

The Fruit of the Vine... and the Work of Human Hands:

Latour's 'Catholic' Environmental Philosophy

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The environmental movement arose from a great anxiety about the fact that our activities were destroying natural habitats, disrupting ecosystems, and driving species into extinction. The flip side of this anxiety, however, was a renewed awareness that life in all its glorious diversity is precious and worthy of protection. This growing recognition of the value of the natural world was a liberating break that challenged the dogmatic prohibition, central to Modern European philosophy, which forbids the attribution of intrinsic worth to anything other than humans. As such it opened exhilarating new vistas for intellectual inquiry and post-colonial thought. In particular the 'deep ecology' that arose in the 1970s promised to inspire and unite a world-wide culture around a shared realization of the value of the non-human world and our moral obligations to it. This hope, however, has not always come to fruition, and indeed new strands of environmental philosophy have arisen in recent years to explicitly deny the claim that a commitment to environmental ethics should be linked to a critique of anthropocentrism and thereby a challenge to Modernity. In this article, I look at the ways this rejection of the heady claims of deep ecology is due in part to two interweaving worries, one that leaving the firm ground of science will lead to interminable metaphysical squabbling and the other that the radical reordering of axiology would necessarily de-value the characteristically human abilities to reason and to innovatively transform the world that have long been considered the grounds of human dignity. In particular I argue that Bruno Latour's critique of iconoclasm opens the space for a

dialogue between a more iconophilic science and a more sacramental religiosity that will help re-frame an environmental philosophy in a way that answers these objections and in doing so provides an approach that avoids both the anthropocentrism of Modernity but also the misanthropic and Malthusian tendencies that are a perennial temptation to the environmental movement.

This article is divided into three sections. The first, ‘What Went Wrong?’, uses Latour’s critique of iconoclasm to show the ways in which our understanding of nature became embroiled in the dogmatic refusal of mediations that impoverished the ontology of Modern science and religion. The second, ‘Where Do Things Stand Now?’, elucidates Latour’s claim that the environmental crisis is helping us to cultivate a more iconophilic philosophy of science, which allows the axiological and political elements of the truths of nature¹ to come to the fore. The third (to which the reader may wish to jump immediately), ‘What Can We Hope For?’, shows how sacramental forms of religiosity can strengthen this iconophilism and inspire a renewed environmental ethics.

I. What Went Wrong?: Latour’s Critique of Iconoclasm in Modern Religion and Modern Science

Latour’s first contribution is to show us how two of the major motivations for rejecting deep ecology—the desire for a political unity that surmounts metaphysical differences and the insistence with which we assume the intrinsic value of nature can only be safeguarded by separating it from the inevitable contamination contracted by the touch of the human hand²—are legacies of the modern attempt to eliminate all intermediaries, both those between Mind and God

and between Mind and World, in the absolutist conviction that only unmediated contact with 'reality' is worth having.

The ferocity of the religious iconoclasm of early Modern Europe is well known. Christianity, particularly in its more mystical strands, had always included an important role for withdrawing from the world in order to enable the cultivation of the interior life. By the later 1500s and early 1600s, however, due to the democratization of culture made possible by the printing press and a rapidly developing economy and the repugnant moral and political decadence pervasive among the late feudal nobility and their ideologues and imitators in the Catholic hierarchy, the desire for a strongly personal and interior spiritual life was now often linked to a radical refusal of all mediations between self and God, whether political or ecclesial. The critique of superstition and sacramentalism was intimately interwoven with this socio-politically iconoclastic spirituality. For it is inevitable that the most popular relics and holy sites will come to be managed by institutional religion, and it is a fundamental part of the belief in the efficacy of ritual that it be done in the right way, i.e. within an ecclesial setting that guarantees its effectiveness.

As is also well-known, the vehemence of the rejection of superstition was further intensified by the abrupt and radical changes brought to our understanding of the natural world by modern physics. It would remain for Newton's *Principia* in 1687 to present a comprehensive view of this new reality, but broad strokes of a radically different understanding of nature were evident very quickly after the results of Galileo's observation of the moon were published in *The Starry Messenger* in 1610 and his work on mechanics became known (codified and summarized in *Discourses and Mathematical Demonstrations Relating to Two New Sciences* in 1638). The discovery of mountains on the Moon and the universal laws of motion seemed to suggest that all

places where essentially the same, merely the open and indifferent spatial grid across which material bodies may move. The laws of gravity and inertia also externalized our basic understanding of movement and change, suggesting these bodies in motion were no more differentiated in their fundamental nature than was space.

For many thinkers, the result of these discoveries seemed to imply that to take modern science seriously would mean rejecting any agency in nature and accepting a world of blind mechanistic forces. As Latour puts it, at the heart of Modern religion we find the belief that:

without the transcendence of monotheism we would be left with the mere immanence of the natural world. Without the spirit, we would be in the world of mere objects. As if the world were really made of the stuff of *res extensa*, against which, fortunately, religious spirituality struck its sword violently enough that another world could at last be seen through the gaping holes – a sword which, in passing, was also used to cut a few throats...³

Thus in the early modern period, many factors including: the anti-hierarchical tendencies of a democratizing culture, the rejection of superstition so central to the progressivism of modernity, the response to the discoveries of modern science, and the worries about idolatry perennially a part of the Abrahamic religions, all contributed to a strongly iconoclastic religiosity.

