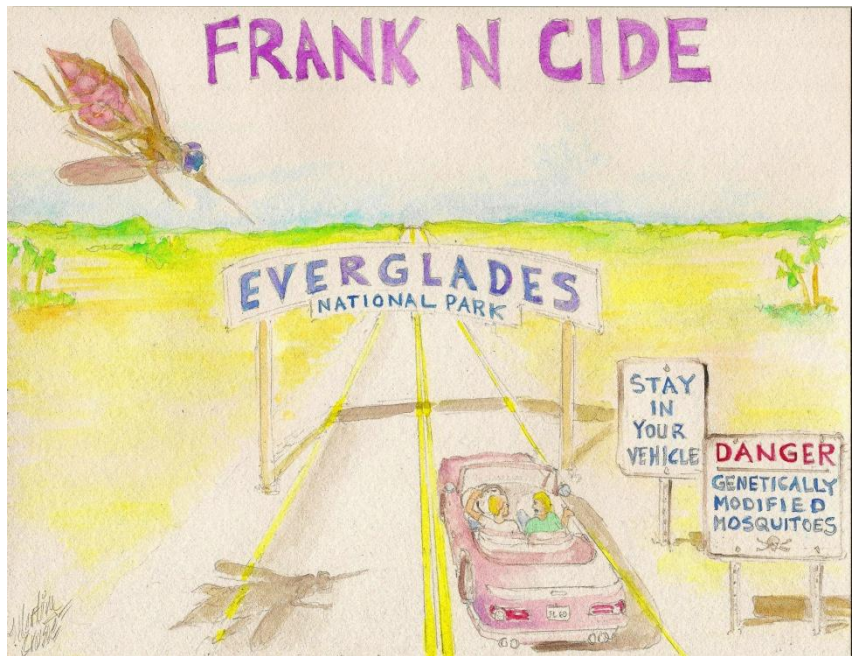


**GENETIC FRANKENSTEINS**

Science fiction has explored the idea of tampering with genetic codes, and the results were horribly ghoulish: e.g., the movie *"The Fly,"* a scientist becomes the victim of his own experimentations after his genes are mixed with those of a house fly. As a human body with a fly's head, he ends up committing suicide; likewise, the tiny fly with a human head caught in a spider's web, this monstrosity was killed off by the police.<sup>1</sup> In the story of *"Frankenstein,"* a scientist assembles various dead body parts while mistakenly attaching an insane mind that comes to haunt its creator.<sup>2</sup> Today, what was science fiction is now becoming reality. Presently, we assemble various parts of failed technical rationalities developed out of synch with nature, that as monstrosities created from genetic assemblies, we may have to kill-off in the future.



Humans and their new religion of science have truly become gods when they are creating test tube crops, livestock and now insects, but like God, humans may not have entire control of their creations with a will of their own; an artificial impulse at odds with nature – yet wanting to co-op nature. Or, will nature co-op test tube mosquitoes into their ranks and through rapid evolution become something at odds with both the elemental gods of nature, and the artificiality of a god without spirit. Science is discovered knowledge, and humanity has discovered an attribute of God – the power to give life. However, the genetic modification of crops, livestock and now insects – are scientific creations that on the face of it are beneficial, but in the long term – the outcomes are uncertain. Though science is about improving the human condition, capitalist profits have a tendency to ignore the ethic of not *"trying out"* something on the public without knowledge of its unfolding effects. That ethical discussion is at the core of the debate: i.e., that science in the guise of goodness, harnessed solely for profits, has a track record of creating environmental disasters with stressed physiologies and psychologies in its wake. Despite the past track record of manufactured disasters, we are entering a new age where policies will have to be crafted regarding the management and rights of scientific creations. It is not out of the realm of possibility that we may have a future with new sentient beings like human clones, or a labor force of hominid brutes, or even an elite class of engineered cerebral types. Though this sounds like science fiction, we know that ideas unfold over time, and clearly there are laboratories laboring on such concoctions.

