for ever describing, nature, and in order to match the shade of green precisely he looked (and here he showed more audacity than most) at the thing itself, which happened to be a laurel bush growing beneath the window. After that, of course, he could write no more. Green in nature is one thing, green in literature another. Nature and letters seem to have a natural antipathy; bring them together and they tear each other to pieces. The shade of green Orlando now saw spoilt his rhyme and split his metre. Moreover, nature has tricks of her own" ([44], p. 5). It must have been for this reason that Geoffrey H. Hartmann wrote in his article "Virginia's Web": "Nature […] is one in which the artist participates" ([45], p. 27).

[16] Note that the insertion of neo-Kantian philosopher Cassirer pertains to another diffraction offered by this article. I will argue elsewhere that just like Cassirer's philosophy of technology fits process-philosophies of technicity (*cf.* [47]), his "logic of the cultural sciences" fits the philosophy of the humanities such as it is developed in this article [48]. The important point being that this is *in spite of* the neo-Kantianism according to which his work is usually classified.

This "*performative* correspondence" [47] allows for underlining how the beautiful is ultimately about, in Kantian terms,

> […] a judgment of taste [that] involves an uncoerced *response*, on the part of the subject, to the object that is being judged beautiful. Aesthetic judgment is a kind of *recognition*: it's an appreciation of how the object "adapts itself to the way we apprehend it", even though, at the same time, it remains indifferent to us ([5], p. 2; emphasis in original).

Shaviro continues by stating that this "adaptation" must be read as a Darwinian notion exemplified by the "response-ability"[17] of the orchid and the wasp, an example that has been made famous by Gilles Deleuze and Félix Guattari and stems from the work of evolutionary biologist Rémy Chauvin, who was, as a matter of fact, highly critical of the work of Charles Darwin [51]. During a process of adaptation, "the object *lures* the subject while remaining indifferent to it; and the subject *feels* the object, without knowing it or possessing it or even caring about it" ([5], p. 5; emphasis in original)[18]. The active role of the non-human in the so-called "judgment of taste" has now been secured: both humans and non-humans are response-able and this relationality can be both inter- and intra-species (*cf*. [49]). Shaviro makes the role of beauty in the break-through of dualisms on the level of concepts, methodology, and schools of thought precise. Putting an end to Cartesianism, positivism, and linguistic constructivism alike, Shaviro's work on the Immanuel Kant of the *Third Critique*[19], on Whitehead, and on Deleuze is all about the intertwinement of how and what we know. That *what* we know is intertwined with the *world* makes all of the thinkers just listed into "secular and naturalistic [thinkers according to whom] empiricism is ultimately correct: all our knowledge comes from experience, and there is nothing outside experience, or beyond it" ([5], pp. 23–24).

5. …to Non-Reductive Naturalism in the Humanities

The Darwinian reference—albeit controversial in a natureculture context since often classified along the lines of a crude materialism and a linear teleology—is worth following up as it can provide the jump to the contemporary humanities that I announced in the beginning of this article. First, McAllister has argued that "Darwin felt aesthetic pleasure in viewing scenes in nature as [an intricate network of relations among organisms]" ([26], p. 20). This resembles Whitehead's originary total

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[17] This concept is Derridean, Harawayian, and Baradian [8,49,50].

[18] Throughout his book Shaviro is keen on highlighting that he is not on the side of the speculative realists/materialists or object-oriented ontologists, for that matter. For instance, he affirms that "[t]he aesthetic subject does not impose its forms upon an otherwise chaotic outside world. Rather, this subject is itself *informed by* the world outside, a world that (in the words of Wallace Stevens) 'fills the being before the mind can think'" ([5], p. 13; emphasis in original). The point here is that the speculative realists/materialists would label this a "correlationist" argument (a label that is negatively evaluated) based on Shaviro's inclusion of the aesthetic *subject*. Shaviro explicitly reads Whitehead as a theorist of "subjectivity as embedded in the world. The subject is an irreducible part of the universe, of the way things happen" ([5], p. xii).

[19] Cassirer talks about value and Kant too, but his Kant is a wholly different Kant ([48], p. 104). This demonstrates that a diffractive reading does not entail the smoothing out of important differences or tensions.

environment. Second, in *Becoming Undone*, Elizabeth Grosz comes to the study of beauty by way of her fascination for the work of Darwin as diffracted with Luce Irigaray's feminist philosophy. Irigaray is "with perhaps Deleuze alone" said to push to "the terms by which we understand our existence as beings in a world larger than ourselves, a world not entirely of our making, whose limits and constraints provide the very limits and constraints of thought itself" ([52], p. 99). In line with Whitehead again, Grosz argues that the push to such a world in humanities scholarship "is not alien to a Darwinian understanding of natural and sexual selection and is actively confirmed by [Darwin's] claims more than perhaps those of any other theorist of the nineteenth and twentieth century" ([52], p. 104). If nineteenth-century Darwin actively confirms the twentieth-century Irigarayian insight that "nature itself is sexed, made up of (at least) two types of being, two forms of incarnation, two types of sexuality and morphology, two types of activity and interpretation" ([52], p. 104), the oeuvre of Darwin extends beyond itself. It is no longer just to be considered along the progressively linear lines of Darwin leading to socio-biology and sociobiology leading to evolutionary psychology (EP), on the one hand, and twentieth-century and contemporary feminists reconfirming socio-biology and EP by negation, on the other. Grosz makes clear that whereas socio-biology and EP thrive on crude materialism and feminist theory on idealism (*cf*. [53], p. 58), both are grafted upon a(n exclusion of a) Darwinism that, together with Irigaray and Deleuze, affirms that

> [n]ature itself is dynamized, historical, and subject to dramatic change. Sexual difference remains the most creative and powerful means by which this transformation is brought about. It is the means by which the natural cultivates culture, rather than culture cultivating nature ([52], p. 168).

Dynamic nature, in other words, is originary and sexual differing moves the ever-changing marking exercise that is the motor of nature as always/already dynamic. Sexual bifurcation is not, once again, naturalized.

Grosz's work hinges on the insight that Darwin's "[s]exual selection may be understood as the queering of natural selection, that is, the rendering of any biological norms, ideals of fitness, strange, incalculable, excessive" ([52], p. 132). The process of "queering" in this fragment does not uncover presentism on the side of Grosz. Whereas queer theory as a conceptual field is localized in the here and now, its actualized form references not at all a thorough excessiveness in the biological, the cultural, let alone the biocultural sense. "Queer" *can* signify a sexual selection that goes beyond "gene maximization, of the selfish gene's interest in its own perpetuation" ([52], p. 129) as well as beyond identity politics, which is a selection that demonstrates how biology and culture are predicated upon one another:

> Homosexuality, like racial diversity or difference, […] is one of the many excesses that sexual selection introduces to life, like music, art, and language, excesses that make life more enjoyable, more intense, more noticeable and pleasurable than it would otherwise be. ([52], p. 131)

Nature explains itself: sexual selection introduces "aesthetic value in the sheer relationality and facticity before one's eyes". Of course, a well-known example pertains to the peacock's feathers, "an impressive display of beauty" ([52], p. 128)[20].

And indeed, *Becoming Undone* closes with an analysis of art, albeit not in the incarnation of "Darwinian lit crit". Grosz brings in aboriginal art as it is anti-representationalist, yet fully situated and visionary; it asks of its viewers to become *with* the work and, as such, this "[a]rt denaturalizes life" ([52], p. 189) as much as it deculturalizes culture, we could add (*cf*. [55]), as we are not supposed to be reverted back to idealism. Aboriginal art is the art that endures and opens up to the total environment of the Australian land. Grosz claims that "[i]n the work of Aboriginal artists, art becomes ontology" ([52], p. 190; *cf*. [56]). What is particularly striking about Grosz's analyses of the artworks of Doreen Reid Nakamarra and Martu women is how the lines, the paint, and the pictorial elements; sand dunes, hills, lakes, and waves function precisely like those elements that Dean mentioned in his Whiteheadian poetry analysis. The so-called elements are not the relata, but what happens is that the art works express sheer *relating* in such a way that what happens on the canvas or the paper is "not in opposition to science, however one may understand this term, but as its underside, as its intuitive complement" ([52], p. 190). It is once again one nature that is originary as it is from here that the colored lines and patches gather together.

In *The Art of Evolution*—a book illustrating the intricate interwovenness of science and art around 1890—Phillip Prodger cites Darwin's take on the matter. The following sentences were published in the fifth edition of *The Origin of Species* from 1869, but had been cooked up in 1838–1839 when Darwin was about to finish the first edition of his world-famous book:

> […] the sense of beauty obviously depends on the nature of the mind, irrespective of any real quality in the admired object; and […] the idea of what is beautiful, [is] not innate or unalterable. […] If beautiful objects had been created solely for man's gratification, it ought to be shown that before man appeared, there was less beauty on the face of the earth than since he came on stage. (quoted in: [57], p. 51)

Darwin's first sentence appears to be an anthropocentrism; however, Darwin's entire work centered on "the animal origins of the most complex human mental functions" instead of "ascribing human values to animals" ([57], p. 55). Therefore, it is just like the second sentence a meditation on the *indifference* of the object according to which it is *only* in the encounter happening in the total environment that a judgment of taste makes for something that stays. When we are confronted with an object from a time before man ("archefossils", to speak with Quentin Meillassoux in [58]) and judge it as beautiful, this is proof of the non-linear spatiotemporality of the total environment that we find in art. The endurance of the object is precisely that which is inexpressible in a purely scientific formula—*pace* EP—because such formulae are based on culture as an outside or Other, and on language as deceptively static. (The question is of course to what extent such formulae are scientific and who provides them with that status as histories of science univocally showcase the messiness of scientific practices.)

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[20] Grosz alludes at times to the sublime, for instance when she describes her response to aboriginal art "[l]ike when before huge natural wonders, we are perceptually dwarfed" ([52], p. 200). See also [54].

6. Conclusions

For one thing, the attempt to avoid both idealism (the resulting man-made representations come to stand for the thing) and crude materialism (consequentially materials are merely mute objects or resources) suits the contemporary humanities well. The disciplined humanities have always distinguished themselves from a *scientistic* crude materialism, but this argument got them caught up in Snow's "two cultures". In other words, the dualist rendering of the matter and message of art in interpretative work that privileged the "message" over the " matter" reveals that this separation has not allowed humanities scholars to go to the bottom of things (*cf*. [59,60]). In an attempt not to give way to anything crudely material, the Culture-centered humanities have become susceptible to idealism by privileging the linguistic process, because the message of an artwork is supposed to come and to be decoded from a humanist mastermind upon which matter remains mute (here, too). Humanities scholarship that embraces inclusive nature, *i.e.*, that *starts from what is before the eyes of the humanities scholar* in an attempt to follow Whitehead's take on empiricism instead of a take on empiricism (positivism) that follows the logic of the two cultures is scholarship that affirms the originary entanglement of matter and meaning, whether conceptualized as "humanicity" [9], "technicity" [61], "feminicity" [62], "alphabeticity" [63], or, simply and along the lines of this article, nature. It is this kind of scholarship that evokes an inclusive genealogy of the humanities that is no longer (in the words of C.P. Snow) "bewitched by the power of dialectics".