What is less well-known is that the Modern understanding of science was also, like religion, infected with an equally one-sided and equally blinding preoccupation with the desire for unmediated truth. In other words, both Modern science and Modern religion are deeply marked by iconoclasm. This is because the modern understanding of science is as influenced by

religion as vice versa. First according to Latour, modern science had to bear the consequences of being born not only into a deeply religious society, but into a society locked in religious war. In the face of this sectarian strife it was natural to turn to science as a method for discovering indubitable truths. As Latour writes,

In the notion of ‘nature’ there is thus always, inevitably, a polemical dimension. The requirement of sticking to the facts is normative to the second degree. Not content to introduce the supreme moral value, this requirement purports, in addition, to be achieving the political ideal par excellence: *the agreement of minds despite disagreements on moral [and religious] questions.*⁴

This insistence of the universal assent to truths grounded in reason leads to the bifurcated world of modernity: on the one hand, a *multiculturalism* in which each person or society is free to choose to ascribe to any of a whole array of subjective values mediated by all kinds of cultural and personal considerations, and, on the other hand, a *mononaturalism* in which scientific reason yields an objective and unmediated world of facts to which all people of good will must assent. Already, we see the rhetorical force at work in European Modernity’s valorization of science and universal reason: Do not challenge the objectivity (unmediated and supra-political) of science at the price of returning to the chaos and destruction of the wars of religion and returning to the superstitions of a more benighted time.

This dogmatic character is exacerbated, however, by an even more direct connection between early Modern religion and early Modern science, namely the apocalyptic sensibility that the latter inherits from the former. Following Henri de Lubac, Latour points to a decisive change in the European Christian understanding of temporality that began in the late medieval period.

Under the influence of millenarianism, European thinking began to lose track of the complicated tensions between time and eternity in a religion which preached both the Resurrection as the definitive salvation of the world (already here) *and* the need to wait for the Parousia (not yet). The temporal tensions at work in an understanding of the Kingdom of God that is both ‘already among you’ and yet ‘coming like a thief in the night,’ began to collapse along with the collapse of religiosity from communal practice into mere belief. Further, Latour points to Henri de Lubac’s reading of the legacy of Joachim de Fiore to show how these two collapses are related. Joachim and those that followed the trajectory of his thinking taught that there were three ages of religion: (1) the age of the Father which corresponded to the law of the Old Testament, (2) the age of the Son which corresponded to the liturgical age of the Apostolic Church, and (3) the age of the Spirit which had just begun and would be marked existentially by interior personal conviction, politically by antinomianism, and religiously by anti-sacramentalism.

Once one has entered the age of the Spirit no event in the world could make a definitive difference in one’s life or to one’s culture. The danger of this form of spirituality is a blindness to the concrete conditions of our worldly experience and the corresponding need for change necessitated by those conditions.⁵ Latour shows how the scientific elements of modernity transfer this hubristic belief from a conviction that one has been saved by belief in religion—which brings a radical end to historicity—to being saved by belief in science—which does *the same thing*.⁶

Latour’s long career has been spent using sociology to help set science free from this legacy of unwitting subjugation to a certain strand of early modern religiosity, both to curb its overweening hubris, but also to restore the full glory and depth of science’s materiality and creativity in engaging the natural world, which can only emerge when the iconoclastic model of

Mind standing directly before World is dismantled. First and foremost, Latour and his colleagues have shown that the *actual* practice of science is dominated by an array of mediations, both social and technological, between the scientist and the world. As Latour points out, “every somewhat solid fact has to be accompanied by a whole suite of instruments, by its assembly of experts engaged in public debate, and by its public.”⁷

Recognizing this means overcoming the iconoclastic prejudice that mediations undermine truth. As Latour points out,

The mere opposition of Letter and Spirit leads to the misconception that, if given the choice, one could chose the spirit *against* the letter or even *without* any letter at all; that one could obtain the representation without any re-presentation, could get the Verb without any Flesh. It is as though a scientist imagined it possible to gain access to reality directly without any instrument or against the weight of any instruments.⁸

Conversely we celebrate the creative mediations and social relations at work in the creation of *art*, but at the price of divorcing epistemology from aesthetics and knowledge from beauty (and thus also knowledge from sensations—*aesthesis*):

The more I read about the intermediary steps that make up the picture of the *Night Watch* [for example], the more I may like it. Constructivism [in the study of art] adds to the pleasure, going, so to speak, *in the same direction*, towards the multiplication of mediators. In some deep sense, constructivism flatters some essential feature of the arts. This is not, however, the case with scientific facts. Constructivism, when it multiplies intermediary steps, seems always to *weaken* the claims to truth.⁹