It is obvious that there will be unintended effects on the environment affecting the public health, because once genetically modified insects are released, they cannot be recalled. On the face of it, it is a miracle when science can control malaria and dengue fever by introducing genetically engineered mosquitoes to

<sup>1</sup> *The Fly*, Story by Langelaan, George; screenplay by Clavell, James, (1958).

<sup>2</sup> *Frankenstein*, Shelley, Mary, (1818).

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mate with hardy mosquitoes whose offspring are infertile and whose being self implodes. However, though this tampering with the fertility, the reproduction of swarms of mosquitoes is a clever alternative to chemical spraying, still science is tampering with a major link in the marine food chain: i.e., swarms of mosquitoes are the food for many a fish species. So, as we eradicate diseases, we may be running the risk of a chain reaction affecting other animals' ability to thrive. We ought to ask the obvious question of whether genetic engineering of the mosquito will result in a bad effect carried throughout for the food chain given the little we know of the intricacies of symbioses among animal species. Perhaps by robbing animals of their ability to survive with a shorten supply of mosquitoes will collapse the food chain. Some argue we ought to kill-off the source of malaria and dengue fever by engineering a solution to pestilence; yet we need may need antidotes when nature incorporates engineered disasters.

Science is about controlled experimentation and accurate long term measurement, yet genetically modified insects and crops while interfacing with nature's authentic creations may created a modified Frankenstein with even stronger resistance to human schemes to eradicate real mosquitoes: i.e., while being bred for generations in the laboratory, can evolve resistance to the introduced lethal gene that kills them off, and then this evolution may be released inadvertently – thus creating a greater problem. Such a possible scenario ought to be incorporated into policy regulating the application of science. We just don't know what the outcome will be in twenty years. A few cases of dengue fever treated economically by a medical doctor, does not justify tampering with an eco-system. If we are in need of mosquito control, we rely on simple technologies that work with nature, not against it: e.g., drain standing water from urban environments and with the improvement of the environment, the natural elimination of pestilence through predators feeding off mosquitoes.

In the discussion of the application of rules informed by ethics to give a sense of purpose for science, we ought to discuss the psychology of the rational; and it is the penchant, this compulsion to be rational that is part of the problem. It is a mentality bent on categorizing and measuring every attribute to death - and that includes using animals in studies resulting in their death. Scientists pretend to be rational; they are merely reflective of a mentality that is devoid of native, indigenous ways of reasoning and managing nature's creations like insects and crops. Recently, Dr. James of the Foundation for the National Institutes of Health reflecting an ignorance of insect based cuisine, said, "*You don't eat insects. This is being done for a good cause.*" The motive for controlling disease is a good cause, but one without adequate thought as to creating an even larger, threatening environmental disaster – is poor, misguided science – or just the power of finance prostituting science for money. Dr. James is either ignorant not seeming to understand that some cultures do eat insects, or just a parrot for some vested interests; or worse - a dehumanized, antiseptic mind thinking itself right. Besides, given the booming population growth, the future of alleviating a strained food supply may be the cultivation of insects as a source of rich protein foods.

Will science cure everything, the avalanches coming from a poisoned environment, or does it create reactive technologies out of synch with nature? The Western mind has been predisposed to viewing nature as a thing, first through the imposition of Christianity that views nature as fallen from heaven; and second, the emergence of science viewing nature as capricious, something to control as though it was potentially dangerous. Yet perhaps it is the high priests of science, the "*mad scientist*" in white coats that argue that we need to "*get a grip*" on nature because it is the source of human illnesses. Yet scientist, and their masters, the philanthropic corporate ogres, their mission to earn a living or claiming a moral purpose requires asserting control over the environment to head off the source of human disease, yet they are more than willing to ignore deeper environmental questions about our place in it too. But corporations financed by government tampering with the environment is an old story of robber barons turned good, but it's the turning ego mania outward onto the victims of an unsustainable system that creates a narrow base of wealth set on the broad foundations of poverty that forces others to agree to a "*fixed*" system of science employed as a good thing for all.