NATURE, NURTURE, AND THE MATHEMATICS OF CULTURE IN THE LIGHT OF SELECTED WORKS OF VOLTAIRE AND ROUSSEAU

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Abstract

The noun "culture" and the verb "cultivate" were frequently used in 18th century French literature in a very special way. Drawing inspiration from this special usage, this paper examines culture as the art or science of shaping, polishing, sifting and enhancing raw nature by borrowing and using the most basic mathematical principles as the tools of the formation process of Man. However, the noble enterprise of nurturing Man and cultivating in him the best values is often compromised and subjected to so many hazards as in the case of the broadcast seed in the biblical parable of the sower.

1. Introduction

The simplest things, like the wheel or a lever, are the building blocks and the foundation of the most complex ones, and can always be relied upon to produce results. The most complex or refined thing then becomes proportionally the most delicate, fragile and less dependable, though when properly managed it has the potential for greater results. In the field of human experience, simple, basic principles may be laid as a foundation to multiple actions and immense results.

Thus, in Rousseau's *Social Contract* (1950: 102) the entire mechanism of the body politic is based on a few, simple but solid principles, devoid of "embroilment of conflict of interests" and "political subtleties". Indeed, Rousseau, (1986: 12) quotes Rome's own philosophers, who were said to be lamenting that since the learned began appearing among them, the direct "practice" of virtue was lost to its "study". Jesus (Mathew 22: 38-40) then must have been right when he told the Pharisees that "all the law of the prophets" was founded on only "two commandments": the love of God and the love of neighbour. Similarly, Descartes (1988: 29) affirmed that "a multiplicity of laws often provides an excuse for vices, so that a state is much better governed when it has

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only a few laws which are strictly observed;" Hence, he judiciously decided that "in place of the large number of rules that make up logic", he found "four to be sufficient", on condition they were constantly observed. Voltaire (1964: 157-158) also rejects complex algebra in favour of the four simple rules of arithmetic.

The point is made manifest that much can be achieved if the most basic principles are used optimally to achieve concrete results rather than adopting numerous or sophisticated ones that are confusing and incapable of producing a pin.[1]

Following from the above, the issue raised here is whether the notion of "culture", defined throughout this paper as "improvement and development through care and training", can be circumscribed and simplified on the basis of its usage in 18th century French literature and thought. The objective is to provide a full understanding of culture within the said context and propose its adoption in today's world. Our reading of Voltaire and his contemporaries depicts culture as tantamount to using the four basic rules of arithmetic - division, subtraction, addition and multiplication - to shape its object. Just as it is said: "here is the hammer, here is the chisel, shape your own destiny", it can equally be said: here are the principles of culture, shape your own nature. When nature is properly nurtured and then subjected to culture, the latter adds to it good human values, multiplies its good natural values, while the evil ones may be subtracted, even if by suppression, a clear division having been made between what is good or evil in nature, universally, or considering the time, place and purposes.

This paper purports, in the first instance, to gather evidence of the ambiguous character of nature portrayed in the literary works of Voltaire in particular and other 18th century writers in general as both good and evil. As nature requires nurturing, the Biblical models in the parable of the sower (Matthew 13: 3-8) will be borrowed to illustrate the role of factors, other than human, that determine what becomes of nature. It will finally be shown that invariably nature calls forth for deliberate human interventions in the form of culture to make it respond most favorably to the highest expectations of man, through the constant application of the most basic mathematical operations to distill its ambiguity and make it fruitful.

2. The Ambiguous Character of Nature

The biblical Sodom and Gomorrah, on behalf of whose inhabitants Abraham pleaded, saying to the Lord "Wilt thou also destroy the righteous with the wicked?" (Genesis 18: 23), is a story which apparently inspired Voltaire's *Le monde comme il va.* In Voltaire's version of the ambiguous character of human nature, Babouc, like Abraham, plays the devil's advocate, though he had to exclaim at the sight of the display of evil and wickedness: "Are these men or ferocious animals" (Voltaire 1966: 96). Elsewhere Babouc however witnessed "acts of generosity, nobility of the soul, humanity" and exclaimed again, totally abashed: "inexplicable human, how can you embody so much baseness and nobility, so much virtue and crime" (Voltaire 1966: 97). What Abraham did not do, Babouc did by having a statue moulded from all sorts of metal, soils, and from the most precious and base minerals. He presented it to the Spirit Ituriel saying: "Will you destroy this beautiful statue because it is not entirely made of gold and diamond?" (Voltaire 1966: 108). Ituriel understood the argument, and made it a point not to punish Persépolis. In terms of human nature, Voltaire (1964: 74) again finds that though we may be all of what the little statue is made of, "we perfect ourselves, we polish our rough edges, we hide what nature has put in us". Whichever of these three options we choose in dealing with our nature, each can more or less temporarily bring about some degree of change in us, hiding or exposing the good or evil in us. It is then that, as shown below, human nature turns ambiguous, due to the high potential of its goodness becoming somewhat corrupt or this corruption becoming altogether evil.

2.1. From Good to Corrupt Nature

Considering both "angel" and "devil" as concepts respectively representing good and evil, one may say that man is neither an angel nor a devil. Man is man, occupying a place somewhere and anywhere between the two. The range of being of man, taken generically, therefore extends from a near-angel to a near-devil, the individual initially being exactly half-way between the two and therefore morally neutral. However, time and circumstances set off more or less significant oscillations between the two poles, subsequent to reason.

Indeed, Rousseau discovered that prior to reason the motivations setting

off such oscillations could be distilled into two basic and natural principles in the nature of man, and in this case the movement is rather positive, signifying therefore the goodness of human nature. In his attempt to define natural man and his[2] moral position Rousseau (1986: 132) wrote:

> Hence, disregarding all the scientific books that only teach us to see men as they have made themselves, and meditating on the first and simplest operations of the human Soul, I believe I see in it two principles prior to reason, of which one interests us intensely in our wellbeing and our self-preservation and the other inspires in us a natural repugnance at seeing any sentient Being, and especially any being like ourselves, perish or suffer.

Wellbeing/self-preservation and Pity are the seeds of every good fruit produced by man for himself and for others, respectively. Rousseau (1986: 161) further explains this by recalling that:

> Mandeville sensed clearly that for all their morality, men would never have been anything but monsters if Nature had not given them pity in support of reason: but he did not see that from this single attribute flow all the social virtues he wants to deny men. Indeed, what are generosity, Clemency, Humanity, if not Pity applied to the weak, the guilty, or the species in general?