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Conflicts of Interest

The author declares no conflict of interest.

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“Imagining What We Know”: The Humanities in a Utilitarian Age

Paul Keen

Abstract: This paper explores the ways that critics writing in the early nineteenth century developed arguments in favor of what we think of today as the humanities in the face of utilitarian pressures that dismissed the arts as self-indulgent pursuits incapable of addressing real-world problems. Its focus reflects the extent to which the financial crisis in our own day has manifested itself in a jarring shift in research priorities towards applied knowledge: a retrenchment which has foregrounded all over again the question of how to make the case for the value of the humanities. These problems, however, also constitute an important opportunity: a chance to re-imagine our answers to questions about the nature and role of the humanities, their potential benefits to contemporary life, and how we might channel these benefits back into the larger society. The good news is that in many ways, this self-reflexive challenge is precisely what the humanities have always done best: highlight the nature and the force of the narratives that have helped to define how we understand our society—its various pasts and its possible futures—and to suggest the larger contexts within which these issues must ultimately be situated. History repeats itself, but never in quite the same way: knowing more about past debates will provide a crucial basis for moving forward as we position themselves to respond to new social, economic, technological, and cultural challenges during an age of radical change.

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1. The Present Crisis

For those of us working in the humanities it is, as Charles Dickens famously said, the best of times and the worst of times. The digital revolution has manifested itself in a range of cultural changes that are in many ways far more radical than the ones unleashed by the invention of the printing press over five hundred years ago, and they have made their presence felt far more swiftly. Where those earlier changes took centuries before their impact was fully realized, the digital revolution has redefined our communicative world in decades. And whereas the invention of moveable type preserved the basic form of the codex, the digital revolution has altered the most fundamental ways that it is possible to think about the materiality of writing, and about the relation between books and texts. Its interactive possibilities have also forced us to reimagine our ideas about the relationship between authors and readers, and between the individual reader and the reading public (or publics) to which he or she may feel they belong. Never before has a generation lived through such extraordinary technological and cultural changes.

Nor are these changes limited to those emerging creative and critical forms that have become known as digital humanities. The advent of new technologies and the new forms of textual community they enable have cast those earlier technologies of writing associated with manuscript and print

culture in an exciting new light by helping to expose many of the assumptions that had, until the last couple of decades, been so thoroughly naturalized that they resisted critical analysis. As critics such as Adrien Johns and Andrew Piper have argued, becoming more attuned to the historical arbitrariness of these technological achievements (the fact that their history did not unfold in any preordained way) has made us newly aware of the kinds of ideological work that were required in order *not* to think about the many forms of mediation (cultural, political, technological, educational, economic) that had naturalized these earlier forms of textual production [1,2]. As a result of these changes in our own day, we have very rapidly grown used to thinking in far broader terms about the kinds of infrastructure that lurk just beneath the surface of the production, circulation, and reception of the books whose material reality earlier critics tended to dismiss in order to concentrate on the literary richness of the ideas they contained. Predictions of "the death of the book" (a media favorite for the past several years, though it seems to have diminished recently) may have been premature, but we can never take the idea of "the book" for granted again.

That is the upside. But if the extraordinarily rapid and wide-ranging changes unleashed by the digital revolution have shaken up our most entrenched assumptions about important forms of cultural production and reception in critically exciting ways, it is equally true that it is hard to think of a time when the humanities were so badly besieged on any number of levels, the most serious of which has been a jarring shift in research priorities towards market-driven applied knowledge: a retrenchment that has foregrounded all over again the question of how to make the case for the value of the humanities. As Martha Nussbaum has recently argued, "we are in the midst of a crisis of massive proportions and grave global significance": not "the global economic crisis that began in 2008" (though that context is definitely part of the issue), but the widespread erosion of support for the humanities in terms of both pedagogical and research priorities within universities ([3], pp. 1–2). Nussbaum's book—*Not For Profit: Why Democracy Needs the Humanities*—has become a widely cited element of this debate, but the urgency of the topic has generated numerous books and articles, many of them by distinguished scholars in a range of venues, from academic journals to leading magazines and newspapers. As Marjorie Perloff put it in an article entitled "Crisis in the Humanities", "[o]ne of our most common genres today is the epitaph for the humanities" [4]. The phrase itself—crisis in the humanities—has become so familiar that it has begun to appear in scare quotes, along with warnings that just because everyone is saying it, doesn't mean it isn't true. "You've probably heard several times already that the humanities are in 'crisis'", Gordon Hunter and Feisal G. Mohammed wrote in a *New Republic* article entitled "The Real Humanities Crisis Is Happening at Public Universities", but as their title implies, this doesn't mean that we should doubt it. "The crisis is real", they assure us [5]. Few would contradict them. In a column in the *New York Times* that was prompted by the threat of SUNY Albany to close their French, Italian, Classics, Russian and theater programs, Stanley Fish responded to a letter from one of his readers that it "will be a sad, sad day if and when we allow the humanities to collapse" by insisting "that it had already happened". Fish's tone of world-weary resignation struck many people as misguided ("I have always had trouble believing in the high-minded case for a core curriculum—that it preserves and transmits the best that has been thought and said—but I believe fully in the core curriculum as a device of employment for me and my fellow humanists"), but his pessimism is widely shared [6]. Robert Weisbuch is on safe

ground in his insistence that "today's consensus about the state of the humanities—it's bad, it's getting worse, and no one is doing much about it—is supported by dismal facts" ([7], p. B4). However illustrious their past, the humanities have no future at all, so these epitaphs suggest, and that recognition has put its stamp on our present discussions like few other topics today, the digital revolution not excepted.

The signs of this crisis are everywhere around us. In England, the government's 2010 decision to cancel funding for the teaching of humanities programs has been doubled by the spirit of intellectual recoil that characterizes its new Research Excellence Framework, which was recently established as the official basis for determining research funding allocations amongst English universities. As Stefan Collini has pointed out, part of this formula for funding allocation depends on what the Research Excellence Framework calls the "impact" of research, a somewhat nebulous concept which the Framework breaks down into thirty-seven categories, each of which is in turn measured by a series of "indicators" such as (to quote the Framework) "creating new businesses", "commercializing new products or processes", and "attracting R & D investment from global business" (quoted in [8], p. 18). As Collini points out, the final category, the only one where the work of most humanities scholars might easily be slotted, which is headed "other quality of life benefits", is unique amongst the thirty-seven in having no examples provided. In place of the sorts of concrete indicators suggested in the other thirty-six examples of research impact, this final one contains a one-line note that merely says: "please suggest what might also be included in this list" (quoted in [8], p. 18). Admittedly, the "impact" score accounts for only 20% of the overall assessment (likely to rise to 25% in the next REF cycle); publications in scholarly journals of "high quality" still weigh far more heavily. But this inability to imagine the "impact" or usefulness of the humanities is a chilling index of a broader failure of the same kind. These institutional pressures are also taking more insidious forms, such as the current shift within the U.K. to an emphasis on "open access" publishing. Few would disagree with the intrinsic worth of this idea in the abstract, but the fact that publishing costs will be downloaded to researchers has opened the door to further problems by enabling universities to target which areas of research will receive support to offset these costs.

Evidence of these problems is just as hard to miss in Canada, where I live and work, from the federal government's $7 million cut to SSHRC[1] funding in 2012 (all of which was replaced by targeted funding emphasizing collaboration with industry, or more broadly, non-academic partners); to the cancellation of the Ontario Research Fund, including the special round for the Social Sciences, Arts, and Humanities; to the growing sway of a narrow cluster of research priorities (health, environment, and digital technologies) and a rhetorical emphasis on addressing "real-life problems" within universities' strategic plans. It is borne out, over and over again, in the closure of university departments and programs, the budget cuts, and the general climate of suspicion that have become part of our day-to-day experience. In 2013, the University of Alberta announced that it had suspended admission to twenty humanities programs. An editorial entitled "Liberal Arts and Commercial Utility" in the *Globe and Mail* (Canada's leading national newspaper) epitomized this reactionary climate in its warning that "the liberal arts are necessary and good, but not sufficient in the modern

[1] SSHRC, or the Social Sciences and Humanities Research Council, is the main source of research funding for academics working in the humanities and social sciences.

age" ([9], p. F8). If, as Percy Shelley once famously complained, poets had been challenged "to resign the civic crown to reasoners and mechanists", this same tension has reemerged today in the face of a new utilitarianism ([10], p. 131).

But as serious as these problems are, it is important to recognize that they are not reducible to a growing antagonism to the humanities alone. Scientists within and outside of universities have been equally outraged by what they regard as an unprecedented attack on the idea of curiosity-driven abstract research: the pursuit of knowledge as an end in itself. In December 2012, hundreds of leading scientists in lab coats marched in front of Parliament Hill to protest being muzzled by a government that is mistrustful of any sort of research that is not in step with their business agenda. Five months later, John McDougall, the Calgary businessman who serves as President of Canada's National Research Council (once a highly respected body of scientific researchers) made headlines by insisting that "innovation is not valuable unless it has commercial value". McDougall's comments were part of an announcement of a broader shift in the NRC's focus towards research the government deems "commercially viable" [11]. As an editorial about the fate of the NRC in the *Toronto Star* put it, "once a bastion of pure research—exploratory science no business would pay for but which is essential to eventual innovation—the agency has been redesigned to respond to industry requests, its $900-million budget effectively transformed into a business subsidy" [12]. Within universities, this attack on pure research is part of an underlying tendency to thinking about the role of the university in more narrowly vocational terms as an institution whose primary role is to ensure that graduates secure well-paying jobs. Months after McDougall's announcement, the ACCUTE[2] president, Stephen Slemon, warned that as sharply as the humanities have felt the burden of financial cuts, it is crucial to recognize this wider context: "we are *all* under attack. I don't know anyone now working in any of the postsecondary human or natural sciences who does not feel institutionally threatened" [13].

