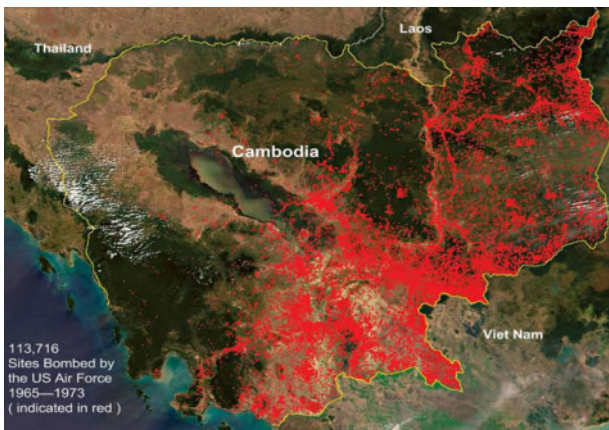


War, Ecology, and Emerging Intelligence

by Dana Visalli

The wars in Afghanistan and the word ‘ecology’ have both been around for about the same length of time. The United States invaded Afghanistan in 2001, but a more accurate dating of U.S. involvement in hostilities would be the Soviet invasion of 1979 (the U.S. funded the opposition). And that war was intimately related to the British invasions of Afghanistan, which were serial events, occurring in 1838, 1878, and 1919. Those dates bracket the invention of the word ecology, which was coined by the German biologist Ernst Haeckel in 1866, when he defined it as “the science of the relationship of the organism to the environment.” The word derives from the Greek *oikos*, house (or by extension, earth), and *logy*, ‘the study of.’ And while war is nothing



Secret bombing of Cambodia during the Vietnam War; 2.7 tons of bombs were dropped, more than the US dropped in all of WWII.

new to humankind, the understanding that we live in a tightly woven ecological web of relationships with other life on the earth is something new.

One good example of our human dependence on this web of life is the atmosphere. Consider this while you take your next breath: the atmosphere is 21% oxygen and 79% nitrogen, and neither would be present if it were not for the non-human forms of life that are constantly pumping these gases out into the sky. The oxygen is liberated by plants, protists and bacteria as they do their thing—which is photosynthesis—and the nitrogen gas is released by bacteria in the soil. So, no plants, no protists, no people, it’s that simple.

Keeping the earth suitable for life can be a cliff-hanging affair. For example, the sun has grown 25%



Napalming a village in N. Korea during the Korean War. 600,000 tons of napalm were dropped, an average of 250,000 lbs a day

more luminous over the approximately 4 billion years of life on earth, but the planet has not grown appreciably warmer. Life has over that time interacted with itself and the physical environment—ecology—to alter the chemistry of the atmosphere such that it retains less heat. Life originated in the sea, but chloride ions (salt) has been running into the sea for four billion years. By the simple rules of chemistry, sea water should have gotten too salty for life to exist after only 800 million years, but it didn’t. Where did the salt go? It leaves the water as sediments, and is trapped in massive evaporative deposits. Rainforests would not exist as they do except that they increase the rain that falls in their environment by 50% over the purely geo-physical amount due to massive evapo-transpiration through the trees. Conifer forests enhance the life-supporting capacity of their northern haunts by shedding snow down below their tapered branches and dark needles, which



B-52 bombing of Afghanistan in 2001 at the start of the current ten-year-long war.



A graphic indicating the bombing of Iraq during the Second Iraq War in 2003. Most of the country's social infrastructure not destroyed in the Gulf War was destroyed in this one 12 years later.

bombed Cambodia (2.7 million tons of bombs, 1 million gallons of defoliant) and Laos (3 million tons of bombs, 1 million gallons of defoliant). These were wars not just against human enemies (mostly impoverished rice farmers) but against some of the richest ecosystems on the planet, and against the life-sustaining capacity of the biosphere.

War has become a way of life for the United States. Our country funded the civil wars in Central America in the 1970s and 1980s (Guatemala, El Salvador, Nicaragua), funded the mujahideen fighting against the Russians in the 1979-1989 war with Afghanistan, funded both sides in the 1980-1988 Iran-Iraq war, and then in 1990 went back to war ourselves, with Iraq, with Afghanistan in 2001, and then initiated a covert war with Pakistan in 2004. As Vietnam veteran Mike Hastie observed, "The United States is a non-stop killing machine."² This country also maintains a nuclear arsenal of 7000 hydrogen bombs, many times more than enough to destroy the majority of life on earth.