Indeed generosity is an act motivated by pity on the weak, clemency an act resulting from pity on the guilty, while humanity derives from pity on the human species. Many more virtues can be shown to be offshoots of pity, one of the first impulses of nature as found in what Rousseau calls "natural man" or "original man". This deep-seated conviction runs through most of Rousseau's works, to such an extent that he seems to conclude the matter in *Emile* (1977: 56) as follows:

> Let us lay it down as an incontrovertible rule that the first impulses of nature are always right; there is no original sin in the human heart, the how and why of the entrance of every vice can be explained.

At the very beginning of the same book, Rousseau (1977: 5) is equally categorical as he declares: "God makes all things good; man meddles with them and they become evil." Irresponsible and non-judicious use of science and the arts resulting in man's moral depravity is Rousseau's thesis in his first *Discourse*. It is significant that as his focus shifts from original man to social/socialised man, he admits and even deplores the corruption of the latter, who loses the purity of his ancestor and takes on an ambiguous nature dominated to varying degrees by the tendency towards corruption and potentially from corruption to evil.

2.2. From Corrupt to Evil Nature

Socialism and communism originated from the notion of *tabula rasa,* as far as the being of man is concerned. Some moralists and philosophers think otherwise. Consequently some of the fathers of communism from Plato to Marx, particularly Morelly (1970: 39), blame such moralist and philosophers who are quoted as erroneously saying, "Man is born vicious and wicked. No, others say, but the situation within which he lives, even the constitution of his being, inevitably exposes him to being corrupt." Assuming then that man is a *tabula rasa*, or even granting that he is corruptible, the communist solution to the problem, as Morelly (1970: 40) states, is "To create a situation in which it is almost impossible for man to be depraved or wicked". Since communism has largely failed it seems moralists, like J. J. Rousseau, who hold that man becomes corrupt, are justified.

This particular debate, briefly revisited, is here limited to considerations relating to Voltaire and Rousseau. The latter, in particular, gained fame by vehemently refuting the proposition as to whether the restoration of the Sciences and the Arts has contributed to the purification of morals.

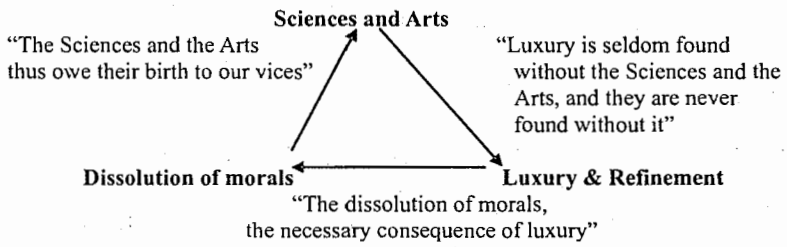
History is replete with men and women who stood up, often alone, in the midst of corruption to defend virtue, some even sacrificing their lives for it. In the case of Rousseau (1986: 3), he held that the Sciences and the Arts are responsible for the corruption of human nature. He therefore rose against the source of corruption and defended virtue vehemently: "It is virtue I defend before virtuous men". Disregarding the other non-luxury advantages of the Sciences and the Arts, Rousseau (1986: 18) picks on the fact that they create luxury and therefore argues: "That is

how the dissolution of morals, the necessary consequence of luxury, in turn leads to the corruption of taste."

While in the second *Discourse* Rousseau had the opportunity to demonstrate that Pity is the seed of all virtuous acts or of the good works of man, in the first *Discourse* he suggests that the Sciences and the Arts, being the source of luxury, are responsible for vices, corruption and the dissolution of morals. Rousseau (1986: 14) expresses the conviction that:

> Astronomy was born of superstition; Eloquence of ambition, hatred, flattery, lying; Geometry of avarice; Physics of vain curiosity; all of them even Ethics, of human pride. The Sciences and the Arts thus owe their birth to our vices.

Putting the two arguments together, that "the dissolution of morals [is] the necessary consequence of luxury" and that the Sciences and the Arts, a consequence of the dissolution of morals, since they "owe their birth to our vices", we find man caught in the middle of a vicious cycle thus:



To justify the concept that the "dissolution of morals" leads to and necessitates the practice of Science and Arts, Rousseau (1986: 14) contends: "without men's injustices, of what use would Jurisprudence be? What would become of History if there were no Tyrants, nor wars, nor Conspirators?" And Voltaire (1966: 351) confirms this in his *Ingénu* by affirming: "Indeed history is but a portrayal of crimes and miseries".[3]

Wars indeed are the greatest concerns of Voltaire, as if they were the

greatest evidence of man's depravity, wickedness and corruption. Hence he laments:

> It is more likely [...] mankind have a little corrupted nature, for they were not born wolves, and they have become wolves; God has given them neither cannon of four-and-twenty pounders, nor bayonets; and yet they have made cannons and bayonets to destroy one another (Voltair 1991:9)

The principle of man "becoming" something else than what he was created to be may be extended from his "becoming" simply corrupt to his becoming simply evil in the minds of some scholars of human nature.

However, it appears untenable that nature, and for that matter man, should be considered as fundamentally evil. In a discussion between Martin and Candide, the latter, inspired by his bitter experiences among men, expressed a lop-sided view about the nature of man, by questioning the former:

> Do you believe, said Candide, that men have always been liars, cheats, traitors, ingrates, brigands, idiots, thieves, scoundrels, gluttons, drunkards, misers, envious, ambitious, bloody-minded, calumniators, debauchees, fanatics, hypocrites, and fools? (Voltaire: 1991: 55)

The litany of negative attributes of "men", in the generic sense, is as surprising as the over generalisation of these vices. This is coming evidently from a disillusioned mind tempted to paint man black. This disillusionment finds confirmation in none other than in Martin's reaction captured by Voltaire (1991: 55):

> "Do you believe" said Martin "that hawks have always eaten pigeons when they have found them?"
>
> "Yes, without doubt", said Candide.
>
> "Well, then", said Martin, "If hawks have always had the

> same character why should you imagine that men may have changed theirs?"

Man may be good from the hands of Nature or God, but Voltaire and Rousseau have demonstrated that there is some measure of corruption in him that often turns evil. Often, the source of that corruption or evil can be found in the nature of man's physical and human environment, or the grounds that provide or deny the opportunity for nurturing and cultivating the individual.

3. Nurture as Intermediate Culture on Bad or Good Ground

While making allusion to the parable of the sower (Mathew 13: 3-8) whose broadcast seed fell on four different grounds, our use of "bad" or "good" ground here is to be taken metaphorically to mean the environment in which man is nurtured and cultured. It is evident that the circumstances in which people grow up can never be the same. These circumstances then necessarily attract moral judgement according to how favourable they are to nurturing and ultimately cultivating the entire human being, and particularly his mental and intellectual properties.