As Slemon suggests, it is important to recognize the extent to which the crisis in the humanities today is intensified by this double threat: a shift away from the humanities towards STEM disciplines (Science, Technology, Engineering, Mathematics) that is compounded by a broader resistance to curiosity-driven research in both the arts and the sciences. Worse, as critics such as Collini and Thomas Docherty have recently argued, this double problem is further intensified by a growing suspicion of universities generally [14,15]. "At a moment when the number of students currently enrolled in these institutions across the globe is several times larger than was the case only a generation ago, there is unprecedented skepticism about the benefits (both intellectual and material) of a university education" ([14], p. 3). Based within institutions that are increasingly underfunded, besieged by a growing insistence on the exclusive worth of "commercially viable" research, and rooted in the most vulnerable side of the disciplinary divide *within* universities, support for the humanities has been weakened by a growing skepticism about any sort of research that cannot be converted into short term market-based applications, and any sort of education that is unlikely to lead to good jobs. (It seems to do little good to cite studies that indicate that humanities graduates fare equally well in their subsequent careers, even if it the transition from university to a good job takes slightly longer.) "The

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[2] The Association of Canadian College and University Teachers in English is in many ways the Canadian equivalent of the MLA.

liberal arts are necessary and good", the saying goes, but clearly "not sufficient in the modern age". The best of times and the worst of times, for sure.

2. Past Debates

These problems, however, also constitute an important opportunity: a chance to re-imagine our answers to questions about the nature and role of the humanities, their potential benefits to contemporary life, and how we might channel these benefits back into the larger society. The good news is that in many ways, this self-reflexive challenge is precisely what the humanities have always done best: highlight the nature and the force of the narratives that have helped to define how we understand our society—its various pasts and its possible futures—and to suggest the larger contexts within which these issues must ultimately be situated. In his introduction to *The Public Value of the Humanities*, Jonathan Bate points out that:

> one of the values of the humanities is that it teaches us that all controversies have historical precedents—the lessons of which we are very good at ignoring. The debate between those who look for the 'economic impact' of academic research and those who appeal to the pursuit of knowledge as a civilizing virtue replicates a dichotomy identified by John Stuart Mill in the early Victorian era, in his pair of essays on Jeremy Bentham (written in 1838) and Samuel Taylor Coleridge (1840) ([16], p.10).

As Bate points out, Mill's aim in these essays was to emphasize a lesson that was "given to mankind by every age, and always disregarded—to show that speculative philosophy, which to the superficial appears a thing so remote from the business of life and the outward interests of men, is in reality the thing which most influences them, and in the long run overbears every other influence save those which it must itself obey" (quoted in [16], p. 10). Gesturing to similar parallels between nineteenth-century debates and today's crisis in confidence about the worth of the humanities, Francis O'Gorman agrees that "it is one of the small advantages for literary and cultural historians that they know the place of the arts and humanities in national education has been debated before" ([17], p. 272). A sense of crisis can encourage a narrowing of focus to present-day difficulties at the expense of a longer historical perspective, but as Bate and O'Gorman rightly point out, the question of the role of the humanities has been debated in remarkably similar ways before, and in the face of similar pressures. What interests me is the long history of this crisis and the insights that this might have to offer about our own predicament today. History repeats itself, but never in quite the same way: knowing more about past debates will provide a crucial basis for moving forward as universities, and the humanities in particular, position themselves to respond to new social, economic, technological, and cultural challenges during an age of radical change.

The single most important aspect of this history may be the fact that the humanities emerged in their modern form during an age not unlike our own, in which leading activists such as Bentham and James Mill resisted any vision of reform that was not driven by a central recognition of the importance of applied knowledge. For utilitarians such as Thomas Love Peacock (a poet himself in earlier days), the poet was "a waster of his own time, and a robber of that of others", whose cultivation of poetry had been "to the neglect of some branch of useful study", in stark contrast with

the tendency of "the thinking and studious, and scientific and philosophical part of the community" to draw on "the materials of useful knowledge" in order to prepare one's self for "the real business of life" ([18], pp. 578–79). These sorts of views are crucial for two reasons. Utilitarians' hostility to poetry (and to imaginative expression generally) represented a challenge that would help to define the struggle to articulate a role for the humanities at the precise historical moment when the idea of culture was crystallizing into its modern form. But just as importantly, the utilitarians were themselves reformers eager to effect social change, which made the challenge of responding to their hostile ideas about the social worth of poetry especially urgent. As with today, it was never a debate between reformers and reactionaries, but about what forms of knowledge production mattered amongst those people who shared a commitment to social and political improvement.

The crisis that forces us to make the case for the humanities today in the face of similar pressures to focus on "useful knowledge" that is suited to "the real business of life" can best be answered with a clearer understanding of the ways that ideas about the humanities were forged in the crucible of this spirit of intellectual reaction which defined itself in terms of the unique importance of more "serious" forms of knowledge. For early nineteenth-century advocates such as Shelley, William Hazlitt, and Leigh Hunt, the arts constituted a central aspect of a larger struggle for social progress, but like today, these arguments were themselves sharpened by the need to challenge a utilitarian emphasis on the primacy of applied knowledge. These writers anticipated Albert Einstein's famous comment that "imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand" ([19], p. 97). But they did so in a polemical spirit that was animated by the need to make a case for the importance of the humanities in the face of a backlash against the value of imaginative expression.

Those writers who sought to make a case for the arts responded in a range of ways, from Hazlitt's and Thomas Carlyle's vehement opposition to utilitarianism's reductive moral calculus, to Hunt's and John Stuart Mill's efforts to forge some degree of common ground, to Francis Jeffrey's struggle to adapt the legacy of Scottish Enlightenment accounts of sympathy to the demands of an industrial society. Shelley's response, which was in many ways the most radical and the most theoretically sophisticated of his age, and which it has become crucial to make again, if in slightly different terms, was that poetry—or today, the humanities—must be understood, not as the opposite but at the limits of applied knowledge: a larger perspective that enables us "to imagine that which we know", in part by highlighting the "unapprehended relations" within which particular innovations must be situated ([10], pp. 111, 134). Poetry, he argued, offers a potential for insight into the nature and limits of applied knowledge capable of extending the transformative power of reason by setting reason against itself in a self-reflexive turn which belongs to the province of the imagination. The implication of Shelley's argument was that poetry was the more important or "useful" form of knowledge, even in Peacock's rigidly utilitarian terms, but if Shelley's insistence on the importance of fostering larger critical contexts within which to think about these issues ("imagin[ing] that which we know") is just as relevant today as it was two hundred years ago, his intervention is equally instructive in another way as well.

Our sense of crisis has helped to foster an energetic and sophisticated debate about the nature and value of the humanities but it is worth emphasizing that a crisis mentality has risks of its own. Besieged on all sides, it can be hard to resist a set of sometimes counterproductive consolatory narratives about why the humanities matter, many of which either view our neglect as an ironic badge of honor—the fact that we remain proudly out of step with the larger vocational and commercial spirit of our age—or which simply reverse the kinds of intellectual prejudices that we are protesting against. W. H. Auden's claim that "poetry makes nothing happen: it survives/In the valley of its making where executives/Would never want to tamper" is understandably tempting, especially given many corporate executives' evident lack of concern for poetry, but this sort of special pleading for some rarified position sheltered from the corrupting influence of the world will not ultimately help us to develop an adequate response to the crisis in the humanities today [20].

Posing the question, "What, then, can be done?" Fish warns "it won't do to invoke the pieties" that have become familiar elements of this debate: "the humanities enhance our culture; the humanities make our society better—because those pieties have a 19th century air about them and are not even believed in by some who rehearse them" [6]. Alex Usher, the author of a popular on-line column offered by the Higher Education Strategy Associates, puts it even more bluntly. Taking issue with the kinds of positions espoused by Rosanna Warren in her *New Republic* article, "The Decline of the Humanities—and Civilization", which imply that the humanities have some sort of monopoly on teaching people "what it is to be fully human", Usher warns against the reaction that this kind of self-aggrandizing claim produces: "Honestly, how self-absorbed, smug, self-righteous and arrogant does one have to be to believe that one's own work is solely responsible for the maintenance of all human progress since the Renaissance? After reading it, I actively wanted to go around, eliminating random humanities departments out of sheer spite" [21]. It is worth adding that Usher has nothing against humanities programs, but his response is both understandable and illuminating: arguments which imply that the humanities are somehow inherently superior to other intellectual fields, or that those people who have not benefited from a humanities education are not "fully human" (even if they mistakenly think they are) are inevitably going to rub people the wrong way.

Which brings us back to Shelley's *Defense of Poetry*, a polemic that, read superficially, seems to epitomize the self-righteous strain that Usher objects to in Warner's argument. Stung by Peacock's diatribe against poetry, Shelley fought back by insisting on the paramount importance of those committed to the task of "enlarg[ing] our imagination" or, as critics might put it today, helping us "to be fully human" ([10], p. 132). Had "reasoners" such as Locke, Hume, Gibbon, Voltaire, Rousseau and their disciples never struggled on behalf of "oppressed and deluded humanity", Shelley allowed, "a little more nonsense would have been talked for a century or two; and perhaps a few more men, women and children, burnt as heretics. We might not at this moment have been congratulating each other on the abolition of the Inquisition in Spain" ([10], p. 132). These reforms were all good things, Shelley acknowledged, but in comparison with their limited impact, "it exceeds all imagination to conceive what would have been the moral condition of the world if neither Dante, Petrarch, Boccaccio, Chaucer, Shakespeare, Calderon, Lord Bacon, nor Milton, had ever existed; if Raphael and Michael Angelo had never been born; if the Hebrew poetry had never been translated; if a revival

of the study of Greek literature had never taken place; if no monuments of ancient sculpture had been handed down to us" ([10], p. 132).

It sounds awful, of course, a high-water mark in "self-absorbed, smug, self-righteous and arrogant" responses to anyone who would dare to criticize the importance of the arts or humanities. Who cares if a few more or less "oppressed and deluded" people die cruel and unnecessary deaths compared with the horror of living in a world without Shakespeare and Milton. Except that Shelley is a step ahead of us. His real point, as he quickly makes clear, is not that the "higher truths" offered by those individuals blessed with artistic genius trumps social reform but that this latter group—the "promoters of utility"—are in danger of intervening in ways that are ultimately counterproductive because they have been blinded by their uncritical faith in the force of reason and the sufficiency of applied knowledge. Having neglected the task of "enlarg[ing] their imagination", they have failed to ask the more serious questions about both the unexamined assumptions and unintended consequences of their efforts. Their uncritical commitment to an eighteenth- and early nineteenth-century form of technological determinism left them exposed to the danger of what Shelley denounced as "the abuse of all invention for abridging and combining labor, to the exasperation of the inequality of mankind" ([10], p. 134). His reference, of course, was to the disastrous effects of that best and worst innovation of the industrial age known as the assembly line, which works precisely through abridging and combining labor. The opening pages of Adam Smith's *Wealth of Nations* featured a reverential depiction of the almost magical force of a proper division of labor in something as "trifling" as a pin factory, in which the work is "divided into about eighteen distinct operations" ([22], pp. 14–15). All that was needed was that the workers be "collected", where the scale of the operation allowed, "into the same workhouse" ([22], p. 14), an arrangement that was central to what Smith lauded as the task of "reducing every man's business to some one simple operation, and … making this operation the sole employment of his life" ([22], p. 18). Lest we should be in danger of missing the fact that this is what he too has in mind, Shelley repeats himself in an almost identical description four paragraphs later:

> Whilst the mechanist abridges, and the political economist combines, labor, let them beware that their speculations, for want of correspondence with those first principles which belong to the imagination, do not tend, as they have in modern England, to exasperate at once the extremes of luxury and want ([10], p. 132).