Because American war-making is so persistent and pervasive, and because every bomb that is dropped, whether it be on Korea or Vietnam or Afghanistan, in the end falls on the earth, the realization slowly dawns that this unending aggression is actually a war against the earth itself. The United States has dropped 15,000,000 tons—that's 30,000,000,000 (thirty billion) pounds—of bombs on the planet's ecosystems in the last 60 years, along with 1,000,000 tons of napalm, with at least 20,000,000 gallons of defoliants sprayed on rainforests and crops with the intention of destroying them. The irony is that the life sustaining qualities of the earth are the very source of human life. The human body is made up primarily of oxygen, carbon, hydrogen and nitrogen, and these are elements are derived from the geologically- and biologically-driven cycles of the earth

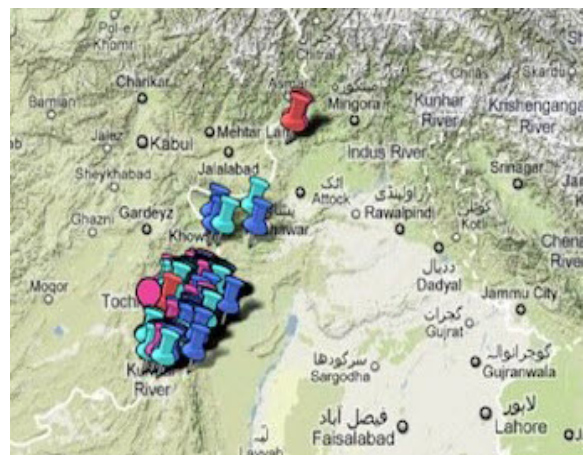
and sky. So in a somewhat poetic but still scientific sense, the earth is our mother; we emerged from the planet's evolutionary cauldron and to the earth we shall return.

Why all the violence against the earth, the source of our lives? Male mammals have an inherent urge for power, and humans have an inherent fear of death. The genetically-induced emotions related to these passions may be the subconscious forces that are driving our dysfunctional and self-destructive aggressive behavior.

Intelligence—the word derives from Latin roots meaning 'to choose between,' and is defined as 'the capacity to think rationally, perceive what is true, and respond successfully to new situations'—is something new on the planet. It was six million years in the making, in the sense that brain size has increased over that length of time from 400 cc (cubic centimeters) in our common ancestor with chimpanzees, to 1300 cc today. Like everything that exists in the biological world, intelligence is emergent; formerly it did not exist, now it does—at least by degrees. Because it is emergent, it appears progressively, a little at a time, like a salamander cautiously emerging from a mudhole. For example, the modern brain capacity of 1300 cc was reached 200,000 years ago, but there was no discernable change in human behavior until 40,000 years ago. At that point, human tool-making abilities began to rapidly improve, and both art and musical ability appear in the archeological record.

While human intelligence is culturally transmitted, only individuals can experience and express it; it is not a mass movement phenomenon.

Intelligence—in part 'the capacity to perceive what



Map showing the areas of Pakistan hit by robot drone strikes. 200+ drone missiles have killed over 2000 people since 2004.

is true'—takes courage, because when we become capable of perceiving even relative truths we also understand that much of what we were programmed to believe in childhood is false. The counterpoint to this statement is that succumbing to fear inhibits the development of intelligence.

Intelligence is also 'the capacity to think rationally and respond successfully to new situations.' Endless war and pervasive aggression against the earth is something new, nuclear weapons are new. Our understanding of ecology is new. Is it an act of intelligence to persistently attack and degrade the interconnected web of life that makes our own existence possible? Is it intelligent to build thousands of nuclear weapons of war, each of which can lay waste to vast swaths of the earth's ecosystems, and if used collectively can destroy most life on earth?

The cliff-hanging element of the current drama is that the very people who are right at the cusp of comprehending the deep ecological basis of our existence are currently spending their entire lives funding and otherwise supporting war and the attendant destruction of the biosphere. The current fear-driven model of eternal war makes a mockery of the lives of those who are drawn to live an intelligent existence, but in fact find all of their resources being stolen by the alpha males of the dominant paradigm of power and aggression. It is fear that holds them in their current position of submission, and fear that now threatens to unravel the complex evolutionary web of life. A positive outcome to this drama is only possible if those who have the mental capacity to act on the insights born of their intelligence do so immediately. Do we want to spend our entire lives funding hydrogen bombs, the power fantasies of dysfunctional males, and the progressive destruction of the biosphere, or do we want to step outside of our frightened selves to become warriors for the earth? What is it you plan to do with your one wild and precious life?¹

Dana Visalli is a professional botanist and an organic market gardener in Washington State. He redirects his financial resources away from war and toward life-sustaining endeavors because it seems like the intelligent thing to do. More of his reading material is available at www.methownaturalist.com, he can be reached at dana@methownet.com. For war tax refusal see www.nwtrcc.org

1. This concluding sentence is from Mary Oliver's poem 'The Summer Day.'



U.S. bombing of Afghanistan in 2001.

The Summer Day

Mary Oliver

Who made the world?

Who made the swan, and the black bear?

Who made the grasshopper?

This grasshopper I mean—

the one who has flung herself out of the grass,

the one who is eating sugar out of my hand,

who is moving her jaws back and forth instead of up and down—

Now she lifts her pale forearms and thoroughly washes her face.

Now she snaps her wings open, and floats away.

I don't know exactly what a prayer is.

I do know how to pay attention, how to fall down

into the grass, how to kneel down in the grass,

how to be idle and blessed, how to stroll through the fields,

which is what I have been doing all day.

Tell me, what else should I have done?

Doesn't everything die at last, and too soon?

Tell me, what is it you plan to do

with your one wild and precious life?

