

UNLOCKING THE HEALTH BENEFITS OF NATURE

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Sustainable Development Goals





GOOD HEALTH AND WELL BEING

Important for building prosperous societies

- Major progress has been made in improving the health of millions of people
- Maternal mortality rates have been reducing,
- Total number of deaths of children under 5 years of age dropped from 9.8 million in 2000 to 5.4 million in 2017
- Life expectancy continues to increase



BUT

In both rich and poor countries, a health emergency can push people into bankruptcy or poverty



CURRENT STATUS

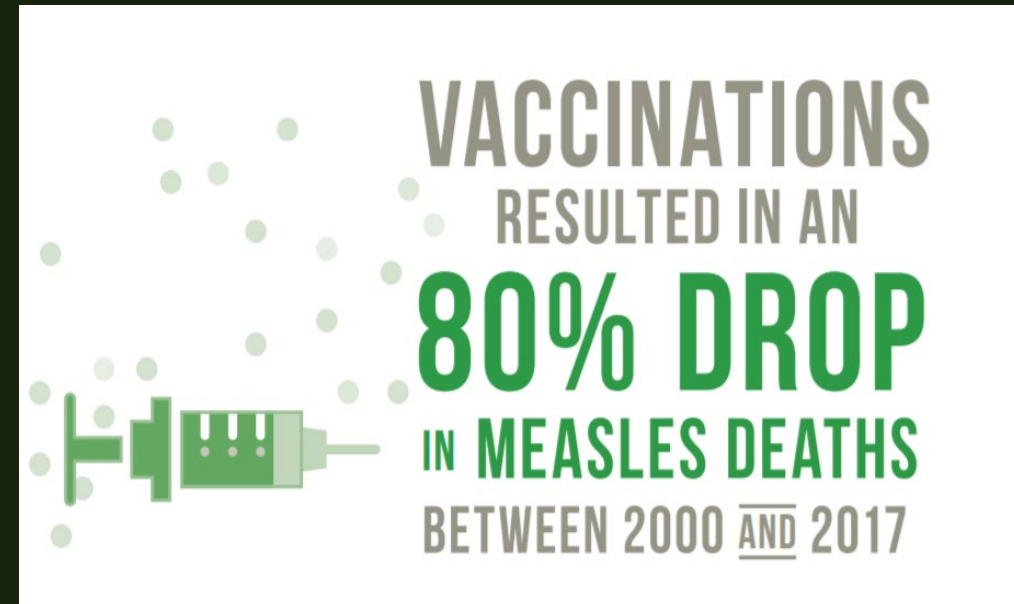
17,000 fewer children die each day than in 1990, but more than **5 million children still die** before their fifth birthday
80% are in in Sub-Saharan Africa and Southern Asia

Since 2000, measles vaccines have averted nearly 15.6 million deaths, over 6.2 million malaria deaths avoided and the incidence rate decreased by 37%,

But progress on malaria has now stalled

Children born into poverty are almost **twice as likely to die** before the age of five as those from wealthier families

Mortality of mothers not surviving childbirth is **14 times higher** in developing compared to developed regions





HEALTHY PEOPLE HEALTHY ECONOMIES

Target 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

- If we spent \$1 billion in expanding immunization coverage against influenza, pneumonia and other preventable diseases, **we could save 1 million children's lives each year**
- In the past decade, improvements in health and health care led to a **24 per cent increase in income growth** in some of the poorest countries
- Non communicable diseases alone will cost low- and middle-income countries **more than \$7 trillion in the next 15 years**
- Children of educated mothers, even primary schooling, are **more likely to survive** than children of mothers with no education



Mothers are Chief Medical Officers!



WHAT IS A GOOD LIFE?

- What does the idea of a good life mean to you and your family?
- What do you and your family need to live a good life?
- What do you think people value and aspire to?
- What do you think politicians and decision makers value and prioritize?
- Do you think this is a place where everyone can have a good life?
- Are there particular things about living here that allow people to have a good life or prevent it?
- Do you think quality of life and opportunities for people have got better or worse in the past few years?