This emphasis on the mediated nature of science, however, would only mean that science does not yield ‘real’ truth for someone who holds the a priori commitment that for truth to be real it must be unmediated. Thus, as Latour says, the sociology of science “would not cast the slightest shadow of doubt on the quality, the objectivity, or the solidity of the scientific disciplines, since it is now clear that the network of instruments, the Vast Machine that the [scientists] have built, ends up producing knowledge that is robust enough to withstand *objections*,” and that is what objective means.¹⁰ A more complete assessment of the plausibility of Latour’s sociology of science can be found in many other places. What interests us most here is the way his critique of iconoclasm opens directly onto a characteristic and plausible approach to environmental ethics, and it is to that to which we now turn.

II. What Can We Hope For?: Environmental Crisis and a Renewed Philosophy of Science.

While the sociology of science has made important strides in bringing to light the role of technical mediations in the production of objective scientific knowledge, Latour argues that the climate catastrophe brought about by global warming is finally bringing these truths into the wider public sphere. Thus he shares with the early environmental philosophers of the 1970s the conviction that environmental ethics will have a significant impact in helping us move beyond the limitations of Modern European philosophy; however, his insistent focus on technological mediations creates some marked differences that supplement the original emphasis on returning to the harmony of nature.

For Latour the new awareness effected by global warming begins, as we would expect, with a heightened awareness of the technological mediations in science. The truths of climate

change are scientific, but the science is much more obviously technologically mediated than the science of earlier centuries, in which the simple and elegant mathematical formulas that presented the results sometimes obscured the methods by which they were reached. The great accomplishments of modern science are all extremely elegant and simple patterns that reach to the fundamental nature of reality in explaining the core features of an entire domain, e.g. Newtonian physics (bodies in motion), Mendeleev's periodic table of the elements (the relations among types of matter), Darwinian evolution (the relatedness of the tree of life), and Mendel's laws of inheritance (the principles of biological inheritance). The truths of anthropogenic climate change are equally scientific, we all want to say, and yet they do not have this same simple elegance or formal structure. Nor do these truths have a single proper name with whom we can identify them.

The closest we have is Charles David Keeling, who in 1958 moved to Mauna Loa to measure changes in atmospheric chemistry. He faced difficulties, both technical problems developing equipment sensitive enough to detect the changes for which he was looking but also problems convincing his colleagues and funding agencies that this unglamorous work was worth doing, work that was in many ways more akin to tracking the contingent changes of history than the discovery of fundamental scientific laws. Yet in 1961 Keeling reported rising levels of CO₂ thus producing the most rigorous early scientific evidence about climate change.¹¹ Keeling's story is a good one, and it follows the paradigmatic plotline of the lone scientist standing up to opposition and difficulty only to finally triumph in the end—and in an exotic locale to boot. Nonetheless, we will never talk about 'Keeling Climate-Change' the way we talk about Newtonian physics, Mendelian inheritance, or Darwinian evolution.

The truths of this scientific ‘fact’ emerge not from any one theoretical construct alone but from a vast array of different kinds of instruments, theories, and even disciplines. As Latour writes:

Everything in these [climate change] reports is dizzying: they offer a sense of the immense complexity of the scientific arrangements capable of establishing reliable measures over such vast distances in time, not to mention the extraordinary layering of disciplines—paleontology, archeology, geochemistry—capable of converging on models that make it possible to predict at what precise moments we are crossing thresholds.¹²

This means that climate change is a scientific truth, but it is a truth with significant differences from the truth learned in Newtonian physics that in an inertial frame of reference the vector sum of the forces on an object is equal to the mass of that object multiplied by its acceleration ($F = ma$). The truth of climate change can never be captured in a single formula, for it is not *a* truth but a set of all kinds of truths directly tied to historical change and what we decide to measure. Climate change includes changes in levels of CO₂, methane, nitrous oxide and other chemicals in the atmosphere, ocean salinity, mean ocean and land temperatures, temperature fluctuations, rainfall patterns across the globe, storm intensities, rock weathering patterns, extinctions rates, disruptions in ecosystems, contraction of forests, and on and on. Further, we are measuring systems that are constantly changing and of which we are a part. There is no ‘objective’ reality (in the sense of a mind-independent world), for we are a part of the planetary system we are measuring. And there is no ‘inertial frame’ apart from what we choose to specify (are baseline CO₂ levels those of the year 2000? 1850? 1610? 10,000 B.C.?), for we are examining an irreducibly historical reality.

