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# Nature, humanity and technology

We live in an age in which politics is no longer simply about the relationship between human beings, but also about the relationship of human beings to the natural world on the one hand and to machines on the other. Perhaps this was always covertly the case and manifestly the case to some degree, but it is now wholly manifest. An aspect of this decisive shift is that natural and social science have come much more into general public contestation.

One approach to this new situation is to insist that what is human be protected from both the natural and the technical. This informs much populist resistance to the claimed control of knowledge and our lives by science, whether we are considering ecological questions or the use of automation and artificial intelligence. Ultimately this resistance is something that is justified: we need to defend human integrity against the claims of both naturalism and robotisation: a drive on the one hand to reduce human beings to animality

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and on the other hand to approximate them to automatons with which their lives are increasingly intermingled.

But it can become too easy to suppose that the threat to our humanity is nature herself, whose universal tyranny over our poor human aspirations should not be appeased, whatever ecologists may say. Or that it is technology itself, which especially in the mode of AI may land up controlling us, especially if it surpasses a supposed threshold of singularity and becomes itself conscious.

The problem with both pure humanism and pure Luddism (for want of a better term) is first that they are mutually contradictory and second that they are forlornly futile. If we assert our artificial wills against nature, then we cannot with consistency insist upon the naturalness of our human lives against the intrusion of the machine. Equally we cannot really claim not to belong entirely to nature, nor to be ever possibly free of the use of tools or of language, which is in one respect a kind of technology of communication that modulates the air. In the first case, if we are able to feel, think and will then we do so as specifically natural creatures. In the second case, we are such naked, slow and non-instinctual animals that we have always depended on the use of tools and of signs for our very existence and survival.

This is so much the case that several of the most reflective philosophers have argued that to imagine the origin of tool-use or of language, or indeed of social organisation and even of myth and religion faces an *aporia: homo sapiens* if not even his immediate evolutionary predecessor just *is* a tool-using, symbol-making, socially organised, worshipping, myth and ritual-directed animal.[2] It then becomes not less than critical but more than critical to ask whether we simply made all these things up? If, for example, we were always culturally formed by stories about the gods, then cannot we equally say that these stories make us, and if not literally the gods recounted in those stories,

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2   The following reflections are mainly inspired by F. W. J. Schelling, André Leroi-Gourhan, Gilbert Simondon and Bernard Stiegler. See Edward Allen Beach, *The Potencies of God(s): Schelling's Philosophy of Mythology* (New York: SUNY, 1994); Nathan Schlanger (ed.), *André Leroi-Gourhan on Technology: A Selection of writings from the 1930's to the 1960's* (New York: Bard Graduate Centre, 2025); Bernard Simondon, *On the Mode of Existence of Technical Objects,* trans. Cecile Malaspina and John Rogove (Minneapolis: Minnesota UP, 2017); Bernard Stiegler, *Technics and Time I: The Fault of Epimetheus,* trans. Stephen Barker (Stanford Cl: Stanford UP 1998). Simondon and Stiegler wrote partly in the wake of Leroi--Gourhan and it is important to realise Teilhard de Chardin's influence on the latter.

then at least powers or psychic forces that seem to spring from an unconscious that is as much natural as it is human.

These same early stories often recount tales of the origin of the donation of technological and linguistic powers from the gods, or else the stealing of these things from the gods, in ways that mark already a sense of the ambiguity of these gifts. And if we start to wonder whether myths make humans as much as humans make myths, then equally we can start to wonder whether these origin-tales are so entirely untrue. For if we have never really been able to act or to think without tools and signs, then should we not say that human beings belong to the history of in some way self-evolving tools, and words as much as to a history of human usage?

In the case of tools which evolve into machines this inversion of the usual humanist attitude can be justified by the phenomenon of experiment taken in the widest sense. An experiment is not just applied reason precisely to the extent that matter has here to go along with us or else frustrate us, just as it can spring surprises which cause us to revise our initial hypotheses. In other words, in the case of experiments which are like pondered machines, or machines turned to a computerised, theoretical use, as in the case of machines put to practical uses, nature is not simply the passive recipient of our thoughts or actions: she is rather a co-contributor. It follows that an artefact is not entirely our own work, but besides embodying our inventiveness, records also nature's allowance or affordance of such a thing to be. Indeed, even though we contrast the artificial with the natural, every technical artifact is entirely natural, since it merely extends, regularises and complexifies the operation of mechanical or causally efficient processes within nature herself.