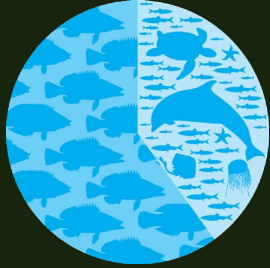
Being able to live well, quality of life, flourishing, prosperity, thriving

What does prosperity mean in Vingunguti-Mji Mpya?

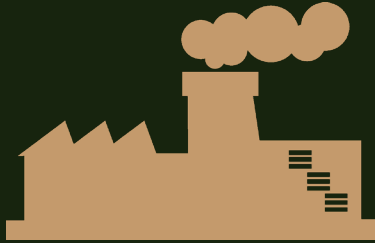


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CALCULUS OF A HEALTHY LIFE



Ecological health and social dynamics



Consumption and production patterns and derived incomes and wealth

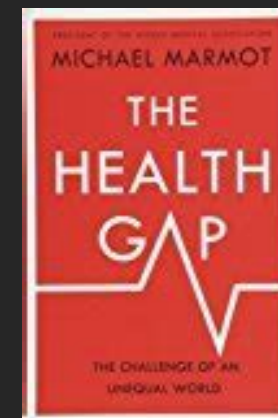
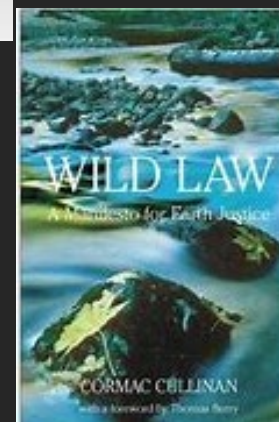
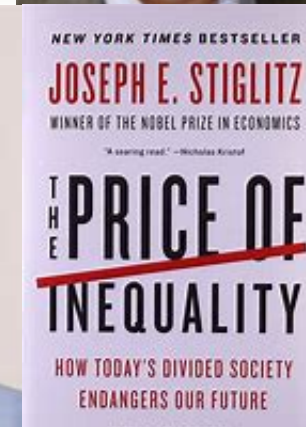
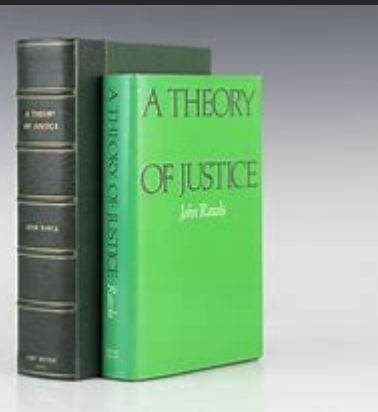
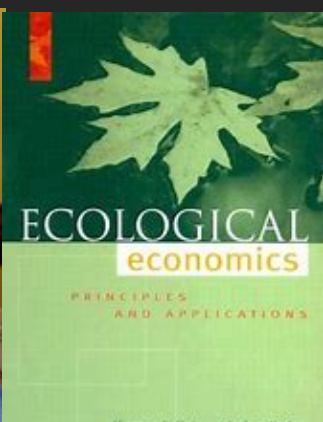
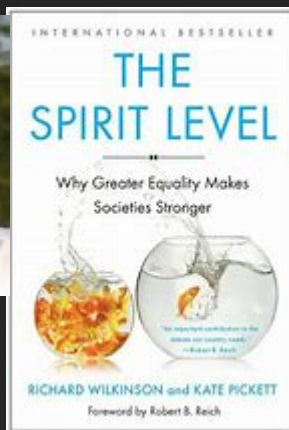
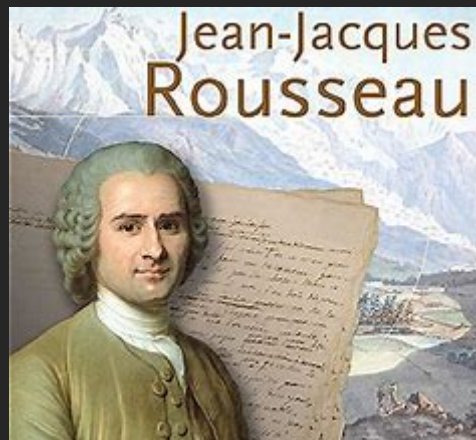