Relatedly, there is no axiologically neutral vantage point from which to safely view these scientific realities. The ecologist cannot merely say, “if we do not change our behaviour, climate change will cause vast biological destruction unparalleled since the Cretaceous extinction event—and that is an interesting fact, nothing more.” Rather this knowledge gained from scientific exploration has normative implications; we *must* change our behaviour now that science is able to report its consequences. It is of course not a matter of ceasing from interfering with nature, however. Every breath we take, every drink of water or bite of food contributes to atmospheric and nutrient cycling. And so the science is ineluctably tied into both normative claims and the trade-offs and compromises between competing values and ways of life, i.e. it is inextricably bound up with politics. Thus as Latour writes, with the dawning of ecological awareness, “the invocation of the ‘natural world,’ which was supposed to stabilize, pacify, reassure, and bring minds into agreement, seems to have lost the capacity to achieve these goals.”¹³

Newtonian physics tells us that at sea-level an object in a vacuum falls a distance such that $d=1/2gt^2$. The general understanding has been that this is just a fact, with no normative element at all. As Latour points out, however, there is a normativity implicit in its truth. The *science* tells us we *ought* to accept this formula as true about the world. On what grounds? The *elegance* of the formula, the *self-consistency* with which the empirical data *approximate* it, the *harmony* with the rest of the principles of mechanics all *call for our assent*.¹⁴ In an analogical way, the truth of climate change also has a normative element. Like a law of physics, an ecosystem also has a self-consistency, harmony, and elegance that calls for our assent to its reality as a governing principle of nature. An ecosystem is necessarily stable and can even be called ‘epochal’ in the sense that it is a set of relations that allows particular ways of life to

unfold within its purview. An ecosystem, however, also includes a much greater element of historicity than the laws of physics. When climate science reveals the truth of the ecosystem's possible demise, we realize that what calls for our assent to its truth also calls for our assent to its existence. Both these exigencies involve a second order normativity. First, the ordering principle of nature is true, and we ought to believe it. If it were not true, the world would be a less intelligible place. If we did not believe it, our world would be a little darker. Secondly, it exists, and we ought to value it. If it did not exist, the world would be a diminished place. If we did not value it, our world would be a little poorer. Further the more we know about it, the more the goodness of its existence becomes apparent. This is why the ecologist is forced to become the spokesperson for the ecosystem when her science reveals its potential destruction. Because she knows it best, she knows most what goodness will be lost if it is destroyed.

This normative element of science is a radical challenge to many of the assumptions we have inherited, and so developing it in a rigorous fashion will take a generation of philosophers. I will just mention in passing that while it is ecology that has provided the deep challenge to our assumption that science necessarily lacks a normative dimension, an analogous situation could have similar results in other scientific disciplines. We could imagine a science fiction scenario in which the "existence" of gluons came under threat from malicious beings in another dimension. Then it would be the sub-atomic physicists who would be forced to argue that we must fight to keep gluons from going extinct. And while bio-centrists like myself would be more likely to accept instrumentalist arguments on the grounds that gluons help constitute the matter necessary for living beings, the more one knew about the physics the more likely one would be to be motivated to preserve these gluons for their own innate (given by birth, 'natural')¹⁵ qualities.

For this paper, however, I hope it will suffice to appeal to the wide-spread agreement that the sciences of climate change *call* for a response and leave the exact nature of this normative dimension undeveloped. This allows us to return directly to the claim that a sacramental religiosity can be a productive dialogue partner for this already interdisciplinary project, which interweaves science, politics, and ethics. Latour argues persuasively that an ecology adequate for an environmental philosophy will involve setting science (and a scientifically informed politics) free from the religious iconoclasm that dominated Europe in the cultural epoch in which modern science was born. This means finally allowing science to operate as its own autonomous sphere of human activity, independent from religion, and thereby allowing it to glory in all the instruments, institutions, social networks, and human creativity that constitute the practice of science. This does not mean, however, that science must be insulated from all contact with religion, on pain of contamination. We already know how to celebrate mediations in artistic creation, and in this regard our philosophy of science can learn from theories of aesthetics. It can also find mutual enrichment and new resonances with forms of religiosity that have traditions of appreciation for mediations. Tellingly, one of Latour's central essays on the topic is entitled, "How to Be Iconophilic in Art, Science, *and* Religion."¹⁶

III. What Can We Hope For?: Latour' Catholic Environmentalism

In the Christian context, looking to traditions attuned to the value of mediation means a special place for sacramental forms of religion, which understand grace to be mediated by nature. Sometimes this is expressed with the phrase "matter channels grace,"¹⁷ but we ought not understand this formulation in terms of the modern notion of undifferentiated matter. Rather, it

means that the things of the material world can serve as vessels of the free divine gift of grace, *through the agency of their own created nature.*