Shelley's argument was not ultimately with social activists' struggle to achieve political reform (his polemic, *A Philosophical View of Reform*, tended to regard them in more generous terms as important allies in the struggle for social progress) but with the dangerous lack of perspective that uncritical ideas about reason as an engine of progress and technology as an inherently beneficial force implied: the unintended "abuse" of new forms of instrumentalist knowledge.

Shelley's concern here is about fundamental social realities rather than higher spiritual truths, about economics rather than aesthetics: about the sorts of issues which ought to have been more forcefully championed by Enlightenment reformers, had they thought imaginatively enough about the impact of their own struggles. The reformist dream of rational progress had collapsed into a utilitarianism which, despite its triumphalist rhetoric, only reinforced existing inequalities. Knowledge

had fallen prisoner to the very historical forces that it had presumed to challenge; history remained the nightmare that reformers were struggling to wake up from. Or as Shelley rather unpoetically put it, "the rich have become richer, and the poor have become poorer" ([10], p. 132). His point was not that Enlightenment reformers' efforts had not mattered but rather that they had been undermined by the tendency of their very success to overshadow the larger sorts of questions that would help to ensure their ongoing social good. Poetry (or the arts) offered a radical extension of the critical impulse associated with reason, an amplification rather than a negation of its transformative power (or "impact") which insists on the primacy of a much broader sense of the "unapprehended relations" within which particular developments must be situated ([10], p. 111).

Nor, for Shelley, was this merely a historical coincidence. On the contrary, it was precisely the breathtaking pace of change that had fostered this faith in technology as an end in itself. People had lost perspective, which is the real danger in times of rapid and fundamental change: "We have more moral, political and historical wisdom, than we know how to reduce into practice; we have more scientific and economical knowledge than can be accommodated to the just distribution of the produce which it multiplies. The poetry in these systems of thought, is concealed by the accumulation of facts and calculating processes" ([10], p. 134). The problem lay in an imbalance between applied and self-reflexive knowledge: "a cultivation of the mechanical arts in a degree disproportioned to the presence of the creative faculty... From what other cause has it arisen that these inventions which should have lightened, have added a weight to the curse imposed on Adam?" ([10], p. 134).

Shelley's critique amounts to an early version of the argument that Max Horkheimer and Theodor Adorno would offer in *Dialectic of Enlightenment*, that the progress of enlightened thought tended, by its very nature, to undermine itself because its very successes weakened the all-important tension between these two very different kinds of knowledge: the technological field of applied expertise and a critical self-reflexiveness (Shelley's "poetic faculty") that ought to pose questions about the larger context within which instrumentalist advances ought to be situated [23]. Horkheimer and Adorno were ultimately pessimistic about the possibility of reversing this process, but for Shelley, the poetic imagination was also a form of praxis, simultaneously a set of critical insights and a force that would generate the impulse to put these into action: "We want the creative faculty to imagine that which we know; we want the generous impulse to act that which we imagine" ([10], p. 134). Nor was this task altogether difficult, had people the will to do so: "There is no want of knowledge respecting what is wisest and best in morals, government, and political economy, or at least, what is wiser and better than what men now practice and endure. But we let '*I dare not* wait upon *I would*, like the poor cat in the adage'" ([10], p. 134).

3. Future Roles

This emphasis on poetry as a critical perspective from which to reconsider inherited ideas and as a spur to act on the conclusions this reconsideration suggested may ultimately have been a bit romantic. Poetry may never have possessed the revolutionary power that Shelley suggests. But having said so, it is worth emphasizing the timeliness of Shelley's argument about the dangers of the scramble to embrace applied knowledge at the expense of any adequate recognition of larger social and political contexts: the "unapprehended relations" within which these solutions to so-called

real-world problems must be situated. And this is where he might well have found an ally in critics such as Usher. Having been challenged by his readers to answer the question of what sort of arguments we might want to make, in place of the self-serving claims for the unique power of the humanities that he had denounced, Usher cites Paul Wells' argument in his 2010 article, "In Praise of the Squishy Subjects", that "societal problems are incredibly complex and can't be explained by simple cause-and-effect, what the humanities do is get people used to the idea of complexity" [24,25]. Especially, one might add, in times when rapid change heightens both the appeal and the dangers of an unexamined faith in innovation. As Stanley Fish rightly warns us, making our case by appealing to values that sound like they belong to another era won't be much help in our efforts to persuade the broader public of our worth, but ironically, knowing more about the long history of the struggle to make this case may itself be instructive in forging the kinds of arguments that will help as we try to position ourselves in a rapidly changing present.

All of this highlights both the urgency and the complexity of what seem to me to be the most important points that have emerged out of the debates that this crisis in support for the humanities has triggered:

The first and most important is the question of how we make the case for the humanities to people outside of our own academic community. How do we avoid the trap of simply preaching to the converted? We are bedevilled by the paradox that the positions that will likely be the most popular amongst us, even when we get these arguments right, may be hardest to convey to the broader public in any really convincing way. Wells is absolutely right that what may seem like the most necessary strategy—clambering onto the rhetorical bandwagons of the day—won't get us very far. Citing arguments made by Noreen Golfman (then president of the Canadian Federation for the Humanities and Social Science) "about the contribution of social sciences and humanities research to innovation, and to our nation's ability to compete globally and be an effective partner in the international community", in part "by stimulating the need for economic recovery in the short term and by shaping the broader prospects for Canada's future", Wells rightly dismisses these arguments as unconvincing gestures to short-term thinking (quoted in [25]). They sound both opportunistic and, what may be worse, tedious. But they do clarify the importance of forging arguments that we can believe in in ways that will resonate with people outside of our own academic community. A bit of history, which is one of the things that we can bring to the discussion, can help a lot. The other side of this question is the issue of how far can we push the argument that the self-reflexive space of critical thinking fostered by the humanities offers a more useful form of knowledge than other "commercially viable" forms without surrendering to the utilitarian or vocational logic that this argument is intended to resist. But do we have a choice?

My other points emerge from this initial one. The first is that we need to be wary of the intellectual cost of the arguments that we have been forced into making, over and over and over again, in favour of the humanities. It's not that these arguments aren't legitimate (I think they are). And it is definitely not the case that we don't have to make them. But in being forced to make them so repeatedly and so defensively, we can travel down an intellectual dead-end that does as much harm as it does good. Here's a simple if anecdotal way of explaining what I mean: I became Chair of an English department a little over six years ago in a Faculty that includes both the arts and social sciences. At

the time, the mood was expansive and intellectually generous: the real emphasis was on the common ground between those two groups. That never really changed, but by the time I stepped down as Chair this past year, our talk had been hijacked by an embattled sense of how to make the case for the humanities in the face of a climate, both within and outside of the university, that does not seem to place much value in what we do. It's not that we fell out with our colleagues on the social sciences side of the fence—the opposite was true, much to their credit—but in defending the humanities, we had been forced into focusing on a set of far less interesting conversations.

The trickiest question may lie in the unexamined tension between the humanities as a field of critical analysis and humanism as an inherited set of cultural values. How we can make a case for the humanities in ways that do not depend on what many of us now regard as the outmoded assumptions that were central to traditional models of humanism? This is the most fundamental question that confronts us: do we know what we mean by "the humanities" in an age when most of us who work in the area no longer align ourselves with the humanist ideals that provided our disciplines' rationale as they emerged in their modern form in the nineteenth century. It is not simply that, as Fish points out, these "pieties"—"the humanities enhance our culture; the humanities make our society better"—no longer strike us convincing; they seem to be bound up with a highly conservative deference to authority and resistance to activist intervention that has the potential to be deeply reactionary [6]. We avoid them, not because we're embarrassed by their dated feel, but because we're suspicious of their political implications. We may no longer need to explain the problems that an Arnoldian humanist rhetoric about the disinterested contemplation of universal truths entailed, but our rejection of it does raise the thorny question of what we actually *mean* by the humanities today, in an age that is increasingly uncomfortable with inherited definitions of the term "humanism". It raises the question of how we can make that case to the broader public, if not to our senior administrators, without appearing to be either self-contradictory or just intellectually dishonest. To put this more constructively, how might we begin to theorize a new "new humanism"—not the highly conservative school of thought which became known as the new humanism in the first half of the twentieth century, but one that takes an honest engagement with these tensions as its starting point without abandoning the political impulse that helped to fuel critiques of humanism in the name of a historically grounded politics of difference in recent decades?

Rather than confronting this dilemma as a problem, it may be more accurate and more productive to recognize it as a valuable starting-point as we position ourselves to answer the question of the future role of the humanities. If we rid ourselves of the baggage of the sorts of outmoded "pieties" that Fish cautions us against, which include the idea that the humanities have a singular ability to make us "fully human", we can concentrate on Paul Wells' point, which Usher rightly endorses and which has become a central aspect of the many discussions that this crisis has prompted, that the humanities train us to be more fully engaged with the issues of our day. This emphasis on fostering engaged forms of citizenship, which epitomizes what has become known as the ethical turn in the work of theorists such as Jacques Derrida and Emmanuel Levinas, has been especially true of recent debates about globalization, which have highlighted the ways that the relentless traffic of ideas and bodies, goods and wealth, pipelines and pollutants, across borders and oceans has produced both new cultural formations *and* reinvigorated hegemonic orders. An insistence on the importance of

recognizing the simultaneity of both of these aspects of our modernity—the growing possibilities of collaboration on the one hand *and* the persistent forms of economic exploitation and the cultural dissonance between incommensurable traditions and value systems on the other—has been a hallmark of these debates. But this emphasis on encouraging a comfort with complexity as a basis of new forms of engagement has been equally central to a range of other questions, from the efforts of posthumanist critics such as Cary Wolfe to complicate debates about animal rights, to the ways that the concept of "geological agency" proposed by Dipesh Chakrabarty have enabled us to reframe environmental issues, to Marxist critiques of neoliberalism. Running through all of these has been an emphasis on the importance of embracing those forms of complexity that flourish in times of fundamental change when it is no longer possible to deal with emerging problems using inherited methodologies[3].

Offering "a reminder that you can never know what you'll need to know", and that it can therefore never be enough to work hard to "figure out the answers to important questions" without adequately considering if they are the right questions, or if they have been formulated in the most helpful ways, Wells points out that what really matters is the challenge of fostering a climate where irreducible complexity is welcome:

> Very few of the problems our society faces admit to narrow technical solutions. There is no genome for crime or poverty or the listless emptiness that comes from punching a time clock. There is no subatomic particle which, once discovered and mapped, will coax a song into giving up its secrets or make the subjunctive verb tense easier to conjugate. These things are mysteries and they will remain mysteries right to the heart of them. It is helpful, then, to have people around who are used to mystery [25].