2. U.S. Military Impact on Planet and People

Philippines* (1889-1902)

of people killed: 220,000 (11)

WWI* (1914-1918)

of people killed: 16 million + 21 million wounded (12)

Total allied bomb tonnage: 16,000 tons (36)

WWII* (1939-1945)

of people killed: 70 million (13) + >100 million wounded (extrapolation of data)

Total allied bomb tonnage: 2.7 million tons, total US bombs 1.6 million tons (36)

Atomic bombs: 2, killing about 200,000 immediately and another 200,000 over time

Total Napalm: Unknown but considerable

Korea* (prewar 1945-1950, Korean War 1950-1953)

of people killed in the pre-war insurgency: 100,000 (15, White, from Chomsky & Cumings, averaging)

of people killed in the war: 2.5 million Koreans, ½ million Chinese, 36,000 Americans (11)

Bomb tonnage: 386,000 tons, total for all munitions 698,000 tons

Napalm: 600,000 tons, about 250,000 lb per day

Defoliant: mostly the above-mentioned napalm.

Refugees during war: 8 million (ref #55 + unmentioned refugees in North Korea from urban bombing)

Vietnam* (pre-war 1945-1955, Vietnam War 1955-1975)

of people killed 1st Indochina War: (1945-1954) 1,000,000 (largely funded by the U.S., fought by the French) (61)

of people killed 2nd Indochina War (1954-1975): 5.1 million (62)

Total US bomb tonnage: 7 million tons (19)

Total US cluster bomblets dropped: 97 million (59)

Napalm: 400,000 tons

Defoliant: 20 million gallons (41)

Total acres spray with defoliant: 5 million acres of forest & 700,000 acres of cropland (41)

Refugees during the war: 5 million (53)

Cambodia* (1964-1973)

of people killed: 600,000 (11) or 500,000-1,000,000 (49, Chomsky)

Total US bomb tonnage: 2.7 million tons (about equal to US + allies in all WWII) (10)

Total US cluster bomblets dropped: 26 million (59)

Napalm: A considerable but unknown portion of total bomb tonnage

Defoliant: 1 million gallons

Total acres spray with defoliant, napalmed and bombed: ½-1 million acres

Refugees: 2 million (9)

Laos* (1964-973)

of people killed: 350,000 (49)

Total US bomb tonnage: 3 million tons (more than US + allies in WWII)

Total US cluster bomblets dropped: 270 million

Napalm: A considerable but unknown portion of total bomb tonnage

Defoliant: 1 million gallons (43)

Total acres defoliated: 150,000 (60)

Total acres spray with defoliant, napalmed and bombed: ½ to 1 million

Refugees: 1 million (54)

Guatemala* (1954-1990)

of people killed 200,000 (11)

Nicaragua* (1970-1990)

of people killed 78,000 (38)

Landmines: 180,000

El Salvador* (1979-1992)# of people killed: 75,000

Serbia* (1999)

of people killed: ~1000 killed, 6000 injured (31)

Total US bomb tonnage: 6300 tons

Total US cluster bomblets dropped: 295,000

Depleted Uranium: 10 tons? (33)

Total refugees: About 1 million (39)

Iraq* (1980-2011)

of people killed Iran-Iraq War (1980-1988)-700,000 (11) This war was largely funded by & weapons supplied by the U.S.

of people killed: First Gulf War (1990-1991)- 125,000 (21)

of people killed by Iraq Sanctions (1991-2003)- 350,000 (11)

of people killed: Second Gulf War (2003-2011)- 250,000-1 million (22)

Total war deaths 1979-2011- 1,325,000

Total US bomb tonnage First Gulf War: 88,500 tons

Total US cluster bomblets dropped: 20 million (59)

Napalm, First Gulf war: 55,000 gallons

Depleted Uranium used in First Gulf War: 320 tons (25)

Total US bomb tonnage Iraq War:~ 80,000 tons (24)

Total US cluster bomblets dropped: 2 million (59)

Napalm, Iraq War: 3300 gallons

Depleted Uranium used in Iraq War: 1500 tons (25)

Equivalent number of Hiroshima's in Iraq = **14,218 bombs (25)**

Defoliant, both wars: quantity unknown, less than in SE Asia as most of Iraq is desert

Refugees: 4.5 million

Afghanistan* (1979-2011)

of people killed 1979-2001-- 1,800,000 (11)

of people killed 2001-2010—30,000 estimated (28)

Total US bomb tonnage: Unknown

Total US cluster bomblets dropped: 248,000 (59)

Napalm: Used at bombing of Tora Bora in 2001

Depleted Uranium: Unknown

Landmines: 5-10 million currently in the ground

Refugees: 320,000 internally displaced since 2001 (51)

Pakistan* (2004-2010)

of drone strikes total 2004-2010: 218

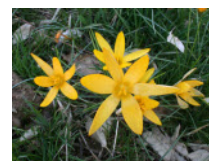
of people killed by drones total 2004-2010: ~2000

of drone strikes 2009: 53

of people killed by drones 2009: 500

of drone strikes 2010: 122

of people killed by drones 2010: 995 (all data--40)



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