Distributional fairness and equity



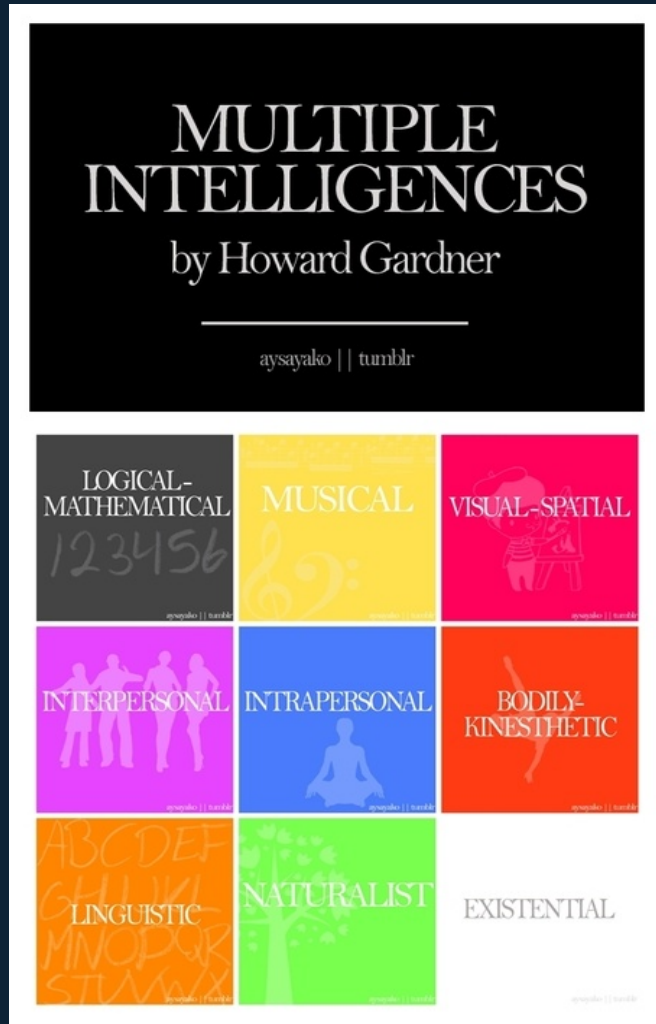
Human Nature Relationships





INSPIRED WRITING

NATURALIST INTELLIGENCE



The connection to nature is what Howard Gardner calls Naturalist Intelligence

Peoples' experience of nature is part of a deep-rooted form of multiple intelligences