For Wells (and Usher) this is where the humanities have an important role to play:

> If you spend a few years wrestling with the idea of society as propounded by Hobbes, Locke, Mill, Rousseau and Marx, you come away with a better understanding of all the alternative ways our own society might choose to configure itself, with their attendant risks. If you study the fur trade in British North America, you learn something lasting about the contribution of aboriginal Canadians to our politics and economics, and you begin to understand the behaviour of today's Canadian businesses a little better. Read Goethe or Cervantes in the original and you understand things about Germany and Spain today that Goethe and Cervantes cannot have imagined [25].

It may not even be the case that a humanities education will be useful because it offers a kind of soft version of applied knowledge: a training in all of those things that you didn't know would help you to address particular problems but did—a history of the fur trade as an illuminating perspective

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[3] For arguments about globalization, see for instance, Timothy Brennan, *At Home in the World: Cosmopolitanism Now* [26], Bruce Robbins, *Perpetual War: Cosmopolitanism From The Viewpoint Of Violence* [27], and Robbins and Pheng Cheah, *Cosmopolitics: Thinking And Feeling Beyond The Nation* [28]. For posthumanist interventions in animal rights debates, see for instance, Cary Wolfe, *Zoontologies: The Question Of The Animal* [29]. For the concept of "geological agency", see Dipesh Chakrabarty, "The Climate of History: Four Theses" [30].

on Canadian business, or of political theory on questions about public policy. It can do that, for sure. Even more fundamentally, and maybe more importantly, by teaching us to be comfortable with complexity, and by encouraging us to realize that complexity is a central characteristic of our world rather than something that needs to be reduced out of existence, it can train us to be more genuinely engaged citizens in a world that is going through extraordinary changes. In doing so, the humanities will indeed play a vital role in helping us to "come away with a better understanding of all the alternative ways our own society might choose to configure itself, with their attendant risks", not just by exposing us to particular historical theories, options, and experiments, but by enlarging our imaginations in ways that incline us to think about the sorts of "unapprehended relations" that can have a more important influence—both positive and negative—than some of the more obvious but limited aspects of our debates.

> Will this knowledge come in handy? Will it have direct application in some lucrative enterprise? It might well. Stranger things have happened. In the meantime, this sort of study instills in the student an appreciation for the richness of our human enterprise. It shows that the way we live is not the way we have always lived, nor is it the way everyone lives. It demonstrates the role of ideas and the possibility of massive change. It is harder, having contemplated such things, to go back to a rote existence. Not impossible, but harder [25].

As we struggle with the challenge of facing up to the problems and possibilities of the future, this may be the greatest advantage that the humanities have to offer. They can help us to become intolerant of reductive thinking (though this adds to the importance of resisting unconvincing clichés about stimulus and innovation in the arguments that we pose on our own behalf). They can encourage us to think about new innovations in the context of larger questions about their "utility" or "impact": who will they help? What might the consequences be? How can these best be addressed? What have we missed when we fixate on the ideas that do seem important to us? The humanities are very definitely not the only place on the disciplinary map where this kind of training goes on, but when it is done well, it plays a vital and in many ways unique role in cultivating this atmosphere of engaged citizenship in which insisting on the stubborn importance of questions may be as profitable as a struggle to come up with the sorts of answers that can too easily descend into technical fine-tuning. Their ability to make us more comfortable with complexity and more focused on the "unapprehended" implications of the kinds of research that we are prioritizing may even lessen the danger of "exasperat[ing]...the extremes of luxury and want" that remain stubbornly in place two centuries after Shelley's *Defense*. In a utilitarian age marked by the scramble to embrace "commercially viable" forms of knowledge, that is a point worth making.

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Conflicts of Interest

The author declares no conflict of interest.

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The Challenges of the Humanities, Past, Present, and Future: Why the Middle Ages Mean So Much for Us Today and Tomorrow

Albrecht Classen

Abstract: Every generation faces the same challenge, to engage with the past and to cope with the present, while building its future. However, the questions and problems inherent in human life remain the same. It is a given that our society can only progress if we work toward handling ever newly rising demands in appropriate ways based on what we know and understand in practical and theoretical terms; but the drumming toward the future cannot be a one-way street. Instead, we have to operate with a Janus-faced strategy, with one eye kept toward tomorrow, and the other eye toward yesterday. Culture is, however we want to define it, always a composite of many different elements. Here I argue that if one takes out the past as the foundation of culture, one endangers the further development of culture at large and becomes victim of an overarching and controlling master narrative. This article does not insist on the past being the absolute *conditio sine qua non* in all our activities, but it suggests that the metaphorical ship of our cultural existence will not operate successfully without an anchor, the past. I will illustrate this claim with reference to some examples from medieval literature, philosophy, and religion as they potentially impact our present in multiple fashions.

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One of the critical questions which medievalists face above all pertains to the foundation of their own discipline and its relevance in the modern world. By the same token, of course, many other cultural historians, to cast the net as widely as possible, find themselves in the same boat because as time moves on, each new generation turns away from the past in order to find its own path toward the future. When I studied history in the late 1970s and 1980s, I met many peers for whom 1789, or the French Revolution, was the absolutely earliest starting point of anything having any relevance for us today. I am afraid that this time limit has moved by now up to 1945, or to the end of the Second World War. And we will have to wait only a few years until the next generation might use 1989, the fall of the Berlin Wall, or the Iraq War since 2003 (until 2011) as the exclusively relevant marker for their own historical time frame. In other words, the issue is highly relative and fluent, yet the basic concern never changes and needs to be addressed constantly again because the importance of past ideas for the present does not go away, except that the attention and interest by the present generation is fading. Literature departments at North American universities tend not to shy away from cutting positions located in the premodern world, and replacing them with new ones dealing with film, minority literature, immigration issues, or business and marketing strategies. The situation, unfortunately, might be even worse in the U.K., in the southern European countries, and probably

also in the northern countries. I cannot address the case of Asian, African, South-American, or Australian countries.

It is, however, fully understandable and logical in a certain sense that the past, a very broad and nebulous term by itself, does not necessarily carry relevance for the future generations at first sight. There must be some direct connections, some intercultural significance, otherwise we might compare apples with oranges and throw in anything smacking of history without explaining why we need to learn about previous periods, literature, philosophy, or art works in order to cope with our lives in a well-informed, efficient, and comprehensive manner.

Granted, any history can be of interest, and the more exotic it is, the better for some people who pursue it as a hobby, but not as an epistemological instrument to understand oneself or the society we live in. Yet then we run into the typically postmodern problem that we increasingly will be at a loss how to justify the teaching of history at a time of shrinking resources, and soon enough history as a school subject, at least a history extending prior to 1989 or 1945, might no longer be offered, becoming another victim of the ever-growing corporatization of our education system that seems to prefer future customers as its "end-products" instead of cultured and informed individuals. With history here I mean to include all aspects of historical culture, such as literature, religion, art history, philosophy, and the like.

Moreover, history in itself is a vast and complex field, and the more one enters into details, the more the study of a specific period grows and expands, almost to an infinitude. For example, Europeans still tend to mock at the short time span of the U.S. history of a little more than two hundred years by now, considering that they themselves can look back to at least two thousand years and more. However, the U.S. history has been vital for the entire western world, and it has been highly complex, so there is no shortage of valuable, relevant, and significant aspects pertaining to that subject matter which continues to have a deep impact on our daily lives, as we discuss, for instance, the proper interpretation of the Constitution or the Bill of Rights. U.S. students might have to study U.S. history just as long as they would need, for instance, with respect to the entire European Middle Ages (*ca*. 500 to *ca*. 1500), depending on the approach pursued.

Actually, the North American culture must be divided into a pre- and a post-colonial period, which immediately takes us back to 1492. In other words, both the European and the American continent are directly linked in historical terms, insofar as the fundamental changes of the European economy and the political system from the sixteenth century onward strongly depended on the impact of the Americas, and the arrival of the European settlers changed the political landscape of the New World for good.

One could even argue, and this with good justification, that the U.S. history is actually deeply grounded in the enormously rich history of the native people of North America, extending as far back as at least four thousand years [1,2]. Considering the Southwest (Arizona, New Mexico, and Southern California), for example, we would have to include first the history of the missionary activities by the Jesuits [3], then the truly medieval history of the ancient people in that region who have left numerous ruins behind, especially all over Arizona and New Mexico, and finally the history of their predecessors, especially the Cochise, Hohokam, Anasazi, Sinaguas, and Mogollon, some of whom

had built, as we have learned only recently, huge irrigation channels and had developed an elaborate culture a very long time before the first white settlers appeared in that region [4,5].

All those aspects might seem far-fetched and irrelevant for European readers today, but they demonstrate that the latter cannot simply pride themselves of being heirs of the most important culture in the world, an observation which no longer needs to be commented on since postmodernity. Moreover, the Jesuits, above all, maintained since the late seventeenth century an intensive communication network between both continents and delivered extensive information about the so-called Pimería Alta to their superiors, friends, and families. We know, for instance, of the Swiss Jesuit missionary Philipp Segesser (1689–1762), who left behind an extensive correspondence, and also shipped a considerable quantity of objects he had collected in the New World back home [6]. The founding father of the Jesuit mission was, of course, Padre Eusebio Kino (1645–1711), but I do not want to trace the entire history of Jesuit missionary activities in the Sonoran Desert here. All these remarks only serve to stress how much our approach to history can be relativized, and that the importance of specific aspects of this or that history can be debated from many different perspectives, depending on the vested interests by the targeted audience and the scholars involved. In other words, (post)modernity is not necessarily the only criteria when we want to investigate human culture.

All this boils down to the fundamental concern, once again, how much the past matters for the present and our future. Only a historical perspective can appropriately alert us to the presence of a master narrative that might dominate, or manipulate, our thinking and mentality until today, not allowing minority voices and alternative ideas come to the fore [7]. Of course, for many scholars in the Humanities this would be tantamount to carrying coals to Newcastle since we have been struggling with this concern for a long time, but this does not exempt us from studying as carefully as possible the implications and corollaries of past cultures for us today once again. History matters, and without an awareness of the past the foundation upon which we will build the future might be rather shaky. I will exemplify my approach to this question below with examples selected from medieval literature, philosophy, and religion.

It is very possible, of course, that the public would not simply accept our claims and refer us quickly to the huge problems which our world faces today: the need for more or renewable energy, sufficient food supply for an ever growing world population, the dangers of global climate change, gender equality, or rather, the lack thereof, immigration issues, medical health care issues, world conflicts among the Muslim populations and the war between Eastern terrorist groups and the Western world, *etc*. The study of the past has apparently not much to do with those huge concerns.