We see this deep and central tenet of sacramental theology at work in the Catholic view of baptism. According to canon law, a Baptism “is validly conferred *only* by a washing of true water with the proper form of words.”¹⁸ The requirement that water be used is quite strict; without water there is no baptism. This legalism appears in stark contrast to a whole host of other ‘rules’ specified by canon law. A baptism *should be* performed on Sunday (and ideally on Easter Vigil), in a church (and in the recipient’s own parish church when possible), using water that has been blessed with proper rites, for a recipient who has received a full catechetical training, and immediately before he or she receives the Eucharist, etc. But all of these rules are preceded by a series of qualifiers that become almost tediously repetitive: “except in cases of necessity,” “except if there is some compelling pastoral reason,” “except in the case of imminent death,” “except cases in which distance or other circumstances necessitate an alternative.” This latitude in accommodating particular circumstances extends as far as allowing lay persons to celebrate the sacrament. In fact the “The Decree for the Armenians,” promulgated by Pope Eugene IV and the Ecumenical *Council of Florence* (one of the most authoritative sources for Catholic thinking about Baptism), seems intent on exaggerating this latitude through the use of hyperbole, claiming that “the minister of this sacrament is the priest, to whom it belongs to baptize, by reason of his office. In case of necessity, however, not only a priest or deacon, but even a layman or woman, nay, even a pagan or heretic can baptize.” A heretic can perform a valid baptism—but not without water!

So why the thoroughgoing situationalism about the rules in most respects and yet the tenacious legalism about the necessity of water? Partly this is a matter of denominational

polemics. Calvin had claimed that the water used in baptism was merely commemorative of the blood of Christ.¹⁹ Luther is reported by his students to have said that if someone was accidentally baptized with wine, it would not matter, for “when I take something to be something—when I think it’s water, even if it really is something else—there’s no danger at all.”²⁰ Further, in his own polemic against traditionalist medieval Christianity, Luther claims:

The sophists talk nonsense when they discuss how Baptism makes righteous. Thomas and Bonaventura think that some power for bringing this about has been given by God *to* the water... Scotus speaks more correctly when he defines Baptism as a divine covenant standing *by* the element.²¹

The insistence of the Catholic response risks the dangers of legalism and factionalism, but at its best it takes this risk in order to hold onto the central insight that it is not only “matter in general” that channels grace, but natural beings in their proper nature and with their characteristic agencies. Thus, the *Council of Trent*, responding to Luther and Calvin, declares anathema anyone who denies that “true and natural water” (*aquam veram et naturalem*) is required for Baptism.²² But the phrase *aquam veram et naturalem* was already used in the 1439 *Council of Florence*, and 200 years earlier still Pope Gregory IX had argued that the Norwegian Archbishop of Trondhjem was wrong when he claimed that beer could be used in place of water.²³ Thus, there is clearly a deeper question involved that goes beyond the particular dispute with Reformers, even if it comes to a crisis at that time.

To modern ears “true and natural” is often heard as synonymous with “pure and uncontaminated.” To understand what is at stake in terms of purity and abstention from relations, however, would be to misunderstand the tenacity of the Catholic position. *Nātūrālis* can be translated as ‘natural,’ and it did describe that which pertains to nature itself. But it refers to this

general concept only derivatively by way of its reference to the ‘nature of a thing’ or a thing’s ‘innate qualities.’ These meanings in turn are derived from its most primordial sense: ‘by birth’ or ‘one’s own.’²⁴ This helps us to see that ‘true and natural’ refers to water in its particular nature *as water*, with its own characteristics that are proper to it as such. Thus, as long as it does not violate its nature, the water used in baptism need not be pure but can be mixed in all kinds of ways. Similarly, it need not be derived from ‘untouched’ wilderness but can be produced by various forms of human labor. As the *Catholic Encyclopedia* explains,

Theologians tell us consequently that what people would ordinarily declare water is valid baptismal material, whether it be water of the sea, or fountain, or well, or marsh; whether it be clear or turbid; fresh or salty; hot or cold; coloured or uncoloured. Water derived from melted ice, snow, or hail is also valid... Dew, sulphur or mineral water, and that which is derived from steam are also valid matter for this sacrament. As to a mixture of water and some other material, it is held as proper matter.²⁵

What is important is that the material, through all its transformations and mixtures and all its relations with human activity, remains water—with water’s particular kind of being. It is not a problem that the water is mixed with other things, “provided the water certainly predominates and the mixture would still be *called* water. Invalid matter is every liquid that is not usually designated true water. Such are oil, saliva, wine, tears, milk, sweat, beer, soup, the juice of fruits, and any mixture containing water which human beings would no longer call water.”²⁶ This is because it would then be something else and thus no longer water with all the natural agency this material possesses, i.e. cleansing, refreshing, quenching of thirst, watering of crops, separating of territories, providing transportation for boats, flooding of fields, the ending of life through drowning, etc.²⁷ The sacramental principle worth defending is that it is not matter in general that

mediates grace in a sacrament, but this kind of matter, which opens onto various relations that are made concretely possible by its particular nature.