PHILOSOPHY OF NATURALISM

Humanity does not stand apart but is fully part of it

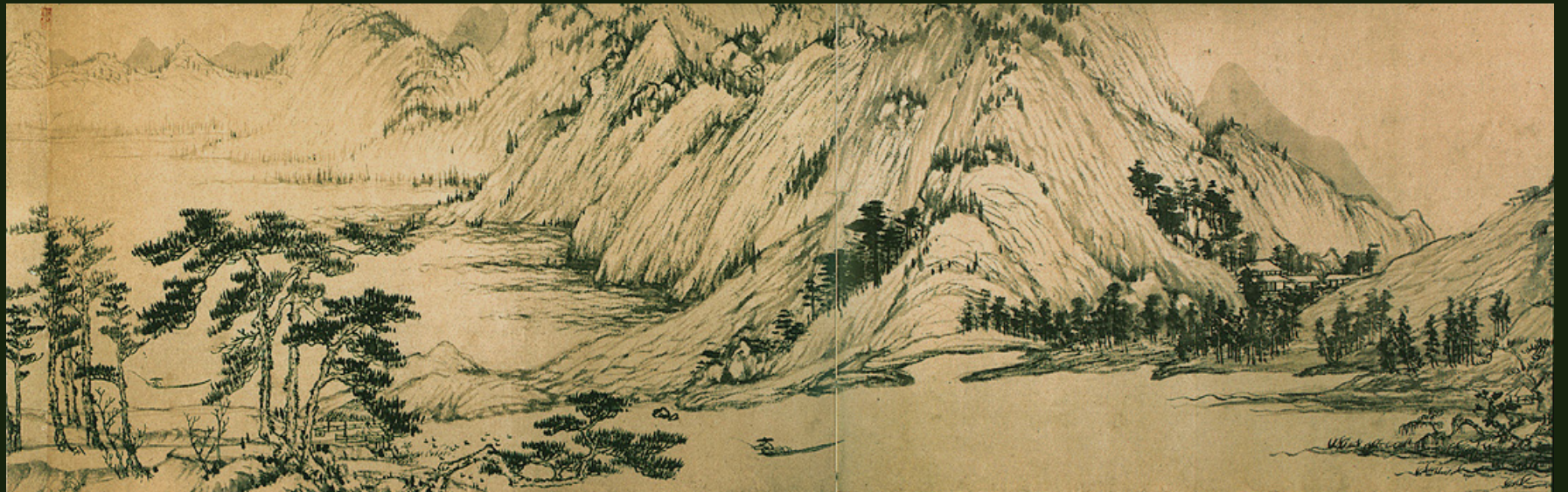
No sharp divisions between mind and spirit, heaven and earth

all who speak about the natures of things have in fact only their phenomena to reason from and the value of a phenomenon is its being natural

Mengzi or Mencius (372–289 BC or 385–303 or 302 BC) Chinese Confucian philosopher the "second Sage"



Jin Dai (1388-1462) Dense Green
Covering the Spring Mountains



Wang Meng (1308-85) Secluded Dwelling in the Qingbian mountains

CHINESE NATURALISM

Confucianism

No God or focus on the afterlife

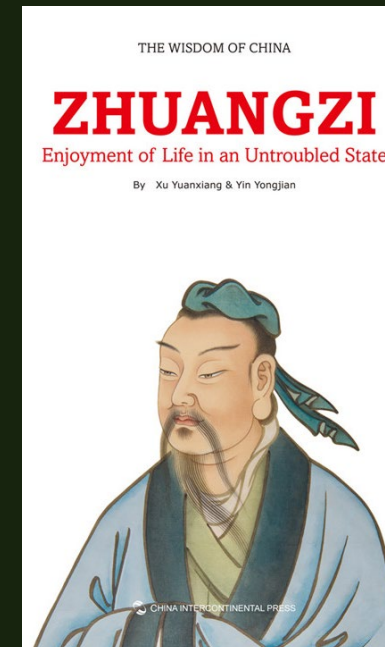
Profoundly non-dualistic - yin and yang two aspects of the whole



Daoism

most associated with nature of all the global philosophies. Shares the metaphysical agnosticism of Confucianism. Founder Lao-Tze

Living in harmony with nature; going with the flow like water



JAPANESE NATURALISM



Zhongfeng Mongben meditating
Pure Land Buddhism



Yamato-e seasonal painting from the Muromachi period (1392-1573) Landscape of the Four Seasons a scroll over 10 metres long attributed to Sesshu Kyoto National Museum

NATURALISM AND VIEWS OF NATURE



In Asia and aboriginal Australia nature is seen as ubiquitous

Nature is around us – we do not do things **to** nature from the outside but **with** nature from the inside

Nature is not a paradise; it may be include tsunamis and earthquakes

Aboriginal Australians also see no need to protect nature from humans as humans are already part of nature

There is no distinction between the natural and the artificial because it is all part of nature

Japanese think of wild nature as domesticated a hybridity of wild nature and technology. The famous sakura – cherry blossoms – reflect this. Before the Nara period 710 CE the plum tree was more widespread.. cherry was deliberate planting. Disposing of waste in Japan is more about purity than thinking of waste as unnatural