Or does it, after all? We live today by what our predecessors created for us, and the value system of the past continues to shape our thinking and frame of mind. The battle cries of the medieval crusades are, tragically, not forgotten in certain quarters, and hatred and revenge for past injustices and violence continue to incite radicals all over the world. Fortunately, the most fundamental question that immediately arises does not have to be addressed here since otherwise we would re-invent the wheel at a time when we might be close to abandon the metaphorical vehicle altogether and discover futuristic modes of transportation without wheels. This pertains to the role and function of the Humanities at large, which do not, of course, answer any of those questions and do not work toward the goal, for instance, of discovering new ways how to produce more and better food [8]. Yet,

our world would not be what it is without literature, history, religion, art history, philosophy, *etc*. Undoubtedly, we cannot live without food, but an existence perhaps protected in material terms but void of ideas would not be worth the term we call it by [9]. Oddly, Robert G. Bednarik polemically argues that the humanities "have no utility; they exist purely for their own sake" ([10], p. 70). He suggests that the humanities should learn from the science and submit under the refutability concept, but he seems to dream of a return of nineteenth-century positivism, and this at a time of postmodernity when even the foundations of sciences have become unstable. After all, the Humanities do not necessarily deal with so-called "facts," but with human issues which can be conditioned by facts, or interact with facts, but really address non-material aspects. There are facts, of course, in the history of literature, arts, religion, and philosophy, but the critical issues in the Humanities pertain to the discourse about ideas, concepts, and, above all, values. These are established not through inheritance or logical deductions, but through the engagement with the past and the present in a constructive conversation.

A sleuth of excellent studies has taken up the question recently what the Humanities really mean and how they fit into our society, because it addresses also the very core of the school and university system all over the world. In brief, Humanities scholars (perhaps, of course, because they might have vested interests) have argued, virtually in unison, that human society consists of more than material possessions and requires the Humanities as an academic discipline to deal with everything else in human life beyond the physical dimension [11–15].

Already Tacitus had emphasized that the ultimate purpose of history is to learn about virtuous individuals, and hence about virtues, that is, as we would call it today, ethics and morality, two aspects that we can never inherit from our parents and must learn anew in each individual's life [16]. Even though Friedrich Nietzsche had warned us of too much history, that is, of an excessive absolutization of past events and people to the detriment of our understanding of the present and the future, he also reached the insight, in Georg Simmel's terms, of life being both past and future. Martin Heidegger developed this further and claimed that human life is really part of an ever forward marching temporality at one and the same time [17,18]. In other words, we live in a time-space continuum that thrives because of its double perspectives, looking backward and forward at the same time, and in order to maintain the harmonious balance, we just cannot afford to neglect the historical dimension which could be compared, so to speak, with the genetic code of all living existence. Life then represents the evolution of that genetic material, even if that does not happen necessarily in a progressive fashion.

One of the more critical areas in the Humanities that are under attack today, at least within the universities, though not so much in the public, proves to be the study of the Middle Ages, whereas the Classics seem to continue enjoying, even politically, a high degree of respect, perhaps because all the founding fathers of the U.S., among many others, were thoroughly trained in that field. In fact, with regard to the Middle Ages we observe a curious divergence because the interest in things medieval, as manifested in medieval fares, medieval movies, medieval tournaments (see the Society for Creative Anachronism or Medieval Fairs), medieval castles, medieval weapons, and so forth, is growing in leaps and bounds, and this already for several decades now. In many ways American popular culture, for instance, is deeply grounded in the glorification and idealization of the mythical King

Arthur, the famous Round Table, the sword Excalibur, and many other aspects and objects pertaining to courtly society [19,20]. In many ways, the Middle Ages appear as a world in which aura and charisma, but then also the ideal of honor were still more or less intact, thus providing material for modern dreams about true human values lost in the capitalistic humdrum of modern life [21].

By contrast, the interest in studying the Middle Ages in a serious, scholarly fashion, which would imply acquiring the necessary linguistic competence (Latin, medieval vernaculars), learning the historical and religious background, then also studying the philosophical treatises and scientific tracts, or exploring the history of medieval art, is shrinking quite rapidly, and the laments by medieval scholars about this decline all over the world are loud and clear [22–24]. But such problems are challenges to be tackled in a constructive way, and the subsequent part of this paper will outline some strategies and concepts allowing us to confirm, once again, how much the critical study of the past in general terms can only buttress the analysis of the present, and hence lay the foundation for the future. As a side note, students of Classics have to work hard as well to acquire the necessary tools, but within the academia this field seems to enjoy a higher respect than the Middle Ages, which might seem to be more like a play thing for the decision makers than a serious subject matter.

Curiously, despite huge difficulties everywhere, perhaps mostly coming from the administrative side where enrollment figures matter the most, medieval research is booming, and the output of new critical studies on the Middle Ages is truly astounding. Scholars flock to the major medieval conferences, and journals focused on the medieval past are thriving [25]. Increasingly scholars have energetically argued that many aspects determining the Middle Ages can easily prove to be model cases for the exploration of our present and future, such as the concept of the nation, or rather, the absence thereof, the engagement with representatives of foreign cultures and religions, the approach to nature (ecocriticism) [26], and the understanding of Europe in the past as a model for the Europe of the future, without real borders and grounded in a shared Latinate or oral-vernacular culture [27].

When medievalists discuss the phenomena of identity formation, difference as cultural practice, transgressing of borders as a creative process, and of cosmopolitanism, they draw from medieval situations, but really probe universal issues pertaining to all people, thus bring together past and present in a most productive manner [28,29]. Multilingualism and the exchange of cultures are not exclusively modern aspects, but were already intensively negotiated throughout the entire premodern world. The current discourse on immigration, amazingly perhaps for modernists, proves to be nothing but the continuation of a long tradition, even if some of the social and religious parameters have changed requiring a modulation and adaptation of the instruments dealing with those issues [30,31].

This is not to deny the strong alterity of the Middle Ages, but every stage of our past falls into that category, including the Classics. In the Western world, for instance, there is a very strong trend to concentrate on medieval Europe, instead of medieval Japan or China, simply because of direct lines connecting that world with us. We certainly need to demonstrate, as Marcus Bull has called it, "respect for the extraordinary diversity of human experience" ([32], p. 5), and the Middle Ages represent, simply put, one of many significant facets of human life in the past. We need many of those facets to understand who we really are today and where we have come from. After all, to follow Bull to the very end of his argument, alterity is an essential component of all human cultures, both

past and present, and to study the Middle Ages alerts us to the very nature of ourselves, but seen through a historical lens ([32], p. 141).

Although the Greek philosopher Heraclit had formulated that no one can ever step into the same river twice since everything keeps flowing and nothing stays the same, neither the river itself with its riverbed and water nor the person trying to cross the river. This applies to us as well, being the avatars of the past. Considering how much scholars are examining and studying the history of everyday life, of gender relationships, the history of generational conflicts, of racism and homophobia, for instance, and taking into account such critical issues such as the relationship between orality and literacy, the exploration of the senses and desires, we can fathom how much the past altogether, at least the European Middle Ages, has become much closer to us than ever before. We still notice clearly marked differences in social, economic, religious, and philosophical terms (e.g., feudalism versus democracy, a manuscript culture versus a print and a computerized culture), but we recognize, as the result of ongoing research, more strongly than perhaps ever before how much we as modern people have been shaped and influenced by our medieval past, and hence have evolved on the basis of our predecessors, sometimes hundreds of years or almost a millennium ago [33].

Simon Gikandi recently made the excellent observation that some, if not many, of the most important literary and social critics of the twentieth century had been exiles, and that their exile had, perhaps not so unexpectedly, provided them with an important platform from which they were much more empowered to view their world back home than those who had stayed without being completely integrated into their new country or culture. “It is in the works of the exiles of the twentieth century that one can discover literary criticism functioning as a project of the human subject outside nation, outside the imperium of humanism, in the place of the other, in the language of the other. Confronted with the abyss presented by slavery, genocide, or the violence of empire, writers and critics would seek refuge in the house of criticism” ([34], p. 522).

In a curious but far-reaching analogy, we can identify the past also as an exile, even if a temporary and voluntary one only for the scholar and reader turned critic. By studying literary and historical texts from the Middle Ages, for instance, we transplant ourselves for a short time into a different mind-set, a different culture, language, religion, and social context and thus gain an outside perspective from the past to the present. However, just as in the case of a modern exile, the observable difference is not so huge as to destroy all bridges to the own self and the home culture. As much as the exiles wrote about their own identity and the culture of the world left behind (see already Ovid, or the medieval heroic figure of Dietrich) [35], as much the cultural historian can transpose him/herself into the past and thus gain a new vantage point through which the modern world can be viewed in a new light.

Referring to the South African writer and author Es’kia Mphahlele, Gikandi insightfully notes, which certainly applies to our current reflections in a metaphorical sense: “exile, which would appear to many people to be the name and logic of homelessness, was the instrument of one’s self-alienation. And this self-alienation was connected to a powerful ideal of freedom” ([34], p. 525). Turning to Medieval Studies, we would certainly not need to search for political freedom, but it proves to be refreshing and illuminating to build a distance to the paradigm of our modern world in order to grasp truly what is going on today, now seen through the lens of the past. Or, in Gikandi’s words, the

historical 'exile' facilitates criticism as "a conduit outside systems of domination" ([34], p. 526). Critics of the modern world are best qualified if they have a thorough understanding of the past and can pinpoint the roots of specific phenomena determining the present world.

Of course, we in the West live in democracies, but the emergence of this type of government happened not too long ago and there are still many countries in the world where democracy either does not exist or is even adamantly opposed. Moreover, there is no absolute guarantee that we can maintain the democratic system in the future; hence it remains absolutely mandatory to remember how the entire process and intellectual discourse was set in motion in the past to reach us today. Intriguingly, the entire issue of the power relationship between a king/ruler and the people was already of central concern for such medieval thinkers as John of Salisbury (*ca.* 1120–1180), William of Ockham (*ca*. 1285–1347), or Marsiglio da Padua (*ca* 1275–*ca*. 1342) ([36,37]; [38], pp. 296–308). We would not necessarily have to rely on their insights to gain an understanding of the theoretical implications of a ruler assuming too much power to the detriment of the people, but if we want to comprehend the historical discourse about the proper relationship between God and a ruler, and then the people, which takes us directly to our own western-style democracies, the voices of these two medieval philosophers certainly deserve to be listened to, and this still in 2013 and well beyond [39].

Both in practical and theoretical terms I have over the years investigated how to innovate Medieval Studies for the modern student generation and how to bring medieval texts to life again [40,41]. To meet my own needs, I have recently created a new textbook, which is now available already in its second revised edition [42]. Beginning with Boethius's *Consolation of Philosophy* (*ca*. 525), this book provides a large selection of relevant texts which all hail from the Middle Ages and invite critical readings and epistemological challenges insofar as they contain, as I would contend, profound, timeless messages about human problems, concerns, ideals, fears, aggressions, and other notions and hence prove to be of greatest significance for the modern discourse about those very same issues.