Latour points to the example of the Eucharist where the mediating character of natural agencies is even more evidently on display, noting in passing that this theological point has been emphasized most in recent times in Orthodox Christianity:

As the Metropolitan John of Permagon points out, the Eucharist is a presentation not of grains and grapes but of the actively, artificially, technically (and I would add scientifically) transformed grains in bread and grapes in wine. Before the transubstantiation of bread and wine into flesh and blood, there is another indisputable transubstantiation of grain into bread and of grapes into wine that is no less mysterious than the other.²⁸

There is no direct, unmediated access to Eucharistic grace. Without the material presence of bread and wine as the matter of the sacrament, there can be no Eucharist. Further, to understand the grace, even purely theoretically, requires meditating on the mode of mediation. But there is no direct, unmediated access to bread and wine, either. They also are effected through a whole series of mediations—skilled human activity, technological interventions, microbial agency—that transform wheat into bread and grapes into wine.²⁹ Further, this points us beyond the wheat and grapes to all the relations that in turn gave rise to them. In announcing the coming of the Kingdom, Jesus himself often calls on the growing and cooking food as paradigmatic examples. In doing so, he mentions both the transformations that are effected by processes explicitly and directly under human technological control, such as harvesting and baking, and those transformations that come about from agencies with very little or no human involvement, such as

the shining of the sun and the falling of the rain. Interestingly he also makes a special place for the ‘in between’ cases, such as yeasts, which have adapted to human use but are not fully domesticated, that are alive and ‘managed’ but not fully conscious and responsive the way a dog or a sheep is.

The water of Baptism and the bread and wine of the Eucharist are the proper matter for a relatively short list of official sacraments, but many of the same principles also apply to the “sacramentals,” all the other outward/material signs of grace involved in the liturgical and spiritual life of a people.³⁰ If we look at these traditional sacramental practices around the world, we find a very similar dynamic to that which Latour finds in the Eucharist, i.e. a rootedness in the beauty and power of the non-human natural world *combined* with a special celebration of human creativity and power to transform nature.

Among the most monumental of these sacramental practices is surely the Gothic Cathedral. This is a discipline in which master craftsmanship allows stone, among the most elemental of substances, to become recognized as radiant with divine grace. As it should be, this is the local limestone that a resident of the region would come across in his or her normal life, but now praying in the midst of that stone becomes an exercise in which everyday materiality and the peaks of the spiritual life become deeply intertwined.

‘Nature’ in this case is imbued with a spiritual radiance, but this is certainly not nature ‘untouched by the human hand.’ The Gothic Cathedral is as much a celebration of human ingenuity as it is of the spiritual beauty of the material world. In fact we see this adulation of human labor intensify over the course of the Gothic period. One way this occurs is the placing of limestone or other sedimentary rock ‘face-bedded’ (or what the Norman cathedral builders called *en delit*: ‘stone out of bed’), so that the grain of its sedimented strata runs vertically, parallel to

the forces of gravity. As any introduction to stonework will tell you, “when placed in a wall, stone should generally lie in its natural bedding position. That is, the layers should run horizontally, in the manner in which the stone was originally formed. The stone is stronger in this position and is also less vulnerable to defects.”³¹ Nonetheless, due to the innovations made possible by flying buttresses, later Gothic cathedrals made extensive use of face-bedded limestone.³² This accentuated the gothic desire to allow the stone to soar heavenwards. By standing the stone vertically, however, and thereby flouting a most basic rule of masonry as well as reorienting the deep, geo-epochal history of the stone’s horizontal embeddedness in the earth, this technique was surely also meant to highlight human ability and inventiveness.

In fact, sometimes the Gothic cathedral is critiqued as a symbol of overweening human pride. It is revealing that the 19th century Romantics seemed to prefer gothic architecture, not as inhabited, but standing useless in ruins. Working from the Sufi tradition, Hossein Nasr makes a related but narrower and more revealing critique.

There are no created tensions, no upward pull to a heavenly ideal in Islamic architecture as one finds in Gothic cathedrals... Islamic architecture ennobles matter not by making stone appear to be light and flying upwards but by means of geometric and arabesque patterns which make material objects become transparent before their spiritual archetypes, reflecting these archetypes on the level of existence proper to those objects. *In this way the nobility of material objects is brought out by remaining faithful to the nature of each object.*³³

I think Nasr articulates the correct criteria quite eloquently. Human acts of transformation and creative engagement with the natural world in the pursuit of liturgical or sacramental practice are

to be pursued, while at the same time remaining faithful to the nature of the things they creatively engage. This means that human proficiencies and power to transform things are to be valued, but so is learning to listen to them and to learn from them. Thus rather than committing a violence, human transformations of nature, at their best, set things free into the fullness of their being. Because this is at the same time their most transparent rootedness in God's creative giving of being, it is also a revealing of something about God's grace. My disagreement with Nasr has only to do with the application of the criteria in this case, for I think the work of the stone mason in those cathedrals tends to be both faithful to the limestone while at the same time raising it to new levels of splendour that were beforehand only unrealized possibilities of its nature. In the doxological language of the Psalms, 'raising the stone from its bed' is akin to 'awaking the dawn.'

