

# Haitian culture is Haiti's most important development resource

## Mervyn Claxton

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Norman began his presentation at the recent Panel Discussion on the Haitian Earthquake, (UWI, St Augustine, January 26, 2010) with the following remark: "*I cringe every time I hear that Haiti is 'the poorest country in the Western hemisphere' that is 'plagued with corrupt and tyrannical governments' and other stereotypes so beloved by the Western media; sometimes reproduced uncritically by our own media houses.*" <http://www.normangirvan.info/girvan-solidarity-with-haiti/>. I, too, cringe whenever I hear so-called experts from the North pontificate on Haiti's "poverty" and then proceed to propose "solutions" to that perceived problem. Those solutions invariably involve Aid - increasing the level of Aid, improving its delivery, ensuring that it reaches the sections of the population in greatest need of it and that it is not diverted to the pockets of politicians and the local elite, persuading donors to fulfil their Aid pledges and so on.

Haiti can be considered poor only if a country's wealth or poverty is measured exclusively in material terms. While watching a cultural programme on French television last week, I heard a participant (a French writer) state that Haitian writers won twenty-seven literary prizes, worldwide, in the course of last year alone. If that information is accurate, it suggests that, when population is taken into account, Haiti probably possesses a greater wealth of literary talent than any other country in the world.

Haitian artists, who have justifiably won a world-wide reputation for their immense creative talent, are further evidence of the incredible richness of Haitian culture. An article posted Monday last week, on the Miami Herald Tribune website, describes the massive destruction of Haiti's rich artistic heritage by the earthquake <http://www.miamiherald.com/news/americas/haiti/story/1444197.html>

Although he grieved over the loss of the murals at the Episcopal cathedral, the colonial-era gingerbread houses, and the Nader collection (15,000 art pieces collected over 40 years by Georges Nader and housed at his home and museum, Musee D'Art Nader), "*All those major artists, we don't have them anymore...*", Phillipe Dodard, the Haitian graphic artist and painter, consoled himself with the thought that: "*Haitian culture isn't just buildings and art, it's people.*" Haitian culture is indeed it's people. It is the creative genius of the Haitian people which makes Haitian culture so inventive, so original, so resourceful, so dynamic, and so unique.

Dominique Desjeux, professor of social and cultural anthropology at the Sorbonne, has argued

convincingly that it is essential to consider cultures as "*cultural models for solving problems*" and that culture must be seen as "*a strategic element that may evolve with situations and not as a deterministic framework conditioning human behaviour*". Haiti's culture should be considered "a cultural model for solving [Haiti's] problems". (*La Part Cachée: approches socio-culturelle des stratégies alimentaires dans les pays en développement*). Culture is the Haiti's most important development resource and, as such, it ought to be integrated as "a strategic element" in the reconstruction and development plans for the country, under discussion in Haiti and abroad.

The stunning creativity of Haitians is by no means confined to the literary and the plastic arts, it permeates the entire culture. Zora Neale Hurston, the black American novelist, poet, folklorist, and anthropologist, was a prominent member of the black literary and cultural movement in the 1920s, known as the Harlem Renaissance. She spent two years in the Caribbean on a Guggenheim Fellowship, studying voodoo culture and practices in Haiti and other islands. In her biography, Hurston mentioned a poison, known to certain "*Bokors*" (voodoo priests), who employed it to create zombies. She advanced the opinion that Voodoo culture possessed medical knowledge unknown to Western medical science: "*What is more, if science ever gets to the bottom of Voodoo in Haiti and Africa, it will be found that some important medical secrets, still unknown to medical science, give it its power, rather than gestures of ceremony.*" (*Dust Tracks on a Road*, 1942).