It is significant, in this respect, to recall what Rousseau (1974: 9) says in his *Emile*, a treatise on education:

> The real object of our study is man and his environment. To my mind those of us who can best endure the good and evil of life are the best educated; [...]. We begin to learn when we begin to live; our education begins with ourselves, our first teacher is our nurse. The ancients used the word 'Education' in a different sense, it meant 'Nurture'. 'Educit obstetrix', says Varro

Rousseau evidently recognises that the "environment" in which man lives is characterised by "good and evil". But this environment is either a "human environment", that is, one constituted by humans or a "physical environment" dominated by the laws of nature. Both environments can be bad or good and will consequently compromise or favour attempts at nurturing and cultivating the individual.

It is shown below, on the basis of the works of Voltaire and Rousseau,

that while there is a unique good ground for nurturing nature, the bad ground is varied, as in the case of the broadcast seed fallen among thorns, on stony ground or by the way side.

3.1. Nurturing Nature Fallen by the Way Side

The biblical model of the broadcast seed fallen by the way side is alluded to at the beginning of Rousseau's *Emile*. It is indeed a biblical story that reflects a social fact. Preoccupied with the stifling of nature in civil/social man, Rousseau is equally worried about nature being altogether crushed when it finds itself in an unfavourable environment. The nature of the individual may be "plunged" into "social conditions" that do not augur well for its blossoming, and as Rousseau (1974: 5) appropriately puts it: "she would be like a sapling chance sown in the midst of the highway, bent hither and thither and soon crushed by the passers-by"

This is a strong image depicting the lot of so many who do not benefit from nurturing and much less from culturing. Their feebleness in many respects is captured by the image of a "sapling" exposed to the dangers and threats of the "highway" of life. And what is more, the "passers-by", as opposed to the "mother" image, are none other than all those who have no interest in the individual and who will rather either exploit him or make him a victim of the evil they perpetrate. In such a case, culture is compromised.

But, of course, Rousseau does not intend to compromise culture. He makes a strong appeal:

> Tender, anxious mother, I appeal to you. You can remove this young tree from the highway and shield it from the crushing force of social conventions. Tend and water it ere it dies. One day its fruit will reward your care. From the outset raise a wall round our child's soul; another may sketch the plan, you alone should carry it out. (Rousseau 1977:5-6)

There is indeed a "crushing force" like Damocles' sword hanging over individuals and even sections of populations exposed to the hazards of life in society, individuals fallen out of track, more or less abandoned in the general movement towards cultivating human nature to make it more fruitful.

Indeed, the reality of abandonment, which deprives some individuals of the opportunity to cultivate themselves or be cultivated, cannot be underestimated. Thus, giving figures of youth dropping out of track Col. K.A. Jackson (2006) remarked:[4]

> It is shocking that today 50% of our children born in a year do not go to school. A careful look at our educational system reveals that about 90% of the children who enter school come out without skills and without opportunity to develop themselves. In Ghana for example each year, about 300,000 children enter school. 200,000 of them drop out at the JSS level. [...] about 70,000 pupils drop out at the SSS level.

For many of these dropouts who are like saplings exposed to being trampled upon by passers-by, or as the Bible puts it, who are like a broadcast seed fallen on the wayside and exposed to being eaten by the birds of the air, the lack of opportunity to grow on good ground and be cultivated is what practically destroys them. As they fall out, the passers-by and the birds are persons who influence them and turn them into what they themselves are: drug addicts and dealers, armed robbers and the like who are destructive of social life and values.

Unfortunately no sower goes to the roadside to pick seeds that fell there while he was broadcasting it on the cultivated land. If Governments do not show much interest in these dropouts, Voltaire (1991: 86) thinks God himself does not care either, for "When his highness sends a ship to Egypt, does he trouble his head over whether the mice on board are at their ease or not?" God is his Highness, the ship is the earth and the mice are the human beings, and particularly those who fall out of track.

Nurturing and cultivating the human capital against all odds appears to be an uneasy solution. A tremendous effort and goodwill is required by the individual and public authorities to recover or transplant those whose circumstances are comparable to being dropped by the wayside, or as the other biblical image puts it, dropped on a stony ground.

3.2. Nurturing Nature on "Stony Ground"

Every living thing requires a favourable environment to survive, and

what is more, to blossom, or to be appropriately cultivated. An unfavourable ground compromises culture. What a difference it makes if such a living thing is transposed from grounds incapable of nurturing it to a more favourable ground! Voltaire illustrates such a situation with his Ingénu, born and bred as a Huron: an all too natural, simplistic individual whose intellect, and indeed whose full intellectual potential, is extraordinarily developed, thanks to his new European environment. As Voltaire (1966: 355) puts it, "the young Ingénu resembled one of these robust trees which, beginning from an unfertile ground, stretch in a short while their roots and branches when they are transplanted onto favourable ground".[5]

Rousseau, in his *Social Contract* (1950: 78) takes the analogy further and establishes a relationship between agrarian culture, human culture, and political culture or polity. He asserts that:

> Unfriendly and barren lands, where the product does not repay the labour, should remain desert and uncultivated, or peopled by savages; lands where men's labour brings in no more than the exact minimum necessary to subsistence should be inhabited by barbarous peoples: in such places all polity is impossible. Lands where the surplus of product over labour is only middling are suitable for free peoples; those in which the soil is abundant and fertile and gives a great product for a little labour call for monarchical government.

Cultivating the individual human being is a philosophical concern and the extent to which a man is cultivated is therefore dependent on his environment just as the extent of his political culture also depends on both his environment and the extent to which he himself is cultivated as illustrated below:

AGRARIAN CULTURE	HUMAN CULTURE	POLITICAL CULTURE
Extent to which Land is cultivated	*Extent to which the People are cultivated*	*Extent to which Polity is cultivated*
1. Barren lands with labour exceeding product	Savage people: "cruel, hostile"* etc.	Polity or political culture is impossible
2. Land producing less than minimum for subsistence	Barbarous people :[6] "unrefined in tastes, habits; Ignorant"*.	Polity or political culture is impossible
3. Average surplus product over labour	Free people: able to direct their energies & talents at will.	Democracy
4. Abundant fertile soil with great product over little labour	(Rousseau provides no description here)	Monarchy

One wonders what the parameters would be among non-agrarian people. Nevertheless, from the above table, the hostile physical environment, the barren, uncultivated lands produce a people that are equally hostile, unproductive, uncultivated, barren in their human development, since much of their concerns are towards survival. Such people may be found to practise cannibalism as mentioned in Voltaire's *Candide.*[7] As the Oreillons were preparing to eat their victims, Candide and Cacambo, the latter tried an argument with them in line with their thinking, but with a salvaging conclusion: since the two were not Jesuits they were not enemies of the Oreillons:

> You reckon, says Cacambo, you are today going to feast on a Jesuit. It is very well, nothing is more just than thus to treat your enemies. Indeed, the law of nature teaches us to kill our neighbour, and such is the practice all over the world. If we do not accustom ourselves to eating them, it is because we have better fare; But you have not the same resources as we; certainly it is much better to devour your enemies than to resign to the crows and rooks the fruit of your victory. (Voltaire 1991: 39)

It is significant that Cacambo attributes their cannibalism to their lack of resources. A barbarous people in a slightly better environment than their savage counterparts are simply ignorant and unrefined. Though with them their human nature may have traces of cultivation, the latter is just

rudimentary and as minimal as the product of their land. On the other hand, an environment that produces an average surplus in comparison with labour input also produces a people capable of freely exploiting their energies more usefully and cultivating their talents and full potential.

