

Entomology and the Oil Industry in Nigeria: Corporate Social Responsibility. (Edited)

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By

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I am delighted to be here today and thank you for inviting me to be part of your conference. When the call came for me to attend this conference, I was excited at the opportunity of being in the same audience with a unique group of academic professionals. That was the good news. Then the other part soon followed.... I was to be the keynote speaker. And then cold anxiety set in for two reasons: First, I belong to "Town", far from "Gown", and the business sector for that matter, ever so comfortable in corporate, but non-academic settings. Second, and to make my case worse, I belong to that part of business that is Big Oil, which in Nigeria, means Big Problems. What then would I be saying to an audience of the Gown, which essentially comprises the most sober, cerebral and serious-minded segment of our national life? And when, as we have today, that segment of academia consists of an audience of entomologists, that is, people who think, study, research and dream insects, then my assignment becomes even more daunting as I will explain presently. I accept the role of keynote speaker today with utmost humility and I thank you for the honour. And even though I have had a long and, may I say, lucrative relationship with insects and developed a modest knowledge and deep appreciation and respect for them over the years, I must still maintain my pace and steps far behind entomologists in the scholarship of that profession to which you eminently belong and lead. Professionally, you are called Entomologists.

But to me, that is just a name. I believe, and strongly too, that based on the shallow limits of my own knowledge of insects, and the accrued pecuniary benefits I have derived from such knowledge over my business career, you must be more than just that name. Yours must be a professional calling, very much like the priesthood. Because, who else, will do what you do? And derive so much pride, passion, joy and blissful satisfaction from an academic relationship with insects! Who else, but the specially gifted, such as you, will enjoy the company of those equally gifted fellows! You are, without doubt, the unsung heroes of our academic and national life as people of depth, instinct, painstaking focus and discipline making a silent contribution to our well being through the output of your study and research. You must be some of the most resourceful, hardworking, creative, productive, rigorous and patient members of the university community. After all, those are the essential attributes of your subjects, close friends, research clients and veritable neighbours in the world of insects! And we all share in this universal neighbourliness simply because insects are everywhere, seen and unseen. As in every life form, they belong to the three broad and natural categories of the good, the bad and many which fall in between depending on our understanding and interpretation of the circumstances. The "good insects", or as we say in business the "good cops" are our friends and partners

without which the biodiversity of human, animal and plant life will simply be unsustainable whether in small agrarian communities, towns, mega cities or even wildlife parks or rain forests. Whether in our food chain, the beauty of our cities and in many more areas of our lives, their role is more to intervene for our collective good than interfere. How would human life be without the relentless focus, hard work and organization of a colony of honey bees or the pollinating role of the butterfly on our flowering plants. We certainly have a lot to learn from the bee on providing leadership, selfless service, discipline, a strong work ethic, good order and organization in our societies and cities.

Then there is the middle ground or "good today, bad tomorrow" insects depending on our mood or area of interest. The bee, useful as it is, becomes a different fellow with the slightest encroachment on its territory. And termites may be unfriendly to our woodwork at home but are vital components of the biodiversity of the forest and a positive impact on sustaining plant and animal life with their beneficial release of nutrients from dead plants as decomposers.

The third group is equally of universal interest but with a negative human affiliation, and I dare say even with you as entomologists. You call them pests; we in the business world call them the "bad cops" for their stubbornness and immense capability to destroy. They well and truly have an "interfering influence" in our lives as suggested in your conference theme ... damaging everything in their track from our domestic health to agricultural well-being and the overall environment.

At this point, let me leave the agricultural and industrial pests alone for you as the experts. Like all laymen, I will stay with, if you like, "my zone of discomfort" and address the domestic pests ... roaches, houseflies, bugs and the most deadly of them all, the mosquito. These neighbours have clearly learnt to perch on our lines as humans, but as in a famous parody, so have we also learnt to shoot them down without fail. I take some pride in being part of that endeavour. And here is the confession I promised earlier, on my lucrative relationship with insects and a delayed, and

rather costly, interaction with the profession of entomology.