Following, I will briefly touch on some of the most fascinating texts and outline in shortest terms possible what kind of message can be found contained in them in order to illustrate how texts from the late antiquity through the entire Middle Ages, for instance, can serve to provide important material for our discourse on universal concerns and problems. Boethius, for instance, probes the question what constitutes mis/fortune and surprisingly reaches the insight that there is no real misfortune because humans do not own anything really, not even their own bodies and health. Everything is on a loan, so to speak, from fortune, which can take that health away any time. True happiness rests much more deeply in the natural instinct toward the good, which explains why so-called evil people in reality are not fully evil, but rather blind and weak and cannot even move on their own toward the natural goal of merging with Goodness or the Godhead; hence the more evil things they commit, the more they eliminate themselves and actually deserve pity and commiseration.

In the Old High German "Song of Hildebrand" (*ca.* 820), we encounter a warrior father in direct confrontation with his son who assumes that Hildebrand died already a long time ago. Lack of communication and a bitter adherence to traditional feudal values ultimately terminate their feeble attempts at establishing a communication; finally weapons replace their words, and although this short epic poem ends in a fragment, we can safely assume that tragedy strikes both men, either the

father killing his son, or the other way around, or both murdering the other. Here, as in so many other cases, we can recognize how much literary texts prove to be platforms for the exploration of communication, a fundamental concern for people of all times [43].

In Gautier de Coinci's "Our Lady's Tumbler" (*ca*. 1220–1230) a very simple man, who had been allowed to join a monastery, desperately tries to find his own way of worshiping God. Being illiterate and unlearned, he cannot participate in any of the monks' rituals and ceremonies, but he eventually discovers the quiet crypt where he can resort to his own skills, tumbling, and thus he establishes an intensive though highly idiosyncratic service in honor of the Virgin Mary who graces him, in a vision which only the abbot and another monk secretly observe, with her appearance. Leaving the strongly Catholic aspect aside, what matters for us the most here is the realization that the humble tumbler, deeply filled with his idealism and belief, does not allow the other monks, in their learnedness and cultivation, to sidetrack him, although he is very afraid of their criticism. Although he does not know how to venerate the Virgin Mary according to the monastic norms and conventions, he proves to be more devout than the entire community, obviously being more passionate and pious than them, clearly demonstrated by the vision, even though he himself is not aware of it. As Gautier clearly signals, transcending all cultural barriers, true idealism and passion cannot be stifled or suppressed, while learning and cultural rituals carry the danger of turning into rote and empty ceremonies.

The timeless value and importance of the *Lais* by Marie de France (*ca*. 1170–*ca*. 1200) and of the theoretical writings by Christine de Pizan (*ca*. 1364–*ca*. 1429), especially about her struggle to defend women and to argue for their independence, are so well known by now that we do not need to discuss these two authors. However, it is still worth pointing out how much both created texts that deeply appeal to modern-day readers for a variety of reasons. As Sharon Kinoshita and Peggy McCracken emphasize in the conclusion of their monograph on Marie, "in our time she is remembered as one of the most important authors of the Middle Ages" ([44], p. 218). As to Christine de Pizan, Nadia Margolis concludes how much this amazing and highly prolific writer continues to appeal to a wide range of audience, especially today, serving now even as a "feminist-cultural icon" ([45], p. 156).

Even with regard to the question of possible toleration and tolerance medieval writers had much to contribute, as recent research has uncovered, although we might want to reserve the emergence of the latter notion more for the eighteenth century [46,47]. Famous theologians and philosophers, poets and historians could be mentioned here who all contributed, in one way or the other, to the development of this arduous and thorny path, such as Peter Abelard, Ramon Llull, Marsilio Ficino, or Giovanni Pico della Mirandola. Tolerance by itself proves to be a complex issue and represents the results of an ongoing discourse over the centuries, representing an ideal that we today in the West would like to uphold, though it is more than self-evident how fragile this ideal can be. Insofar as we are part of and contributors to that discourse, which deeply impacts us on a daily basis, it certainly behooves us, in order to further and accentuate that discourse, to listen to the past voices and pay attention to their concerns, troubles, and struggles in that regard.

As the current Dalai Lama has insightfully formulated, our world can only progress and reach a constructive future if we embrace compassion, tolerance, justice, inner values, *i.e.*, spirituality, and ethical and moral ideals [48]. All these elements identify a highly developed and civilized society,

but they are very hard to achieve and then to maintain; so the struggle for them goes on. Understanding, however, how they at first emerged and then gradually developed throughout the Middle Ages and beyond, strongly contributes to continued promotion of such values. Humanity is covered by only a very thin veneer of positive ideals, aimed at collaboration, support, empathy, and love, so just a tiny spark can rip off that veneer and throw a whole society into the abyss of chaos and violence, whether we think of the conditions in Kosovo from 1998 to 1999 or in Egypt in 2013.

This also applies to the probably most important aspect of human existence, the experience of love. But love is not simply a passion, deeply driven by hormones and other chemicals; instead it reflects on the spiritual side of our lives and also needs to be informed by ethical values (love is commitment, communication, compromise, collaboration, compassion, and community). This finds an excellent expression in the courtly verse narrative "Der arme Heinrich" (Poor Henry) by the Middle High German poet Hartmann von Aue (fl. *ca.* 1170–*ca*. 1200) [49]. The protagonist contracts leprosy and faces certain death, since there was no medical treatment of this sickness. A medical doctor in Salerno (near Naples) tells him, however, that if he could find a young, nubile woman willing to die for him, her blood would help him to recover—clearly a narrative motif borrowed from miracle stories and fairy tales, hence completely unrealistic, as the protagonist realizes himself since he despairs when he has learned of that advice and retires to a farm to await his certain death.

Years pass, when he finally reveals to the farmer and his family what the doctor had told him. In the meantime, one of the daughters had obviously fallen in love with Heinrich, and now decides to sacrifice herself for him. Her arguments defending her determination to give her heart blood for the young nobleman prove to be so convincing that everyone believes that the Holy Spirit must have spoken through her. The sick prince and the girl travel to Salerno and the doctor then prepares the operation, when Heinrich hears the sound of the sharpening of the knife. Curious and concerned, he gazes through a hole in the wall and suddenly recognizes who that girl really is. He virtually faces an apparition within the operation room, recognizing the absolute beauty of the naked female body, while he realizes his own physical and spiritual ugliness. Thereupon Heinrich immediately changes his heart and suddenly accepts God's will, now being ready to die and to spare the girl's life.

Although the latter bitterly fights against the changing of the plans, since she had hoped to gain fast access to heaven and thuys to avoid all the problems of adult life here on earth, the male protagonist remains firm and returns home with her. In that moment God acknowledges Heinrich's transformation into a humble person and a good Christian and so lets him become well again. At the end the prince marries the farmer's daughter, which makes a good happy end. We must, of course, apply an allegorical, if not anagogical, reading to this story to make sense of it, otherwise it would have to be regarded as a naive and sentimental religious tale of little relevance. If we understand the girl to represent Heinrich's soul, and his leprosy as an expression of the turn away from his spiritual self, then the healing and ultimate marriage constitute the reunification of body and soul and the recovery of human life in spiritual terms [50].

Our reading, which solves a profound crux in Hartmann research, illustrates how much a literary text, from the past or the present, is empowered, to use Paul Ricoeur's words, "to transcend its own psycho-sociological conditions of production and thereby to open itself to an unlimited series of readings, themselves situated in socio-cultural contexts which are always different" ([51], p. 91). In

other words, medieval texts might certainly carry more meaning for us today than modern literature, which is not to reject the latter as a centrally important medium of the cultural ideals and values of our own times. We can use Hartmann's narrative exceedingly well to explore the body-mind relationship and to fathom strategies how to overcome the blindness which the physical existence tends to impose on us in epistemological terms.

After all, the protagonist resorts to gazing and discovers a way for him to look inside, an extraordinarily useful metaphor for our attempts to gain spirituality or to connect with our inner self, truly a significant epiphany [52]. Not surprisingly, Dante's *Divina Commedia* has proven to be as meaningful today as the poems by Walther von der Vogelweide or the plays by William Shakespeare. They all represent powerful and meaningful voices about the soul's quest, not the only ones to the exclusion of their modern counterparts, but strong voices in the same huge choir called Humanities.

The world would be different today if St. Francis of Assisi (*ca.* 1181–1226) had not stepped forward and had preached to his audiences, developing innovative ideas about true spirituality in practical terms. Undoubtedly, his messages of humbleness, peacefulness, and love transcend all cultures and periods until today, irrespective of his complete submission under the Catholic Church [53,54]. Most uniquely, he went so far as to advocated for a "species equality as opposed to speciesism; that is, the equality of all beings as part of God's creation, instead of a strictly anthropomorphic and hierarchical worldview of inherent human superiority" ([55], p. 43). In a way, we might call him an ecocritic *avant la lettre*, pursuing a "theistic, ecocentric environmental ethic, or more commonly *creation spirituality*" ([55], p. 44). Even though Francis was not a biologist or environmentalist in the modern sense of the term, he certainly created the principles of spiritual ecology and biophilism, perceiving the natural world as the closest we can get to experience God [56]. His soft voice from the early thirteenth century powerfully resonates with us until today and promises to stay with us because of his profound messages that continue to serve us exceedingly well to transcend the material confinements of our existence.

I would like to conclude with some remarks on the profound and universally relevant sermons and treatises by the German philosopher and mystic (?) Meister Eckhart (*ca*. 1260–1327/1238), who has fascinated religious scholars, philosophers, and literary researchers ever since [57]. As Dermot Moran urges us to consider, "Eckhart has to be read as both belonging to and radically renewing the tradition of negative theological writers that runs from Proclus and Dionysius through Johannes Scottus Eriugena, Maimonides, Albertus Magnus, and subsequently goes on to Nicholas of Cusa. At the same time, as a Parisian academic and a Dominican theologian, Eckhart absorbed and in many ways reinterpreted the central tenets of the new Aristotelian philosophy of being promulgated by Thomas Aquinas and other neo-Aristotelians in the Paris Arts Faculty" ([58], pp. 675–76).

In fact, postmodern literary theory would not be completely understandable without recognizing the influence which Eckhart exerted, for instance, on Georges Batailles, Jacques Derrida, and others [59], and this particularly because of his teachings on apophaticism, the human inability to speak about God ([60], pp. 35, 38–39, 116).

There are many debates as to whether Meister Eckhart was a mystic [61], or simply a theologian and philosopher ([62], pp. 465–84). For our context it only matters that his thoughts excited both his

contemporaries and his posterity until today, here disregarding his vehement critics. In his *Talks of Instruction* (*ca*. 1300), for instance, we come across a host of amazing thoughts and ideas that naturally provoked the traditional Church and ultimately caused the Pope John XXII to condemn this teacher as a heretic on March 27, 1329 [63].