More than four decades later, Hurston's intuitive opinion was confirmed by Wade Davis, a Canadian anthropologist and ethnobotanist at Harvard University and a researcher on indigenous American cultures, whose research focuses on traditional uses and beliefs associated with plants containing psychoactive properties. Davis described the process of zombification in Haiti in two books, *The Serpent and the Rainbow* (1985) and *Passage of Darkness: The Ethnobiology of the Haitian Zombie* (1988). In the course of his visits to Haiti in 1982, Davis not only obtained permission to witness a zombification ceremony but was also able to procure samples of the compounds which voodoo priests utilized to create zombies.

On his return to the United States, he had the samples analyzed by pharmacologists at New York's Museum of Natural History. From the results of that analysis and his own field research, Davis concluded that a living person can be turned into a zombie by two special powders introduced into the blood stream, usually through a wound. The first powder induces a "death-like" state because of its key ingredient, *tetrodotoxin*. The second powder is composed of another substance, *datura* (*Albizia zygia gum*) which puts the victim into a zombie-like state in which he appears totally subdued and lacking all volition.

*Tetrodotoxin* is a potent neurotoxin with no known antidote. It is perhaps the most potent toxin present in nature. A single milligram or less - an amount that can fit on the head of a pin - is enough to kill an adult. William Haugan Light, a research biologist at the California Academy of Sciences, who has done research in environmental toxicology and is author of a major work on the biology of venoms, states: "*Weight-for-weight, tetrodotoxin...is 10 to 100 times as lethal as black widow spider venom (depending upon the species) when administered to mice, and more than*

10,000 times deadlier than cyanide."

*Tetrodotoxin* is present in some species of tropical fish but it derives its scientific name from the fish with which it is most commonly associated, the tetraodon puffer fish, in which the toxin evolved as a protective mechanism against larger predatory fish. The flesh of the puffer fish is considered a delicacy in Japan, where it is known as *fugu*. The delicacy is prepared by specially trained chefs, who must be certified by the Japanese government, and who remove the toxin from the liver, ovaries, and skin where it is concentrated. The level of toxicity in puffer fish varies with the season and Japanese restaurants can legally serve *fugu* to customers only between the months of October and March, the period during which its level of toxicity is lowest. Despite such stringent, legally imposed precautions, fatalities still occur every year in Japan among consumers of *fugu*.



The Puffer Fish



The Notorious Fugu



Fugu fish sliced

*Tetrodotoxin* acts on the central and peripheral nervous systems (the autonomic, motor, and sensory nerves). At carefully calibrated doses, it induces a near-death state with such a lowered metabolism that the victim, into whose body it has been introduced, appears to be dead. He/she is formally pronounced dead and is buried. Soon after the funeral, the voodoo priest returns to the burial place and disinters the body which he then resuscitates with a paste containing the toxins, *atropine* and *scopolamine*, both of which are potent dissociative hallucinogens. The victim selected for zombification is thus first "killed", then buried and, subsequently, "resurrected". The degree of ingenuity and technological sophistication possessed by the voodoo priests are revealed not only in their skilful calculation and manipulation of finely-calibrated dosages of one the most lethal poisons in the world but also by their demonstrated technical knowledge of those potent substances.

Because the level of toxicity in *tetrodotoxin* varies with the seasons and since one milligram or less of the substance can be fatal to a human being, the voodoo priests must possess mathematically precise knowledge of the level of toxicity present in the *tetrodotoxin*, at the particular time of the year the zombification ceremony takes place in order to be able to calculate, to the fraction of a milligram, the dosage required. Jean-Marie Pelt, a leading French scientist, has expressed his stupefaction at the extraordinary technical knowledge of toxicology present in Haitian voodoo culture which he considers superior to that of modern science, thus further confirming the conclusion Zora Neale Hurston had reached more than 60 years before: "*One remains dumfounded by that ages-old knowledge, ritualistically transmitted from generation to generation, which puts modern toxicology in the shade.*" (*Les Langues secrets de la nature*, 1996).

No country endowed with the outstanding creativity, originality, and inventiveness of Haitian culture - its world-class art, its world-class literature and the astonishing technological/scientific/medical knowledge embedded in its voodoo culture - can be considered poor, let alone "*the poorest country in the Western hemisphere*". Those who hold such an absurd opinion evidently suffer from an acute form of cultural myopia.