In recent times, for example, particularly in Ghana, between 1977 and 1982, we have been witnesses to penury, and such economic misery that turned people into savages, barbarians, wolves, CDRs (Committees for the Defense of the Revolution) devouring both the weaker poor and the rich unarmed. Cultivating the Ghanaian personality became compromised. However, though one may still identify other forms of moral degeneration in today's Ghana, Ghanaians are a free people with relatively booming economic activity, increasing luxury and leisure, exciting talent hunts promoted by a free press etc.

It is clear from the above that the availability of resources expands the definition of culture to include the cultivation of the entire human potential in such a manner that man can evolve towards "perfection" or the highest ideals of his humanity. Unfortunately pockets of humanity are found to have difficulty cultivating themselves, for having had others as a thorn in their flesh.

3.3. Nurturing Nature Fallen Among Thorns

Candide, in Voltaire's short story, is a product of nature described as "a youth, whom nature had endowed with the most gentle manners. His countenance was a true picture of his soul" (1991: 1). In the first instance nature had placed him in the castle of the baron of Thunder-ten-tronckh. However, for having expressed love to Cunégonde, the baron's daughter, Candide was kicked out of the castle, described as an "earthly paradise". Thus thrown out, Candide, like a seed fallen among thorns "lay down to sleep without supper, in the middle of a field between two furrows. The snow fell in large flakes" (1991: 3). This was Candide's class one in the school of pain, suffering and thorny experiences; a school in which nurturing his gentle manners was going to be compromised by virtue of the circumstances in which he was caught up.

It is argued below that while Voltaire in his *Candide* reflects reality reenacted by a handful of characters subjected to physical and moral evil

in the form of wars, disease, earthquakes, tempests, crime, etc. Rousseau in his *Emile* postulates that the bane of human nature or the thorns that stifle or smother man's nature are largely man-made.

After considering the existing conditions of civil man, Rousseau concludes in his *Social Contract* (1950: 3): "Man is born free; and everywhere he is in chains". As freedom is part of man's nature, that freedom is fettered within civil society. Evidently, individual freedom is not entirely sacrificed but rather limited and subordinated to collective freedoms and for the sake of the collective good. However, some peoples fall under despotic governments and laws. Such governments and laws, as Rousseau (1986: 4-5) puts it, turn into "iron chains with which they [the people] are laden, [and] throttle in them the sentiment of that original freedom for which they seem born".

This is precisely why Rousseau proposed in his *Social Contract* to legitimise the social and institutional restrictions to freedom, and particularly ensure that they are not abused by tyrants and other political miscreants who by themselves are thorns in the people's flesh. The good-natured citizens, in such a case, are ill-nurtured.

From a different perspective, Rousseau (1977: 5), at the very beginning of his *Emile* outlines other stifling factors within the existing conditions of man, that is, man as a civil, social and socialised being:

> Under existing conditions a man left to himself from birth would be more of a monster than the rest. Prejudice, authority, necessity, example, all the social conditions into which we are plunged, would stifle nature in him and put nothing in her place.

Recognising, therefore, "all the social conditions" surrounding man, Rousseau proposes in his *Emile* a form of nurturing that will yield the best fruits in the individual.

Voltaire, for his part, goes beyond the "social conditions" of man to consider more globally man's "human condition". From this perspective, he puts his characters through a series of unrelenting physical and moral evil. On such grounds of dominant evil, the individual's nature is stifled

for as long as he is not out of the woods. Such unsettling conditions deny him the benefits of culture. It is not until these conditions are over that Candide can say "We must cultivate our garden", where garden means the human potential. But before then the war ground is presented as the most terrifying and most anti-culture of fields. Describing an Abare village, which the Bulgarians had burnt, Voltaire (1991: 5) writes:

> Here, old men covered with wounds, beheld their wives, hugging their children to their bloody breasts, massacred before their faces; there their daughters, disemboweled and breathing their last after having satisfied the natural wants of the Bulgarian heroes; while others half burnt in the flames, begged to be dispatched. The earth was strewed with brains, arms and legs.

This could hardly be an exaggeration and this has happened recently in the Rwandan genocide, otherwise called ethnic cleansing, with an estimated 800,000 people smothered, massacred, for belonging somewhere and being on those grounds. Other wars have been fought in Sierra Leone, where arms were brutally severed according to whether the victims wanted "short sleeves" or "long sleeves", but also in Liberia, Côte d'Ivoire, Sudan, Iraq, etc. The earthquakes and tempests described by Voltaire (1991: 10-12) are the Tsunamis, or the hurricane Catherina, Rita, etc. in the United States that we hear of today..

Meanwhile, plagues "far more terrible than earthquake" (Voltaire 1991: 28) also create unfavourable ground for human culture. Paquette, who survived one of such plagues in Voltaire's *Candide*, recounts:

> Scarcely was I sold, than the plague which had made the tour of Africa, Asia and Europe, broke out with great malignancy in Algiers. You have seen earthquakes; but pray, Miss, have you ever had a plague? [...] I did not die, however, but my eunuch, and the Dey, and almost the whole of seraglio of Algiers perished. (Voltaire 1991: 27-28)

Earlier, Pangloss describes the "strange genealogy!" of a disease whose cause is love. He tells Candide:

> Oh, my dear Candide, you remember Paquettte, that pretty wench who waited on our noble baroness; in her arms I tasted the delights of paradise, which produced in me those hell torments with which you see me devoured; she was infected with them, she is perhaps dead of them. This present Paquette received from a learned Grey Friar, who had traced it to its source; he had it from an old countess, who had received it from a cavalry captain, who owed it to a marchioness, who took it from a page, who had received it from a Jesuit, who when a novice had it in direct line from the companions of Christopher Columbus. For my part I shall give it to nobody, I am dying. (1991: 8)

This sounds like a testimony of a person living with HIV/AIDS today. Thus, diseases, and particularly the AIDS pandemic, are anti-culture; crime and slavery, as described also by Voltaire and experienced historically and currently by persons subjected to them, are anti-culture.

Under these ravages, nurturing and culturing the victims are compromised, and human nature becomes anything but what it should be if placed, nurtured and cultured on good ground.