Considering how much Eckhart insists on pursuing a free mind, but this in a religious sense, we can easily recognize why representatives of Eastern religions have recognized a kindred spirit in him. He defines the free mind as "one which is untroubled and unfettered by anything, which has not bound its best part to any particular manner of being or devotion and which does not seek its own interest in anything but is always immersed in God's most precious will" ([64], p. 5). The individual ought to strive toward the unification with the Godhead by way of abandoning the self as much as possible. Relying on the own self-will removes the hope for peace, hence the only possible first step to achieve illumination would consist of taking leave of oneself and also of the material existence; this then would pave the way toward the encounter with God ([63], p. 6).

Most critically, the individual must detach from him/herself ([63], p. 8) in order to allow God to enter the soul. Quite similarly to St. Francis, Eckhart also emphasizes that God is to be found in all things since He consists of the entire material existence as His external manifestation ([63], p. 9). The true believer needs to turn inside and neglect the outside wherever s/he goes because God is to be found "in the heart, in an inner motion of the spirit towards him and striving for him, and not just in thinking about him always and in the same way" ([63], p. 10). Looking for external solitude would not help unless the individual has found inner solitude: "We must learn to break through things and to grasp God in them, allowing him to take form in us powerfully and essentially" ([63], p. 11).

With a good will, virtually everything can be achieved, and those things one wants are closer to the individual than objects that might be lying in the lap but are not wanted ([63], p. 15). That will, however, must not have selfhood and must have gone out of itself. Nevertheless, even the greatest ecstasy and experience of the Godhead in one self would be only secondary compared to a demonstration of true love toward another person, poor and suffering ([63], p. 17). After all, as Eckhart emphasizes, "whenever we give up what we desire for God's sake, be it something physical or spiritual, we will find it again in God just as if we had actually possessed it and had given it up for God" ([63], p. 18; [64]). In a way, Heinrich in Hartmann's narrative had already demonstrated the meaning of Eckhart's teachings because only when he had given up on his own will, that is, his desire to get well, and submitted himself completely under God, did he get well. In Eckhart's words: "nothing makes us true so much as the giving up of our will" ([63], p. 19). Selfhood blinds the individual and makes it impossible for the Godhead to enter the soul ([63], p. 21). He admonishes his audience not to try to imitate Christ in concrete terms, but spirituality a. because it would be impossible for him to do so, and b. because God wants our love more than our works ([63], p. 30). We might recognize here a kind of anticipation of Martin Luther's teachings, but then we could also perceive in Eckhart's teachings universal insights deeply shared by Hinduists and Buddhists [65,66].

Virtue emerges as one of the central principles which the devout individual ought to strive for "ceaselessly until we attain the essence and ground of virtue" ([63], p. 41). In practice this means: "We must train ourselves in self-abandonment until we retain nothing of our own. All turbulence and unrest comes from self-will, whether we realize it or not. We should establish ourselves, together

with all that is ours and all that we might wish or desire in all things, in the best and most precious will of God through pure ceasing-to-be of our will and desire" ([63], p. 42). Surprisingly, we can discover strong similarities in the comments even by modern representatives of Buddhism, so when the current Dalai Lama remarks: "the inner motivational dimension is the most important aspect of ethics. For when our motivation is pure, genuinely directed toward the benefit of others, our actions will naturally tend to be ethically sound" ([48], p. 71). What ultimately matters, as he underscores, is that we have a shared value system and deeply care about the world altogether, not just about the own self, community, or country ([48], pp. 84–85).

This paper, however, is not just about Meister Eckhart, Christine de Pizan, or the Dalai Lama, so it must suffice what we have plucked from the major treatise by this Franciscan teacher in order to reach our conclusion as to the meaning and relevance of the past for the present and future. It would be hard, if not impossible, to contradict the messages provided by any one of them, after all, since they addressed the human condition in a most intriguing and far-reaching manner that matters for us as well. For instance, Boethius's teachings about mis/fortune and goodness carry as much meaning and relevance as those by Gautier de Coinci and Marie de France, each in his/her own terms and respects.

Human existence in the Middle Ages already faced all the fundamental concerns and problems as we do, but the framework was different, especially with a much stronger belief system and trust in spirituality. Insofar as we can detect toleration, but not quite tolerance, some acceptance of foreigners or representatives of other religions, but not integration, we can recognize significant connection between them and us.

The warnings about the disastrous consequences of interminable blood feud and revenge, as formulated in the anonymous *Nibelungenlied* (*ca.* 1200), might have a direct bearing on the conflict between the various Islamic groups in the Middle East, between Protestants and Catholics in Northern Ireland, and Muslims and Hindus in Pakistan and India respectively, although I honestly question whether any of those involved in the terrible bloodshed in the name of his or her God might have heard of this heroic epic or would even care about its messages. However, the distance should not concern us here, and the lack of interest by the moderns in the past should not frustrate us, because human existence is subject to a continuous flow from the past to the present and beyond, and the task of the Humanities is to work toward the goal to keep the voices from the past present and alive, irrespective of all the senseless killings all over the world.

The most painful analogy would be the eternal flame burning at Hiroshima as a reminder of the nuclear attack on August 6, 1945. Tragically, the nuclear arm race fully developed only afterwards, and the hope for a dismantling of these nuclear bombs seems rather dim even now; yet, the flame keeps burning, and there has not been any other nuclear attack ever since. We might even say that the Humanities are all about hope, which is anchored in the past and reaches out to the future. As human beings we are entitled to succeed and to suffer, as Sir Gawain does in the alliterative romance *Sir Gawain and the Green Knight* (*ca*. 1350–1380), but we cannot give up hope and must rather go through a period of despair and frustration than to abandon our goal, as many medieval poets were able to teach us ([67], pp. 144–46).

This flow of history—and I deliberately do not use the term "progress"—is deeply determined by past individual voices that raised their concerns and offered ideas, probing the relationship between

body and mind, spirit and God, self and nature, and the individual versus society. The Humanities are not looking for truths in material terms, as Bednarik assumes, and their purpose cannot, in fact, should not, be the search for truth as the sciences probably do correctly because they do not deal with the same kind of facts but with values, ideals, dreams, hopes, anxieties, desires, and imagination ([10], p. 71). Those who call for making the Humanities more credible according to the criteria determining the sciences [10] pursue a utilitarian approach, which would certainly be acceptable for the sciences, but completely misses the essential task of the Humanities.

In the Humanities, by contrast, we are on a quest, probing what the many different voices from past and present have to say and how they resonate with our own ideals and needs. Of course, there is never a simple formula to translate medieval observations, for instance, into concrete recommendations or recipes for our lives today. Instead, we encounter a world of metaphors, allegories, symbols, images, and allusions that invite us to go on our own quest, but now armed and strengthened with the insights by those before us who have already learned how to handle situations, how to think about conditions, or how to draw from experiences in order to cope successfully in spiritual, ethical, moral, and religious terms. Moreover, the failures of the past are equally important lessons, and literary texts, for instance, regularly reflect on disasters, miscommunication, aggression, and hostility. We need those as sample cases how to work through such difficulties and to recover our spiritual and social self.

The present could be compared with a children's choir, while the past resonates with us like an adults' choir (with no values attached to those terms). As we know from practical experiences, if both choirs join forces, the musical sensation proves to be phenomenal. Past voices are not simply passé, they just sound differently. In this regard Meister Eckhart's comments only need to be rendered into a language that we can understand today better in order to become highly meaningful and relevant for us to reach the future. Dante's deep concern at the beginning of his *Divina Commedia* about where to go in this life and his sense of being at a loss in the middle of a metaphorical forest lends a voice to our own need to forge our path through the wilderness, which is a profoundly epistemological task of which literature reports systematically [68].

We also might want to use the metaphor of the past as a distant land with many treasures. We can no longer live there, but just like exiles, we must travel there from time to time to regain our objectivity, to rebuild the own self, to learn anew about ourselves, God, and the world. We cannot stay in the past, of course, as the Romantics liked to do or as fantasy/history novel writers prefer, but drawing from past insights proves to be tantamount to having the essential key to the storehouse of the collective human experiences predicated on values and ideals. We need those altogether for the establishment and maintenance of our existence, today and tomorrow, otherwise we undermine our traditional claim on being members of the human community which is determined by the Janus-face, as mentioned above.

Presentism is a short-sightedness both toward the past and the future, but fortunately the current situation at schools and universities globally still affirms that we are not yet trapped in such an epistemological prison, although we can notice worrisome trends as a result of constantly reduced budgets and intellectual battles aimed against the study of the past [69]. Some years ago Louise Cowan made the very valid claim regarding "The Necessity of the Classics," postulating most

passionately: “What is needed is to recapture their spirit of high nobility and magnanimity, of order and excellence, but to recapture that spirit in a framework of democracy engendered by a Biblical culture of radical openness. The things worth preserving, the things we ought to be passing down, far transcend any single heritage: they partake of the fundamental structures of being itself” ([70], p. 11).

By analogy, we can claim the same for the Middle Ages as a time in which heroic values and ideals, religious spirituality, the experience of physical love, and the quest for the Arthurian dream were intensively pursued and experimented with. That quest, significantly, has not ended yet, and actually constitutes part of what makes us human, both then and today (and we do not have to limit ourselves at all to the world of King Arthur and the courts). As primitive and simple-minded the tumbler in Gautier de Coinci’s Marian miracle tale appears to be at first sight, he truly demonstrates what it means to pursue one’s deepest dreams and to throw the weight of one’s whole existence behind it in order to realize what at first seems impossible.

Today, when virtually everything can be bought, everything has a price tag, and no profound struggles await the modern individual, as it still was in the case of Beowulf, Siegfried (*Nibelungenlied*) or El Cid, banality and triviality set in, and the mundane dominates everything, and this although there is no shortage of tremendous tasks, heroic deeds, and model behavior [71].

The past is going to stay with us, but it is up to us to decide how to approach and utilize it in the best way possible. We can, for example, simply dismiss it as irrelevant and unimportant in face of all the tasks and problems facing the modern world. But we can also accept it as a dimension of the universal human experience from which we never should divorce ourselves; otherwise we would cut off one of our own legs, that is, our intellectual, spiritual, philosophical, literary, and artistic home. The whispering from Boethius to Sebastian Brant (1494, *The Ship of Fools*), from the Merovingian Queen Dhuoda to fifteenth-century Christine de Pizan continues to reverberate in our ears and minds and help us to figure out the labyrinthine passage through this life: Lucky an individual or a society that can draw from the past as the storehouse of everything that came before us and created the framework in which our present existence evolves and aims for the future. Cutting ourselves off from the past, however delimited, would constitute an act of intellectual suicide.

Conflicts of Interest

The author declares no conflict of interest.

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