When the LOC Chairman invited me to be Keynote Speaker at today's event, my immediate response was to appreciate her sense of humour since my most abiding relationship with insects had been to kill them, not just because they were dangerous, but also to make good money in the process and deliver robust returns to my shareholders. I therefore felt like a poacher being invited to address a meeting of gamekeepers! She welcomed me all the same, saying I had been a poacher of the right kind ...of the pests or "bad cops".

And now, my confession. In 1986, I was involved in building an aerosol insecticide plant in an oil terminal in Apapa. It was the first such plant built by Mobil Corporation and remained the only one ever built in the world. As part of my learning and development towards building the plant, I was assigned to a renowned research laboratory in Europe to learn about the make-up and behaviour of insects. That was my first introduction to the science of entomology.

It was a unique learning experience for me, even as a young, bright-eyed chemical engineer, to discover some wonders about insects. I learnt a lot but I summarize:

- they are the most diverse species in the universe with about 900,000 discovered and named to date.
- compared with plants (480k) species, vertebrates (60k) and lower invertebrates (210k), they constitute about 54% of all living organisms known to man.
- of the 900,000 identified species of insects, only about 1% can be classified as pests.

My brief was to focus on a tiny fraction of that 1% and work on the design, installation and operation of an aerosol plant in Nigeria that would efficiently kill insect pests and achieve a positive cash flow soon after the investment. My learning also included knowing the difference between flying and crawling insects (I thought it was obvious), the efficacy quotient of killer active ingredients (knock-down, penetration and killing agents), the use of

hydrocarbons as solvents and pressurized LPG as propellant. All that knowledge and effort just to kill insects! What an introduction for me into the interesting and lucrative world of entomology.

The plant cost US\$1 million dollars and paid back in three years! What a fantastic return on investment ... until we realized an uncomfortable truth; the more mosquitoes we killed, the more the spread of malaria. Unknown to us, resilience, stubbornness and huge reproductive potential are common and exclusive preserve of insects and the *Anopheles* spp. was no exception.

Perhaps if we had known more about your society in the 80s and your relevance to industry, we would have been wiser engaging your services as consultants and advisers to our project ... not just to achieve a more robust economics of plant investment and payback, but more rapid understanding of the one-sided approach of our strategy. We were doing good business but not achieving anything near closure of the malaria gap in Nigeria.

With the appropriate partnership with entomologists, we certainly would have embarked earlier on a more corporately appropriate and social approach to the investment ... a focused migration to a malaria prevention strategy even as a complement to manufacturing insecticides. That would have been our first opportunity to synchronize "Town with Gown". But as we say in business..."you don't know what you don't know".

It took us some time but we eventually learnt and got to know about you and other professionals involved in the world of mosquitoes and the deadly impact the insect has on humanity, especially children. With the support of entomologists, the plant had an investment upgrade of US\$9 million over 25 years and remained very profitable. But more importantly, we went on to establish the most robust malaria prevention program sponsored by a private company in Nigeria and indeed Africa.

Since 2000, Exxon Mobil Corporation has spent US\$140 million dollars in Nigeria on malaria education, control and prevention in

cities and rural communities, including the distribution of 13 million Insecticide Treated bed Nets (ITNs). A further 2 million anti-malarial treatment and diagnostic tests have been administered in Lagos State and support provided for the establishment of a training centre for the National Blood Transfusion Centre in Abuja. These initiatives were designed and implemented with the active involvement and partnership of entomologists and other research and medical resources.

It is pleasing to see the positive impact in our joint drive for a healthier and more productive society. This modest effort is geared towards putting something back into the community in which we done good business, literally "on the back" of the mosquito.

We had another opportunity several years later, albeit in a different but equally important business dimension. In 2004, as part of my new life as Chairman/CEO of Mobil plc, we saw the urgent need to close a deep skills gap between oil industry expectations and the quality of our fresh entry level intakes, especially in engineering and other sciences.

As an industry we had made huge investments in apprenticeship and finishing school programs for our engineering intakes. What was missing was the support of members of university faculty to engage with us in assessing our requirements and expectations towards assisting in the design and development of a more relevant engineering teaching curriculum.

Our investment model comprehended offering generous sabbatical grants for science and engineering academics to spend a year in oil terminals and a further six months in overseas facilities for exposure to benchmarking of global standards. The natural preference was the University of Lagos in fulfillment of our corporate social responsibility objectives but more in recognition of its being the source of the best engineering candidates and with the least handicap at the time of recruitment.