The missing element in the international debate on development is "creativity" - a term one would not find in the World Bank's World Development Indicators, in UNDP's Human Development Reports, or in its Human Development Index. I have always argued that the single most important factor in development is not a country's balance of payments, or its level of national indebtedness, or the surplus or deficit in its export trade, or any other economic indicator. That all-important factor is creativity. It is the factor that provides the inspiration, the dynamism, and the capacity to adapt, initiate, innovate, invent and re-invent, qualities that are absolutely essential to sustainable development. For, in the absence of creativity, new challenges would continue to be met with old remedies or with imported ones originally developed for different needs and different circumstances.

Creativity is the oxygen of a dynamic society. Indeed, one could define “developed” or “underdeveloped” (no longer politically correct, but refreshingly unambiguous) purely in terms of creativity - the difference between a "developed" and an "underdeveloped" country being the difference in the degree to which a given society exploits or leaves unexploited, for development purposes, the sources of creativity in its culture. If that more appropriate criterion is used to measure the poverty or the wealth of nations, Haiti would be transformed overnight into, potentially, one of the richest countries in the world, if not the richest.

One may well ask why, with such a creative, dynamic and resourceful culture and, given the central importance of creativity (with which Haiti is so richly endowed) in successful development, Haiti remains one of the most "underdeveloped" countries in the world. The quality of a given society's creativity cannot be judged by the current state of that society's development, or of the adequacy of its responses to the challenges of modern development. The creative power of a culture does not develop in isolation. It develops in response to challenges it is called upon to meet. Unfortunately, for most of the period since the country's glorious revolution, the tremendous creative possibilities of Haiti's culture have been totally ignored in the choice of solutions for Haiti's daunting problems of development and of governance. Haiti's culture has never really been put to the challenge.

When a society's creativity is not utilized in its development action, the links between the society's cultural creativity and the search for the solutions to the problems it faces are broken, productive outlets for cultural creativity are blocked, with the result that cultural creativity remains restricted to artistic expression. That has happened in Haiti, as it has in the vast majority of countries in the South. The indigenous cultures of most countries in the South possess considerable development potential but, with the notable exception of India, China, and South-East Asian countries, the creativity embedded in their indigenous cultures have not been exploited for their development potential.

There is no hiatus between the productive processes, in countries of the North, and the cultural sources of creativity in their societies. The built environment, the design and manufacture of the goods and objects of everyday life, and the technical solutions to the problems with which the particular Northern society is confronted are all linked to its own sources of creativity and its own aesthetic norms. By contrast, in Haiti, as in virtually all countries of the South, it is external sources of creativity and external aesthetic standards which have influenced the built environment and the vast majority of manufactured goods and articles to be found in everyday life.

India is a striking example of the strategically important contribution a country's indigenous culture can make to its modern development. In many areas of its development, notably, health, education, agriculture, environmental protection, and computer technology, India has made successful use of the extraordinary creativity embedded its very rich indigenous culture. Ayurveda, India's traditional health care system which dates back an estimated 5,000 to 10,000 years, is widely considered to be the oldest form of health care in the world. Instead of discarding or

sidelining its indigenous health care system in favour of modern Western medicine, India has preserved and utilized it in conjunction with its modern medical system. *Ayurveda* is the health care system of choice for 70% of India's population. There are over two hundred *Ayurvedic* hospitals in India and some 400,000 *Ayurveda* practitioners. Furthermore, there are faculties of *Ayurveda* in more than 50 Indian universities, to which 100 *Ayurvedic* colleges are affiliated.