It is in the fusion of our creative or inventive power with newly directed, revealed or transmuted powers of nature that the technical consists. This is often concealed from our view because we think in terms of human work, human labour as applying active form to dead matter, and have thought this way at least since Aristotle. But form is not static, and we should think rather of formation. Neither is matter itself passive in its elicitation of form and especially not in terms of already specifically formed matter like clay or wood or metal that forms the specific raw material of tool-using or machinic processes. The specifically technical consists in the operative blending of formal and material contributions, such that in the case of a machine like a clock we cannot really distinguish what is form and what is matter, just as a computer is really

composed of the interaction of software with hardware, even if this operation has to be deciphered by a human mind.

When we regard the technological in this way, certain usually suppressed things come to light. First, technology has no intrinsic bias towards the practical and utilitarian rather than to the cognitive and contemplative. There is a sense in which every machine thinks and always already was a computer. Conversely, every computer is also a process of silent and involuted action. The decisions as to how to regard the machinic are essentially human ones, even if machines inform us as much as we them and nature co-forms us through machinic experiments.

For one can say here that technical operations are a kind of suggestive lure but that they do not altogether constrain us. They lure at once towards control, towards pleasure and towards knowledge and even religious awe. In the latter case we need to remember that writing is a technology and that the great post-axial religious involve at their cores some sacralisation of writing in the form of sacred books. More generally, a focus on the overall shape of a technical product and its specificity tends to isolate it as art if not as an idol or an icon. Indeed, one could say that the very first invention of a machine or an experiment remains the making of a specific work of art, even if it already has the later identical repetition of this work in view. Only when the prototype is repeated does the interest in functional repeatability entirely overtake the singular and attracting beauty of the original. So conversely one could think of art as a technology, or as a science always in search of unrepeatable experiments or psychic affects. It is perhaps interesting that religious liturgy appears to combine the singular variance of art with the reliability of the machinic.

Secondly, the fear that artificial intelligence will escape our human reach ignores the point that this has always been the case for all of the machinic, because of the way in which our invention is combined with natural affordances that we cannot entirely anticipate. On the other hand, just because nature permits this blending, we can always in principle catch up with the machinic—including with artificial intelligence, given world enough and time and enough sheerly human combination of mental effort. More realistically, even when we do not know how AI has arrived at a useful result, we are still able to understand the useful result and to this degree have kept pace with the machine as to the essential.

Thirdly, an improved understanding of the technical allows us better to grasp one aspect of human alienation. Human beings are only able

to interact at all, even in pairs, because of the use of tools and symbols which in principle can be operated or understood by a third party. Just as there is no private language, so there is no pure idiolect *à deux*, no private code that cannot be cracked. For this reason, the very precondition of human existence as inherently a social existence is also a condition of potential alienation, compounded by the fact that, as we have seen, the unpredictable voice of nature is also involved.

If we reflect upon this, then we can notice a surprising inversion: it is not that the technical alienates us from the human and from our human labour, not the machines that are at fault, but the very reverse: removal from insight into and participation in the technical process, including the process of creative art, is what alienates us from being human. Being human is to labour, but not just to labour in the sense of work, also to labour in the sense of being a technician and of being an artist. Why is that the case? Because if the tool and the machine and the sign as tool make us as much as we make them, then it follows that to be fully human we must have some insight into the occult blending of formation and materialisation, of human invention and natural affordance which defines the technical.

Once we have seen this, then we can also see that it is not machines and computers and mobile phones and so forth which remove us from our essential humanity. It is much more that most of us have no idea how these things work and are for that reason their servants, though far more really the servants of the human operators of these machines. No longer can we even repair our own cars or even get the local garage to do so: they are far too over-automated for that. Not because this over-automation makes technical sense, but because we are being subtly subordinated to systems that have ultimate human and not machinic operations. This example could, of course, be multiplied several times over.

Once upon a time, in the so-called feudal and early modern eras, many human beings were treated as if they were matter being shaped by other human beings regarded as form—who in consequence had fatally no insight into the working and technical process, as Hegel explained. If natural things and artificial objects were seen in terms of this static hylomorphism, then that was not because any natural or artificial object really corresponds to this pattern (as opposed to a dynamised hylomorphism, as I have described) but because such objects were viewed in terms of coercive human relationships dividing humans into active and passive.