In Europe, those who follow naturalism still view humanity and nature as separate



Exploring nature's medicine cabinets



ANCIENT MEDICINE CABINETS



ANTI-MALARIAL ARTEMISININ STORY



WHO concerns about effectiveness of non-pharmaceutical forms

- Artemisinin is a natural extract from *Artemisia annua* (sweet wormwood).
- Its discovery goes back to 1969 when chloroquine was failing, Tu Youtou screened thousands of Chinese herbal medicines and produced 385 extracts.
- It has saved millions of lives and Tu Youtou received the 2015 Nobel Prize in Physiology and Medicine.
- Being screened for cancers where it targets tumour cells and anti-parasitic and inflammatory drugs

MADAGASCAN PERIWINKLE LEUKEMIA STORY



In Madagascar, extracts have been used for hundreds of years in herbal medicine for the treatment of diabetes, as hemostatics and tranquilizers, to lower blood pressure, and as disinfectants.

In the 1950s, scientists discovered that the traditional herbal remedy, the Madagascar periwinkle (*Vinca rosea* or *Catharanthus roseus*) contained medicinally active 'vinca alkaloids', among which were the first phytochemicals used to treat cancer.

Although the sap is poisonous if ingested, some 70 useful alkaloids have been identified from it including alstonine, ajmalicine, reserpine, vincamin, camptothecin, vinblastine, and vincristine (leurocristine), all possessing powerful medicinal properties.

Vinblastine, vincristine and other semi-synthetic derivatives inhibit division of cancer cells are used to treat Hodgkin's disease, non-Hodgkin's lymphoma, and testicular and kidney cancer plus acute lymphocytic leukaemia, neuroblastoma, sarcoma, and cancers of the breast, cervix, bladder and lungs.

FUTURE MEDICINE CABINETS

Grewia villosa
Commiphora africana
Acacia nilotica
Acokanthera schrimpi
Bersama abyssinica
Dodomaea angustifolia
Plumbago zeylanica
Lippia kituiensis
Dombeya rotundiflora
Cassia abbreviate
Warburgia ugandensis
Croton dichogamus
Balanites aegyptiaca



FUTURE MEDICINE CABINETS: CORAL REEFS

Corals are stationary animals and have evolved chemical defences to protect themselves from predators

Coral reef plants and animals are important sources of new medicines to treat cancer, arthritis, human bacterial infections, Alzheimer's disease, heart disease, viruses, and other diseases. They are also a source of nutritional supplements, cosmetics and natural pesticides

Coral is used in reconstructive surgery and a substrate for new bone



Preventative natural healthcare



INTENSITY OF CONNECTEDNESS



Connectedness affects multiple aspects of human life and endeavour, from cognitive development and longevity....



to social cohesion, security
and perceptions of risk and
equity



BEING PART OF NATURE

A 30-minute walk in nature improves heart health, circulation and lower cholesterol, blood glucose, and blood pressure, reduces inflammation, stress and cortisol levels by 15%, boosts immunity and decreases the risk of cancers

Just 20 minutes in nature improves concentration and reduces the need for ADHD and ADD medications in children

Individuals are more likely to repeat being physically active when the exercise is performed in a natural environment

LIVING AS PART OF NATURE



Interacting with a green space increases social interactions which can prevent diseases like dementia

Listening to birdsongs and observing animals in nature have shown to promote wellbeing, reduce stress, improve mood, and reduce attention fatigue

Natural aromas from wood and plants have calming effects and viewing nature reduces mental fatigue

A group of seven women are standing in a dense, lush tropical forest. They are dressed in traditional African attire, including patterned dresses and headwraps. The forest is filled with various green plants, ferns, and tall palm trees in the background. The scene is brightly lit, suggesting a sunny day. The women are arranged in a line, facing the camera, and appear to be holding some of the plants around them.

OUR HEALING WORLD