3.4. Nurturing Nature on Good Ground

In the biblical model, where the broadcast seeds and subsequently the crops represent man, a good ground is one that is recognised by the fruits of the crop on it. A good ground is one whose crop bears fruit, "some an hundredfold, some sixty fold and some thirty fold" (Matthew 13: 8). A good ground is also one which does not have the three other characteristics and their consequences: it is not a wayside and therefore the crops are not crushed by passers-by; it is not a stony ground and therefore the crops are able to firmly take root; and finally it is not infested with thorns and therefore the crops freely stretch out their branches and blossom.

Once planted and nurtured on good ground, a tree crop would indeed "stretch in a short while its roots and branches" as Rousseau (1966: 355) puts it. The roots give stability and firmness while the branches stretch out benevolently and without obstacles or hindrance.

A good ground, therefore, is one on which, given the right resources and attitude, men are free to exercise and cultivate their mind and body. It is significant that in terms of intellectual culture, Voltaire demonstrates that this is possible even in a prison. Voltaire (1966: 356) presents l'Ingénu imprisoned, but reading so widely and reflecting so deeply, that: "his mind, stifled for such a long time, developed with so much rapidity and strength, while nature got perfected in him".

Evidently, l'Ingénu has the right attitude: the will and desire for intellectual self-culture and therefore it becomes possible even in the most unlikely of places. While in prison, "His intellectual faculties, not having been warped by error, maintained their full sense of judgement" (Voltaire 1966: 360); and though he often talked about Miss St. Yves, who (while l'Ingénu was yet uncultured) almost became a victim of his unceremonious expression of love *à la* Huronne, "his sensibility was becoming refined" (Voltaire 1966: 361). Indeed, concludes Voltaire, "the young man had cultivated himself through a year of reflections" (Voltaire 1966: 372) and his last feat were to convert a Jansenist (Voltaire 1966: 362) from his prejudices and to liberate his mind.

It is indeed "extraordinary", as Voltaire observes, that for l'Ingénu, a prison was a place for cultivating his sense of judgement and his sensibility in such a useful manner as to give lessons to a Jansenist.

This shows that in as much as there may be situations and environments that favour culture; in as much as these circumstances can be created, for example, by responsible parenting, responsible institutional and political leadership, the individual's will and effort at self cultivation are paramount, on condition one knows what cultivating the human raw material is.

In short, knowing the essence of culture, as shall be explained further below, and exploiting most favourably the circumstances of one's existence, in as much as that is possible, and finally mobilising one's will

and efforts to cultivate oneself or to have oneself cultivated, are three conditions required in what is called in this paper the culture enterprise.

In the sense that Man appears to be abandoned to his fate on earth, he is like the mice on a ship; but in the sense that he is born into a particular situation and into particular socio-political circumstances that will nurture him more or less, he is like a broadcast seed which, if on bad ground, needs to be salvaged or if on good ground, requires both nurturing and, ultimately, culture.

4. The Ultimate Concept of Culture

Culture is the shaping of nature or persons to the highest shared human/social values. The process borrows from the most fundamental mathematical principles: addition, multiplication, subtraction and division. Culture, therefore adds values that may be lacking and multiplies those that are inadequate. Furthermore, culture divides by way of separation and subtraction of what is corrupt or corrupted from the entire being, so as to move the individual towards a universal human ideal.

In this respect man himself is a raw material from nature, and since every raw material destined for greater use undergoes some form or level of processing, man is destined to be cultivated, moulded and shaped in line with basic mathematical principles. For, as Rousseau puts it: "under existing conditions a man left to himself from birth would become more of a monster than the rest." Regarding the rest of nature under man's control, Rousseau (1974: 5) notes that man:

> forces one soil to yield the products of another, one tree to bear another's fruit. [...] He mutilates his dog, his horse, his slave. He destroys and defaces all things; he loves all that is deformed and monstrous; he will have nothing as nature made it, not even man himself, who must learn his paces like a saddle-horse, and be shaped to his master's taste like the trees in his garden. Yet things would be worse without this education, and mankind cannot be made by halves.

Even man himself needs to be shaped like the trees in his garden: physical culture, from "keep fit" to a haircut; "culture of the mind", not in

terms of the quantity of knowledge that is characteristically amoral, but a fundamental culture that ensures the **division** in the mind between good and bad, vice and virtue: a moral culture.

4.1. Fundamental Culture: a Sense of Morality or of Division Between Vice and Virtue

In this regard, Voltaire's comparison of man, in *Le monde comme il va*, to a beautiful statue made from all sorts of metal, soils and from the most precious minerals and base metals, is relevant in guiding us to the principle of division required as an element of culture. For, to conceive of man as a creature rather comparable to a statue of pure gold and diamond would mean man is a perfect creature; which therefore would render any attempt to make him an object of culture irrelevant. Indeed it is rather such a concept that would be irrelevant and far from reality.

In the absence of a division, man considered in his totality will be incomprehensible, a mind-bugling "strange animal". Unable to understand man from this perspective, Pangloss, in Voltaire's *Candide* (1991: 85), asked a Dervish: "'Master', said he, 'we come to beg you to tell why so strange an animal as man was made.'" Indeed, any attempt to understand the whole without considering the component parts would be against logic, and against the second Cartesian principle which states the need "to divide each of the difficulties I examined into as many parts as possible and as may be required to resolve them better" (Descartes 1988: 29). Here, it is man that is examined, and in terms of his morality the division required to understand him is his sense of good and bad, and his being to some extent good or bad; in other words, his being with strengths and weaknesses, respectively pointing to what in his nature is desirable and what is undesirable, within given human values.

The recognition of vice and virtue, weaknesses and strengths, as separable, divisible within human nature, is the first step in the culture enterprise. In other words, being moral or making the difference between vice and virtue is being fundamentally cultured. Being amoral is the state of not having the sense of good and bad and therefore being "strange", uncultivated. One could bet that the greatest cause of moral evil is persons who turn amoral, that is, persons who become morally blind, so to speak.

It is, then, the morality of man or his duplex nature that makes him an object of culture, a culture that will "deal with" the weaknesses and reinforce the strengths.

"Strengths" and "weaknesses" are probably euphemisms used in polite and official circles when there is the need to know how "good" or "bad" someone is before one takes the risk of employing him or her; or before a graduate school offers admission. It is invariably required of referees that the individual to be assessed be divided into two so that the employer or admissions board can see through the candidate. Curiously, the request at that point is more often interested in the purely human side of the applicant.