Since the early modern era, under capitalism. most human beings have instead been oppressed in the name of efficiency and efficient causality. Instead of being regarded as raw material they have been seen as cogs in a machinic process. But even though a machine is not a living organism able to reproduce or feel, it still involves the operation of a certain continuous feedback loop in order to run at all. Similarly, even though efficient causality is not formal or teleological, the recipient of a merely forceful cause is not entirely passive or pre-determined by it: it rather adapts the cause according to the way it already is and sometimes with a certain degree of unpredictable spontaneity. Even at the level of efficiency cause and effect must be co-bound within a certain reciprocal relation in order for causality to work at all.

It follows that to complain that human beings are being reduced to machines tends to misunderstand and to slander the machine. Just as static hylomorphism really projects a false human relationship onto nature and artifice, so likewise, specifically Newtonian mechanism projects another false mode of human relationship onto nature and mechanism. The bad machine was always the inter-human one and alienation from the machine is produced by human beings ensuring that other, indeed most human beings, will be divorced from the technical and from the artistic and so from their own humanity.

The reign of efficiency is still with us. Not only does it try to deny our humanity by conforming us to misunderstood machines, it also tries to deny our humanity by conforming us to misunderstood animals and misunderstood nature in general. For if even mechanical causality is reciprocal and organic nature intensifies that reciprocity by increasing the feedback power of the recipient towards the self-sustaining, then we can start to see how nature is not controlled by detached law, but rather by self-establishing habits or dispositions which appear to tend towards mysterious goals that nature participates in by herself constantly co-shaping and re-envisaging reality. In such a cosmos, of the kind that Romantic nature philosophers first envisaged, and which even professional scientists are now re-affirming, the eventual emergence of freedom and conscious purpose no longer seems like an aberration.

In consequence, we can say that just as the perceived danger of reducing human to machines usually misunderstands machines, so likewise the perceived danger of reducing human beings to the animal or to 'bare life' usually misunderstands both the animal and the natural. We do not need to traduce the animal in order to defend our humanity, because the barely animal to which we are in danger of being reduced – to the merely appetitive

and exploitable — is once more a projection onto animality and onto nature in general of a division and subordination within humanity that has been ideologically upheld by a false duality of nature versus culture.

We do indeed need to defend human liberty, and this requires a strong sense of the reality of spirit as irreducible to matter, because materialist notions of freedom as 'compatible' with mechanical determinism, and so as reducible to mere lack of external resistance to the internally inevitable, cannot possibly support a democratic and participatory politics, but only one of manipulative control by those who in ironic practice would seem to be fully-fledged metaphysical libertarians.

But any dualistic defence of spirit tends to be implausible and to be complicit with the exploitation of the non-human, whereas I am suggesting that there is a continuity between the abuse of human by human with the human contempt for and abuse of nature and even the human contempt for and abuse of the beauty of technical processes.

We need then a politics of the soul that is also a politics of the continuity between the natural and the psychic, and we need this instead of a left 'materialist' politics that is oddly complicit with traditional elite associations of working people with supposedly passive and subordinate matter, however 'dynamic' this may be claimed to be, in terms that are incoherently mixed with a continuing reductionism from Engels onwards.

Yet in more general philosophical terms this implies a metaphysics that gives equal weight to the natural as all-inclusive and the human as the spiritual acme that emerges from and yet super-naturally transcends nature. Modernity bracketing God has tried to render absolute either objective nature or subjective humanity, or has incoherently oscillated between the two. But if the absolute includes both, then more plausibly we must see the absolute as transcendent as well as immanent: an eternal absolute in which the processes of both natural and human history participate.

This perspective can allow that spirit horizontally emerges from nature and yet as something not fully anticipated by nature, which rather can be retrospectively deciphered in terms of this emergence of freedom, art and purpose. To that measure it also seems to supervene upon nature and to descend vertically from above.

It is at this point that a specifically Christian Trinitarian theology of our participation in divine continuous creation seems best to decipher the cosmic mystery: even at the infinite vertical height, in God himself, there is emergence

from Paternal nature of the Filial *logos*, a perfect supervenient technical operation that is also perfected singular art, together with the synthesis of the two, of unconscious striving and conscious perfected form in the Spirit, which is the inexhaustibleness of creative and extra-rationally inspired labouring freedom, even in the face of the most absolute possible completion.

This ultimate conception surely best saves the appearances of the natural, the freely human and the machinic.