Perhaps a sacramental practice more widely suitable to a modern sensibility devoted to the God of 'little things' (a match lit in the dark, a cry in the street, a madeleine dipped in tea),³⁴ but that also emphasizes more clearly an engagement with nature, is the Holy Well. Holy wells exist all over the world in many traditions, but they were of particular importance in (Druidic and then Catholic) Ireland. These wells are usually situated at the site of natural springs, where life-giving water bursts forth from rock and soil. Most were in use in pre-Christian times and have been seamlessly adopted into the new religious practice. This is because the properties of water, particularly here where it springs fresh from the earth, make easily recognizable the graciousness and abundance of the natural world. While encountering nature is clearly important in this sacramental practice, however, pilgrimaging to these sites is a very different activity than that of the post-Kantian Romantic climbing a mountain to gaze at the vast scenery. The pilgrim to the holy well comes not to dispassionately contemplate nature from afar, but to intimately mingle

with it. In some cases the pilgrim may bathe in the well and thus immerse herself in its water. In others cases she may drink water from the well and thus incorporate it into her own body.

Almost always the pilgrim will take with her not only memories of this ‘experience’ but will fill a container to bring water with her back into her ordinary life to bless her house or friends, neighbors, and family. On the one hand, this is not a merely instrumental use. For example, domestic tasks such as gathering drinking water or cleaning clothes are strictly forbidden at the risk of losing the sacred power of the well. On the other hand, it is not purely disinterested observation either.

Further, if the practice highlights the natural qualities of water and the glory of a natural spring, there is no privileging of ‘untouched’ wilderness. This is reflected materially in the fact that the holy wells generally have some human-made stonework that clarifies the boundary between the spring proper and the rest of the groundwater-soaked earth. These stoneworks are almost universally very simple and thus at the opposite extreme from the Gothic cathedral, but the sacramental nature of the spring is highlighted rather than diminished by the thoughtful labor that went into their creation. Finally, as if designed to make it clear to the modern thinker that this is not a misanthropic nature worship, in many cases the practice has arisen over the centuries of leaving a small rag with the petitions of the pilgrim tied to a tree close to the well. For the traveler coming straight from a wilderness preserve (where we are taught to ‘take only photos, leave only footprints’) this may look like a pile of trash flapping in the breeze and marring the beauty of the ‘landscape.’ And yet that would be to miss the point. These rags are left as physical symbols of the suffering borne by the pilgrims and their loved ones in the hope that by the time the rag disintegrates back into the earth, by the time it rots and returns to the *humus* under the tree, the human ailment will be cured. The pilgrim does not expect an instantaneous granting

of her wish but, in consonance with our material and temporal nature, looks to healing in the same modality. In other words, it is a practice that recognizes humans (*L. humanus/ humus*) as a part of nature and ultimately returning to the earth from which all things grow.

This is a different version of religiosity than that which gave rise to modern science and the radical split between ‘objective’ nature and ‘subjective’ values. I think Latour is right that this alternative more sacramental understanding of religion gives us “a positive view of all artificial transformations (against any tendency to conserve what is)” and, thereby, a valuable sensitivity for environmental thinking.³⁵ A sacramental environmentalism would not measure a forest only in ‘board-feet’ of lumber, but neither would it put all its energy into protecting a forest-wilderness off limits to human activity. The natural world is not best thought of as a ‘resource’ or a ‘reserve,’ but rather as a web of ‘relations’ full of myriad creatures creating life and beauty together, a web in which humans and their technologies can play a beneficial and beautiful role.

This is important, for the policy priorities of most environmentalists have focused on preserving wilderness and protecting ‘wild’ species from extinction, and in both of these cases a relationship with humans is considered detrimental or at best irrelevant. On the other hand, very little effort has been done to protect the more positive human engagements with nature, such as the kinds of farming, logging, species domestication, and fire-clearing that open new opportunities for life that are both good and directly indebted to human agency. For example, the controlled burns produced by the Salish peoples to open grazing areas for game and to clear ground for camas fields once created some of the most beautiful and vital habitats in the world.³⁶ The loss of this practice is to be deplored as much as the loss of a species, and yet this and things like it rarely garner the attention of environmentalists. Latour’s iconophilic science and a

renewed sacramental religiosity will help us to pay attention to human activities such as hedge-row farming and slash and burn agriculture, not only for their moral shortcomings but *also* for their potential contributions to the richness of life on the planet, thus allowing us to be more discerning and hospitable to traditions outside our own. Certainly, this does not put all our disputes to rest, nor solve all our problems. In fact it reminds us of the constant need for compromise and continued dialogue that we face in prudential politics, but it does offer a general framework that is often missing from discussions of environmental ethics, one that may help many ‘humanists’ become more open to the claims of deep ecology about the value of the more-than-human world, while inspiring those committed to the intrinsic/innate value of nature to open a more prominent place for human creativity and human culture in their preservation work.

¹ I am aware, of course, of various problems involved in the use of the word ‘nature,’ and I agree with many of the critiques which have led to its fall from favor, including those offered by Latour. It remains for another essay to explain why I, nonetheless, think it is worth rehabilitating the word, primarily by looking to ‘natural history’ as a link between the *Naturwissenschaften* and the *Geisteswissenschaften*.