The proven effectiveness of *Ayurveda* as a complementary and alternative medicine has encouraged an increasing number of people in the West to have recourse to it, particularly in the United States. The *Ayurvedic* remedy for mental illness, a substance obtained from a local root plant which has been used in India for many centuries, is the source for the development of the first major tranquilizer in the 1950s. The active substance in India's traditional remedy was synthesized by Western medical science to create *reserpine*, the molecule used in the first tranquillizers. That Western medical "discovery" heralded the development of a whole new field of medicine, psychopharmacology, which revolutionized the treatment of mental and psychological disorders. India has built on the ages-old medical knowledge embedded in its indigenous culture to develop a dynamic pharmaceutical industry, becoming one of the world's largest producers and exporters of generic drugs. In 2006, India accounted for 20 percent of all generic drugs approved for marketing by the US Food and Drug Administration.

In the field of agriculture, another indigenous Indian technology, a biopesticide derived from the neem tree which is a centuries-old Indian technique used to protect crops against insect pests, is considered by entomologists to be the most effective pesticide known to man. A leading American multinational paid that indigenous Indian technique the highest possible compliment by making it an object of biopiracy. Vetiver grass, another agricultural technique from India's rich traditional culture, has been used for centuries in India as a vegetable mechanism for the control of soil erosion and for moisture conservation. Both FAO and the World Bank have recognized its superior effectiveness over modern, engineered systems in those two respects. (D. Michael Warren, Using Indigenous Knowledge in Agricultural Development, **World Bank**, 1991; Nikos Alexandratos (ed), World Agriculture: Towards 2010 - An FAO Study, 1995).

Indian mathematics, whose roots lie in the early Vedic period (circa 1900-1500 B.C.), has always had an important place in Indian culture, having originally been developed for religious purposes – the construction of sacrificial altars and astronomical calculations for religious observances. Mathematical principles and formulae were incorporated, in verse form (*sutras*), into the Vedas, the world's oldest spiritual texts, to facilitate their memorization. Indian mathematicians were the first in the Old World to formulate such key mathematical concepts and techniques as zero, algorithms, algebra, square root, cube root, among many others. Indian mathematicians derived the concept of zero from the Hindu cultural concept of *sunya* - the philosophical notion of the void or blank space. It was because the void existed in Indian philosophy that a symbol was conceived for it.

India's Vedic system of mathematics which had long been "lost", having fallen into disuse well before the modern era, was rediscovered around the beginning of the twentieth century by Sanskrit

scholars who deciphered the mathematical *sutras* in the ancient Vedic texts. They were subsequently collected and published in book form in 1965. The Vedic system of mathematics was a simple, rather unique one based on simple rules and principles which could be used to solve mathematical problems in arithmetic, algebra, geometry, and trigonometry, *mentally*. The Vedic system has been described as "*perhaps the most refined and efficient mathematical system possible*." When "Vedic mathematics" was made known to the world in 1965, it aroused the interest of mathematics teachers who had been looking for a better approach to teaching the subject. A number of schools in India, England, and other countries subsequently introduced the Vedic system of mathematics into the school curriculum, with impressive results. They found that it stimulated creativity in intelligent students while helping slow-learning students to obtain a better grasp of the basic concepts. (K. Williams, Discovering Vedic Mathematics, 1988).

<http://www.hinduism.co.za/vedic.htm>

Although India did not make use of its traditional mathematical knowledge to develop science and technology in the manner and at the time Europe did so, its ancient mathematical knowledge and traditions subsequently gave the country a huge advantage with the new information technologies, helping to make it a world leader in computer technology. Algorithms are a key mathematical technique used in the design of computer software programmes. The fact that that particular technique of calculation not only originated in Ancient India but, like other Indian mathematical knowledge was also an integral part of its indigenous culture, cannot be unconnected to India's outstanding achievements in computer technology. When the opportunity presented itself, modern India was able to draw upon the outstanding mathematical knowledge and creativity embedded in its ancient culture which had lain fallow for so many centuries, in terms of its use for development purposes.