Hence, the individual who may be referred to as a "rough diamond" can only be treated with caution, if not rejected. So is it then that to be useful, or to fit into some pattern, the natural occurrence of things that have the greatest value has to be reshaped. The human raw material is one that requires the greatest formation and while this might be a responsibility above the individual, the latter has to be empowered to shape his/her own nature. That empowerment comes from the knowledge that culture means growing from a moral foundation that recognises good and evil within and outside oneself. That clear sense of division prepares the ground for shaping and reshaping the individual, and begins with efforts at subtracting, where possible, one's weaknesses.

In this regard, it was amazing to hear a lady respond to a radio phone-in programme host whose question was: "Which emotion will you like to chuck away"? The lady responded: "I will like to throw away my quick temper. I hate it".[8] Making an effort to subtract that quick temper from her nature is culture.

4.2. Culture as Subtraction of Undesirable Manifestations of Nature

In his *Dictionary of philosophy*, Voltaire observes : "there is much to say in response to the complaints about the defects of nature.[9] How did it come out so feeble and so defective from the hands of a perfect being?" (70) Surely, this is a one-sided view of nature because many a time it is the opposite of how it is described here. It is only when one is overwhelmed by its defects that one forgets its beauty and wants to pluck

out the defects like a patient wishes to pluck out a pain that is becoming unbearable. Indeed what is characteristic of nature is its abundance and variety which make room for both the beautiful and the ugly, the pleasant and the unpleasant, the assets and liabilities, as well as good and evil. Consequently nature, in its abundance and variety gives a tree a crooked or a straight branch and makes a man very tall or very short with the others in between. But all have their purposes according to the place and time. Therefore, according to the place, time or purposes, the unusual may be considered a freak of nature and set aside or subtracted from the categories considered more familiar or relevant.

Beginning with the extreme case of culture as a subtraction by removal, with the view to achieving perfection, as suggested in the Bible, it is shown below what such culture means and how it may be carried out in twentieth century French thought.

The biblical argument (Matthew 5: 29-30) regarding the attainment of perfection, and hence salvation, by subtracting from the body or plucking out a sinful "right eye" or cutting off an evil "right hand", is based on pure logic; "for it is profitable for thee that one of thy members should perish, and not that thy whole body should be cast into hell".

Does this logic appear valid only in theory? How about if there is guarantee of salvation, would one not attempt it, taking advantage of modern surgical practice? There is something crude in the action suggested: "pluck it out", "cut it off": that is what is horrifying, if taken literally. Yet there is at least one known person, Origen, who took such spiritual exhortations literally, as historically recorded by the *New Catholic Encyclopedia* (1967: 767):

> Surnamed Adamantus (man of steel or diamond), Origen was the principal theologian of the early Greek Church". Incidentally, "with more zeal than wisdom he took Mt. 19:12 literally and mutilated himself.
>
> Now, Matthew 19:12 reads:
>
> For there are some eunuchs, which were so born from their mother's womb: and there are some eunuchs, which were

> made eunuchs of men: and there be eunuchs, which have made themselves eunuchs for the kingdom of heaven's sake. He that is able to receive it let him receive it.

Origen's self-mutilation, involving the cutting off of his private part, is an act which is also carried out by some traditions, but for different reasons. Genital mutilation of men is well known among the Persians, and some other nationals, not only for purposes of producing eunuchs with melodious voices but also impotent guardians of the women in the harem, as recounted by Montesquieu (1964:33-36) in his *Lettres Peranes*. The practice also exists even today among the Indians for yet other reasons.

However, our argument is not that physical mutilation is culture, but that in as much as culture involves reasonable subtraction from parts of nature, some individuals or traditions indulge in wanton mutilation in the name of salvation, perfection .... Atrocious as such mutilations may appear, when applied to humans, or animals in general, it becomes a normal practice when carried out on other living things like plant species.

Thus, trees are pruned, hedges are trimmed, and grass is mowed, simply because their wild and incongruous growth offends our sense of beauty and perfection. They must fit a certain landscape. This type of culture by subtracting from nature produces, for a time being, shapes that satisfy a cultured, cultivated taste.

In the case of man, he may be shaped morally, spiritually, intellectually ... and politically. In this respect, Morelly's definition of the citizen within the body politic and Rousseau's concept of the role of the legislator who shapes the citizen are very significant. At both levels, society as it evolves from nature, and the body politic as it evolves from society, there is, says Morelly (1970: 43), "a mechanism which is as simple as it is marvelous" and by which the "parts are prepared, and so to speak hewn or cut out to compose a most beautiful whole." Coincidentally, Rousseau (1950: 38) became the one to assign to the legislator the job of subtracting, hewing, changing, and altering the individual unit to fit into the whole:

> He who dares to undertake the making of a people's institutions ought to feel himself capable, so to speak, of changing human nature, of transforming each individual, who is by himself a complete and solitary whole, into part of a greater whole from which he in a manner receives his life and being; of altering man's constitution for the purpose of strengthening it.

This, indeed, is the political culture of the citizen. Meanwhile the proverb "what's bred in the bone will come out in the flesh" is more explicit in its French equivalent « *Chassez le naturel, il revient au gallot* » literally rendered as "Drive away what it natural, it comes back galloping". It appears then, that nature will come back in the same manner that it is driven away: rapidly, or imperceptibly slowly, if so driven away. The return, in the latter case, could be so slow that the subject's natural life will not be long enough for that undesirable nature to return. It would therefore have lived and died without part of its original nature. The new nature given it by subtraction would have triumphed.

Voltaire demonstrates this gradual culture by subtraction in both Gordon and l'Ingénu. Gordon, a Jansenist who had accumulated all sorts of moral and religious prejudices to such an extent that he was dehumanised, particularly with regard to the sentiments of love, became a changed man, once those opinions that made him what he was, were removed from his inner being. Through profound intellectual intercourse between him and l'Ingénu, he became transformed: "the rigorousness of his previous opinions came out of his heart: he was changed into a man, and so was the Huron".[10]

As for l'Ingénu, he had this to say about himself: "I would be tempted to believe in metamorphoses," he said, "for I have been changed from a brute to a man"[11] Not only had he taken on new values which stuck more or less to his nature, but also, he had shed off part of that rustic, brute natural character he portrayed at the beginning of the story.

Elsewhere Voltaire identifies religion and morality as tools, which though they may fall short of destroying nature altogether, are useful in shaping the individual or restraining his negative penchants: "Religion, morality, restrain the force of nature; they cannot destroy it".[12]

Evidence has therefore shown that culture as a subtraction of evil or undesirable trappings from nature could be a temporary or permanent measure. Continuous culture then is the only way to make nature beautiful and to create and sustain virtue, just as it is said in Voltaire's *Candide*, "we must cultivate our garden", an exhortation to which Martin responds "Let us work without disputing; it is the only way to render life tolerable" (1991: 87). "Work", as indicated here can be understood in the usual sense of daily or professional activity, but it should also be understood as the need to make an effort to work on nature, using the basic mathematical processes. Even if what is natural could not be literally subtracted from where it belongs, that undesirable portion can always be more or less permanently suppressed, rendered inactive. In practical terms this would indeed be a subtraction of liabilities to produce changes, in as much as addition of values to nature would also produce change, as a process of culture.