² As just one example, the Stanford Encyclopedia of Philosophy entry on “Intrinsic Value” talks almost exclusively about human beings, but alludes in passing to “the increasingly popular view that certain environmental entities or qualities have intrinsic value.” As paradigmatic examples they note that some people find this intrinsic value “in certain ‘natural’ environments (wildernesses untouched by the human hand); some find it in certain animal species; and so on.” The Stanford Encyclopedia of Philosophy (Spring 2019 Edition), Edward N. Zalta (ed.). <https://plato.stanford.edu/entries/value-intrinsic-extrinsic/>

³ Will Non-humans be Saved?, p. 471.

⁴ [Latour’s emphasis] *Facing Gaia*, pg. 24

⁵ This is why Marx says “To have one basis for life and another for science is apriori a lie.” See Thomas Jeannot, “Beyond Naturalism” in *Sustainability in the Anthropocene*, ed. Roisin Lally, Lexington Books, 2018.

⁶ To these peoples, obviously, nothing serious can happen any longer, since they believe they have always been within the ‘end of history.’ It is thus completely useless to speak to them in apocalyptic terms announcing to them the end of the world! They will reply condescendingly that they have already crossed over to the other side, that nothing more can happen to them, that they are resolutely, definitively, completely, and forever modernized!

⁷ *Facing Gaia*, p. 33.

⁸ [Latour’s emphasis] “Thou Shall Not Take the Lord’s Name in Vain,” p. 9.

⁹ [Latour’s emphasis] “How to be Iconophilic in Art, Science, and Religion,” p. 423.

¹⁰ *Facing Gaia*, p. 33

¹¹ *Facing Gaia*, p. 43.

¹² *Facing Gaia*, p. 44.

¹³ *Facing Gaia*.

¹⁴ We need the philosophy of science to clarify *how* science makes these normative claims but not *that* it does.

¹⁵ See the etymology of 'natural' below.

¹⁶ "How to Be Iconophilic"

¹⁷ E.g. see Mary Douglas, *Natural Symbols*, New York, Pantheon Books, 1970

¹⁸ Can. 849

¹⁹ Calvin, *Institutes*, IV. XV. 2

²⁰ Martin Luther's Table Talks. Abridged. Ed. Henry F. French. Minneapolis: Fortress Press. P. 84.

²¹ Luther's Works. Vol 1, *Lectures on Genesis, chapters 1-5*. Ed. by Jaroslav Pelikan. Fortress Press, 1958. pp. 227-228.

²² Session VII 1st decree on Baptism Canon 2.

²³ Luther is reported to have said this as well. Luther, *Table Talk*, no. 394.

²⁴ See Lewis and Short, *A Latin Dictionary*

<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0059:entry=naturalis>

²⁵ <https://www.newadvent.org/cathen/02258b.htm>

²⁶ <https://www.newadvent.org/cathen/02258b.htm>

²⁷ It is true that not all forms of water are functionally equivalent. Most notably, saltwater cannot be used for drinking or irrigation. Saltwater is, however, intimately related to freshwater via the water cycle. Also, drinking tends to be a little emphasized part of baptism.

²⁸ "Will Non-humans Be Saved?" p. 463.

²⁹ Again, a purely theoretical knowledge of what bread and wine is will have to take into account these mediations. This aligns with all the work over the last 100 years which suggests that *episteme* is closer to *poiesis* and epistemology more interwoven with ontology than tended to be recognized in modern philosophy.

³⁰ The distinction between a sacrament and a sacramental is a decisive one. For a Catholic only the former confer grace *ex opera operato*, but there remain important similarities between the two kinds of practices that tended to be ignored in the modern period. See Godfrey Diekmann's "Two Approaches to the Sacraments," (*Readings in Sacramental Theology*, ed. C. Stephen Sullivan, F.S.C.), particularly the section "Sacraments and Sacramentals." Diekmann was a Benedictine and a leader of the mid-twentieth century liturgical renewal in the United States.

³¹ Institute of Historic Building Conservation Wiki, 'Defects in Stonework.'

https://www.designingbuildings.co.uk/wiki/Defects_in_stonework

³² P. 557. "The Construction of Notre-Dame in Paris." Caroline Bruzelius. *The Art Bulletin*, Dec., 1987, Vol. 69, No. 4 (Dec., 1987), pp. 540-569.

³³ [my emphasis]. Nasr. *Islamic Art and Spirituality*. New York: State University of New York Press, 1987.

³⁴ See Richard Kearney's reading of "a cry in the street" (Joyce), a match lit in the dark (Wolff), and a bite of seed cake (Proust) in *Anatheism*, among other places. For the argument that we ought to pay attention *also* to the God of 'large things,' see my review of Review of *Reimagining the Sacred*, by Richard Kearney. *Notre Dame Philosophical Reviews*. (July 2016).

³⁵ Will Non-humans be Saved?, p. 473.

³⁶ Robert Boyd, ed. *Indians, Fire, and the Land in the Pacific Northwest*. Oregon State University Press, 1999.