India has also made excellent use of its traditional culture to render its modern governance structures more in keeping with Indian cultural values and more responsive to the aspirations of its people. The Indian term *panchayat* (government by a body of competent men) came into general use in medieval times as a term for the local government institution which managed public affairs at the village level. *Panchayats* possessed substantial administrative powers, India's central government having traditionally accorded them considerable autonomy. They flourished up to the eighteenth century when their powers were abolished by the British colonial administration. Alexis de Tocqueville considered the *panchayat* an ideal democratic model and planned to devote a comprehensive study to it, similar to his Democracy in America, but he had to abandon the project because of ill health. (Guy Sorman, La Nouvelle Richesse des Nations, 1987). After it won its independence, India re-established village *panchayats* as a valued instrument of local government. In its 2002 Human Development Report, UNDP suggested that India's *panchayati raj* (local government policy based on the traditional *panchayat*) is an excellent example of how decentralization can promote democracy at the local level.

In stark contrast to India, Africa, whose traditional culture is also mathematically rich, has **not** made use of that very rich cultural resource in its development action. Paulus Gerdes, Director of the Center for Ethnomathematics at Mozambique's Pedagogical University has demonstrated that

many African objects used in everyday life embody mathematical concepts and a mathematical knowledge of forms, shapes, and symmetries. They also reveal knowledge of the properties and relations of circles, angles, rectangles, squares, regular pentagons and hexagons, cones, pyramids and cylinders. (Geometry From Africa: Mathematical and Educational Explorations, 1999). If properly exploited by African countries, that strategically important cultural knowledge has the potential for developing technologically-savvy societies in Africa.

Gerdes rightly considers that *"...the African cultural heritage should be the starting point in the development of the mathematics curriculum in order to improve its quality, to augment the cultural and social self-confidence of all pupils, both girls and boys."*

<http://www.maa.org/reviews/wagsa.html>. In his Geometry From Africa (pages 111-125), Gerdes demonstrates how weaving techniques, such as that shown in this YouTube video, could be used in mathematics education to study trigonometric functions, finite designs and polyhedra, among others. <http://www.youtube.com/watch?v=q7tqiDoHXbc>. Further information on Africa's cultural mathematical treasures and Gerdes' brilliant pioneering work can be accessed at these two weblinks:

<http://www.maa.org/reviews/gerdes.html>;  
<http://plus.maths.org/issue19/features/liki/index.html>

Haiti's indigenous culture, in particular the creativity embedded in it, constitutes its most important development capital and its most important development potential. It is an invaluable strategic resource from which Haitians can draw inspiration for creating new, culturally-compatible, more effective governance institutions. It is also an invaluable resource from which an alternative development approach could be formulated - one that would be capable of harnessing and mobilizing the cultural energies of the Haitian people and channelling them in directions which respond to their deepest aspirations.

Within a little more than a generation, India has transformed itself from an international basket case to being well on the way to becoming, by some estimates, one of the world's two most important economic powers within the next few decades. A major reason for India's striking development success is that it exploited to the full the development potential of its immensely rich indigenous culture. A major reason for Africa's striking development failure is that it failed to do so. Haiti can choose to follow India's example or it can choose to follow Africa's. The choice that Haiti makes - a choice that requires enlightened leadership - will largely determine the Haiti's development future or its economic fate, in the medium and the long term. Haitians do not need a crystal ball to divine the outcome of either choice. All they need to do is compare India's present situation with that of Africa.

Mervyn Claxton

*Webmaster's note: The author, who is from Trinidad and Tobago, is a researcher of many decades in the field of culture and development. He was, successively, a college teacher in West Africa (Ghana and*

*Nigeria); a diplomat with the Trinidad and Tobago Foreign Service (postings in Nigeria, Ethiopia, Switzerland, and the USA); and an international civil servant with UNESCO. At UNESCO he was successivley Head of the anti-apartheid programme; Head of the section for relations with the Caribbean; and Head of the Africa programme within the Secretariat of the United Nations World Decade for Cultural Development (1989-1997), which was hosted by Unesco. For more information and to access his series of essays on culture and development, go to <http://www.normangirvan.info/culture-and-development/>*