4.3. Culture as Addition of Values to Nature

The act changing nature is therefore considered as culture. Conceived as a sudden process such culture by subtraction or addition will be impossible just as Voltaire (1964: 74) rightly puts it in his *Dictionary of Philosophy*. On condition, therefore, that culture is gradual, much may be achieved in bringing nature under culture. This gradual process is tied to the concept of "becoming", for indeed twentieth century philosophical thinking believes not only in the "being" of man but also in his "becoming". When that becoming is conceived in terms of value addition to the being, particularly when that value addition is moral, spiritual or intellectual, as opposed to normal physical growth, then the exercise is termed "culture". It is in this light that the *World Book Encyclopedia* (2001:1186) rightly states the fact that "Culture is acquired through learning, not through biological inheritance. That is, no person is born with culture." There can be no better guiding principle than this to the understanding of culture in the context of eighteenth century French thinking.

Yet some schools of thought do not even believe change in nature is possible, be it by subtraction or addition. Thus, at one time Voltaire himself demonstrated and concluded that both in terms of inner properties and physical attributes, nature cannot be changed:

> If one could change one's character, one would adopt a character; one would be the master of nature. Can one give something to oneself? Do we not receive everything [from nature]? Try getting a slothful person into a sustained activity, freezing with apathy the boisterous soul of an impetuous person, inspiring in someone without taste or the ear for music, the taste for music; you will not have much success than if you undertook to give sight to a person born blind. We perfect, we temper, we hide what nature has put in us; but we do not add anything.[13]

Conceived and perceived as a sudden, on-the-spot exercise, the operation cannot but fail. The verbs used by Voltaire seem to suggest such a sudden process and it is not surprising that he concludes that it is not possible to add anything to nature.

Indeed, the culture of man in terms of his non-physical, non-biological attributes is the concern of most 18th century French writers. It is often said that culture is second nature. Hence, though the values of culture are not biologically built into the DNA of an individual or cannot be considered as part of human ontology, they can be engrained into the fabric of the operational or functional processes of man, and the more they stick to a man's nature the more they become part of, or an addition to, that nature.

Interestingly, Voltaire himself, after denying the possibility of addition to nature, due to a misconception of the process, argues throughout his *L'Ingénu*, that culture is when a primitive, uncouth individual, a Huron for example, becomes a gentleman and a model intellectual. He perceives culture as both an individual and collective enterprise and makes it a point to demonstrate this particular concept of culture, using the character called l'Ingénu.

Having arrived in Europe from a primitive background and consequently had the opportunity to develop his talents, particularly his mind, through vast reading while in prison, l'Ingénu,[14] remarked a change in him and made the following observation:

> I imagine that nations have for a long time been like me, that they only became cultured much later, that for many

> centuries they were preoccupied with the flow of present time, very little with the past and never with the future. [...] Would that not be the natural state of man? The species in this continent appears to me superior to that of the other. It has increased its being over several centuries through the arts and through knowledge. (Voltaire 1966: 353)

Increasing the value of both man's individual and collective being is what is underlined here. The emphasis throughout Voltaire's short story even goes to cultivating the individual, building on his natural talents, "helping nature" (Voltaire 1966: 376). Thanks to culture, Voltaire could then say of the hitherto primitive Huron:[15] "But it is no longer the same man; the way he carries himself, the tone of his voice, his ideas, his mind, all has changed" (Voltaire 1966: 371). Indeed, the culture enterprise is both individual and collective.

Conceived as a gradual and collective enterprise, culture is perceived as a beautiful and marvelous performance by man over the ages. The performance, be it individual or collective, is all the more marvelous as man's beginning is compared to his present status; a beginning of ignorance and darkness from which he gropes and slowly works out his way to knowledge and enlightenment, thanks to the talent and potential with which he is endowed by nature. Rousseau (1986: 4) has a metaphorical style of depicting this collective progress through culture as he states:

> It is a grand and fine spectacle to see man go forth as it were out of nothing by his own efforts; to dispel by the lights of his reason the darkness in which nature had enveloped him.

Rousseau here envisages culture as a feat performed collectively by man. But whatever the levels of favourable natural resources that are available within and outside the individual, these resources need to be consciously cultivated, even through great effort, resulting in their multiplication for the benefit of man.

4.4. Culture as Multiplication of Natural Resource or Values.

René Descartes (1988: 20) claims, at the very beginning of his *Discourse on the Method* that "Good sense is the best distributed thing in the world." In other words, he continues, "the power of judging well and of distinguishing the true from the false – which is what we properly call 'good sense' or 'reason' – is naturally equal in all men." Experience, however, has shown that the philosopher was not exactly right. Clearly, the products of nature are not like industrial products presenting exact features and qualities for any particular product. The hallmark of nature is its variety and broad range of differences and fine nuances. Therefore, good sense, common sense, or reason does not seem to be so equally distributed as Descartes claims.

This is the more reason why whatever the level of talents with which one is endowed by nature, these talents need to be subjected to culture and multiplied. Voltaire invokes culture in the sense of multiplying our natural endowments. Such a concept of culture is the cornerstone of his philosophy: "we must cultivate our garden." The significance of the multiplication factor for all natural endowments as prescribed by the notion of culture in 18th century French thought, is here examined.

Indeed, the object of culture is to produce fruit, both literally and metaphorically. This implies that there is material culture and non-material culture involving improvements in quantity and or quality: value addition by a multiplying factor as revealed at the end of Voltaire's *Candide* when Candide and his team, on a quest for solutions to their misery, met a Turk and the following conversation ensued:

> "You must have a vast and magnificent estate," said Candide to the Turk.
> "I have only twenty acres," replied the old man; "I and my children cultivate them; our labour preserves us from three great evils – weariness [boredom], vice and want" (Voltaire 1991: 86).

Taking a cue from the Turk, Candide and his team settled down and espoused the philosophy of culture:

> We must cultivate our garden [...]. The whole little society entered into this laudable design, according to their different abilities. Their little plot of land produced plentiful crops. Cunegonde [...] became an excellent pastry cook; [...] Friar Giroflée [...] became a very honest man. (*Candide* 1991: 87).

Thus, potentials have been developed and multiplied: the material potential of the land as well as the non-material talents: skills and morals. If then the cultivation of land, and for that matter the labour put in any trade prevents three evils, the cultivation of man, particularly his mental, intellectual and moral being also avoids ignorance, prejudice, all manner of aberrations and injustice: all of which are the cause of human misery.