I personally jumped at the opportunity with incurable optimism... if insects were such lucrative business, as we had seen in the 80s and 90s, then engineering would be an abiding fortune! Or so we thought.

But our optimism was dashed early. We had not reckoned with the stifling bureaucracy of Abuja and its relentless insistence on nominating not only the participating university but also faculty members for the sabbaticals. The industry would have none of that and that was the premature death of the initiative.

We therefore lost an opportunity but we must not allow our pessimism to become a self fulfilling prophesy. Giving up is not an option and we remain convinced that industry and indeed all business segments in Nigeria will always need people of the Gown. Priorities will of course need to be agreed with research funds being made available to support the sciences especially in areas affecting the quality of our national life and the potential to stimulate the economy.

This is an area of strong potential for a mutually beneficial partnership with entomologists given the wide diversity and range of your subjects and their influence on all aspects of human life on this planet.

No professional group is better positioned to drive this effort than you. But as part of positioning yourself for advantage, you cannot remain the unsung, modest and self effacing heroes of the academic community. In today's Nigeria, that is clearly not enough. You must be ready to blow your trumpets and increase the resonance a lot more so industry can hear you loud and clear.

As we all know, to our pain and regret, Governments, often through no fault of theirs, may be hard of hearing. Even when we occasionally amplify their hearing aids, they are helpless from the deep holes in their pockets. But industry is ever ready to listen, with its wide ears and bright eyes constantly seeking partners and viable entrepreneurial opportunities for sustainably profitable investments.

As I conclude, let me charge the Entomological Society of Nigeria with a simple brief ... what research areas or projects are you working on today that have social relevance, economic potential and a speed-to-market commercial feasibility?

Given our challenges as a nation and the theme of your conference, I believe the opportunities

are legion and the brilliant minds to generate those ideas to move from research material to commercial investments are present in this auditorium. Perhaps it is time for a renewed focus on economic entomology.

My immediate thoughts are in three areas which are by no means exhaustive:

Malaria control and prevention ... this should remain an area of relentless focus for as long as malaria continues to be the greatest child killer in Nigeria and Africa. From available data, 30 children would have died in Africa from malaria in the thirty minutes allotted me for this address. How do we engage and sustain the right conversations about hygiene in our cities and neighbourhoods.... the open sewers, wild shrubs, etc., that provide insects and other vectors the "zone of comfort" to cause us so much social harm?

How do we improve the efficacy of active ingredients of insecticides, solvents and propellants and minimize their potential for damage to humans and the environment.

What is the economic viability of the malaria vaccine?

Agriculture: food storage and security ... building enduring partnerships with industry on improving the efficiency of grain silos for raw materials (food processing, breweries, confectioneries, etc.,) through the deployment of pesticides, fumigants, aeration techniques, etc.,

Bioremediation of Oil Spill to Land ... no discussion on the environment will be complete without sharing concerns about the menace of oil spills. Available research data indicate a biological link between insects, microbes and larvae and the mopping up of spilled hydrocarbons on land and slow moving creeks. The impact may currently be low, but the eyes pop at the thought of limitless opportunities that can be unleashed from an economic breakthrough. And it is not just from reducing environmental pollution arising from on-shore operations in the Niger Delta but also the oil installations in our towns and cities ... terminals, depots, jetties, refineries, service stations, etc., on which very little remediation is currently being done especially after divestments.

With so much creative genius from our entomologists, no doubt work has been done in these areas and the research materials are legion. But where are they? In scientific abstracts, journals, web or shelves? And rightly so. But as we all know, business entrepreneurs may often be allergic to too much reading and scholarly pursuits. We will need your help.

Can industry test the ideas, fund them if commercially feasible and build an enduring partnership with entomologists towards solving some of these deep social problems?. Such partnerships between venture capital and scientific research, innovation and economic entomology can drive social transformation to unimaginable heights for the overall good of humanity.

Then, perhaps Industry, and indeed Big Oil, will no longer just be about Big Problems, but also Big Solutions!

I wish the Entomological Society of Nigeria, success in the 2015 Conference ... and very engaging and profitable deliberations too!! I thank you for your kind attention.