An accomplished man, then, is the man who has multiplied as many talents as he has by cultivating them. Such a man will attain the fullness of being and reap the rewards, while the man who would hide his talent might even lose it.

Thus, Nature is like the man in the Bible story (Matthew 25: 14-28) who before "travelling into a far away country, [...] called his own servants, and delivered unto them his goods. And unto one he gave five talents, to another two, and to another one, to every man according to his several ability [sic]". While the first two doubled their talents and, upon the master's return, were invited to enter into "the joy", the last had dug a hole and buried his one talent. Such a person is called a "wicked and slothful servant" and consequently he was "cast" as an "unprofitable servant into outer darkness".

In Voltaire's *L'Ingénu*, we find the hero, Ingénu, cast into prison for exhibiting uncouth manners. Nevertheless it is in prison that he develops his "simple nature", his "natural common sense" to the surprise of the Jansenist, Gordon, whose mind was filled with prejudices. For the young Ingénu, the multiplication of his talents through vast reading was such that he himself felt tempted to believe in metamorphoses, for he said "I have been changed from a brute to a man" (Voltaire 1966: 352).

5. Conclusion

Nature, in general, is a potpourri, a mixed grill of everything morally and

physically bad and good. It is a matter of selection as in the biological principle of "natural selection" and, to a large extent, engaging in culture: a process of division, subtraction, addition, and multiplication.

Culture so conceived with the view to attaining the best of human values is impossible where there is no effort or will. Origen had the will to do it and he did, though he got it all wrong. In short, culture shapes man, be he "savage" or "civilized" and empowers him to get rid of all that constitute an obstacle to man's well-being and happiness in society.

Clearly, God does not have to re-create the world. It is a world to be cultivated as it is by men. If this field is given to us and it is full of bramble, and it is also given to us the ability to remove the bramble, it is for us to take up the challenge and cultivate our world into a better one, after having cultivated ourselves.

Voltaire in his works accomplished his mission as a practical philosopher. He raised the issue regarding the role of culture in a world overwhelmed with evil, a world in which a minority cultivate themselves while the rest remain indifferent to the culture enterprise, or worse still, drawing society down into barbarism and savagery. Evil and misery must then come from as many individuals as are not cultivated, or from as many as have not recognised the division in their being or moral status, and therefore failing to opt for and promote the good in them, against the bad. Evil and misery is also perpetrated when we fail to subtract from our being our undesirable nature, fail to add and integrate human values into our nature, and also fail to multiply our natural talents for our own benefit and that of society and humanity at large.

Failure to act, and act positively on our natural endowments, as Voltaire said at the end of his *Candide*, breeds boredom, vice and want. Any non destructive action on nature should fall under the principle of cultivating nature through the application of the four simple mathematical principles whose role in this action has been discussed in this paper. Indeed it would be interesting, in related studies, to assess to what extent we, as human beings are ready to make the efforts required in the culture enterprise and thereby take positively calculated actions on our nature.

NOTES

[1] So does Pococurante think, as stated by Voltaire (1991: 72) in *Candide*: "Ha! Here are four-score volumes of the Academy of Sciences," cried Martin. "Perhaps there is something valuable in this collection". "There might be," said Pococurante, "If only one of those rakers of rubbish had shown how to make pins; but in all these volumes there is nothing but chimerical systems and not a single useful thing."

[2] Where the generic term "man" is used and referred to by "his", this pronoun includes "woman"

[3] My own translation of the following: "En effet l'histoire n'est que le tableau des crimes et des malheurs" (Voltaire 1966 : 351).

[4] Unpublished paper delivered by Col. K. A. Jackson of the Centre for Technology-driven Economic Development, at a Conference organised by the Foundation for Security and Development in Africa, FOSDA, on 14th August 2006 at Errata Hotel, Accra. It is significant that Col. Jackson remarked in his paper: "About 90% of our people are not trained so they are wasted. Without knowledge and skill, our youth have no future. They cannot employ themselves and are unemployable. They remain poor and our nations also remain poor and underdeveloped."

[5] My own translation.

[6] For further distinctions between Savages and Barbarians, see Montesquieu: *L'Esprit des Lois*, Vol. 1. Book XVIII, ch. XI.

[7] The harrowing experience of Candide and Cacambo who were almost eaten by the Oreillons is used by Voltaire to make the point. They were surrounded by "fifty naked Oreillons, armed with bows and arrows, with clubs and flint hatchet. Some were making a large cauldron boil; others were preparing spits, and all cried: 'A Jesuit! A Jesuit! We shall be revenged, we shall have an excellent cheer, let us eat the Jesuit, let us eat him up'" (Voltaire 1991: 38)

[8] This was on Atlantis Radio broadcast in Accra, on 2nd November 2006 at 7.25 am.

[9] "On a beaucoup à répondre à ces plaintes des défauts de la nature. Comment est-elle sortie si impuissante et si défectueuse des mains d'un être parfait ?" (Voltaire 1964, 70)

[10] "L'âpreté de ses anciennes opinions **sortait** de son cœur: il était changé en homme, ainsi que le Huron" (Voltaire 1966 : 371).

[11] "Je serais tenté, dit-il, de croire aux métamorphoses, car j'ai été changé de brute en homme" *L'Ingénu.* (Voltaire 1966 : 352)

[12] "La religion, la morale, mettent un frein à la force du naturel; elles ne peuvent le détruire" (Voltaire 1964 : 74. Article: "Caractère"

[13] "Si on pouvait changer son caractère, **on s'en donnerait un**, on serait le maître de la nature. Peut-on se donner quelque chose ? ne recevons-nous pas tout ? Essayez **d'animer** l'indolent d'une activité suivi, de **glacer** par l'apathie l'âme bouillante de l'impétueux, d'inspirer du goût pour la musique et pour la poésie à celui qui manque de goût et d'oreille : vous n'y parviendrai pas plus que si vous entrepreniez de donner la vue à un aveugle-né. Nous perfectionnons, nous adoucissons, nous cachons ce que la nature a mis dans nous ; mais nous n'y mettons rien" (Voltaire 1964 : 74). Article "Caractère"

[14] "J'imagine que les nations ont été longtemps comme moi, qu'elles ne se sont instruites que fort tard, qu'elles n'ont été occupées pendant des siècles que du moment présent qui coulait, très peur du passé et jamais de l'avenir. [...] Ne serait-ce pas là l'état naturel de l'homme ? L'espèce de ce continent-ci me paraît supérieure à celle de l'autre. Elle a augmenté son être depuis plusieurs siècles par les arts et par les connaissances" (Voltaire 1966 : 353)

[15] "Mais ce n'est plus le même homme ; son maintien, son ton, ses idées, son esprit, tout est changé" (Voltaire 1966 : 371)

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