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Dexter Sinister

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Michael Smoler

Jamie Stewart

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Lia Trinko-Browner

Jen Delos Reyes

Rafael Rozendaal

Ryan Waller

Amy Yao

What follows is the documentation of 23 travels within Wikipedia (navigating from article to article via a connecting hyper-link, producing a string of connecting articles). The string of articles produced by each travel can be understood as a kind of mental-map: a wandering in thought, or a deeper continuous investigation. The decisions that each contributor made will hopefully produce not only an array of interesting subjects, but also serve as a kind of supplemental reader to their own creative practice. Presenting these links sequentially as they were traveled is also a kind of ordering method. To an extent, digital systems make hierarchical categorizing and analog ordering irrelevant (see introduction to *A Wikipedia Reader*, 2008). Information online is not necessarily categorized and ordered in the traditional sense, it is interconnected with everything, and accessed through these connections. Here the contributors themselves become the categories through their own choices of what connection to follow. The articles are abridged because of printing limitations. It must also be understood that each printed article is also a documentation in the article’s continuously growing life. That is the nature of user-generated content. Things are revised and updated. Some of the connections presented here may now

be broken. Like old trolley lines, they belong to a different time. Yet unlike these old lines, they can be reconnected. Obviously, the nature of Web 2.0 opens up room for factual error. It also opens up room for tinkering and play, which was not present in the first reader. Oraib Toukan’s travel includes a fictitious article in between factual ones (this article lasted no longer than a day). It is a culture of participation. Even tricksters and trouble-makers can participate. But this tinkering is not always rooted in misinformation. When looking at the Hannah Arendt article (which came up twice through Marc Handelman and Eileen Quinlan), I had the uncanny realization that I was looking at my own hand in the photograph of her gravestone. I uploaded the photograph over a year before and had forgotten about it. I had thought, with it becoming more difficult to play with the text, why not play with the images? Anyone can assert their presence in the backgrounds and margins of photographs, becoming part of the information.

David Horvitz, September 2009

This was commissioned by the Art Libraries Society of New York for the Contemporary Artists Books Conference at Printed Matter’s 2009 NY Art Book Fair. It was organized through David Senior at the Museum of Modern Art Library.

1985
Acadian Driftwood
Adaptation
Adrenal Medulla
Afterimages
Ahimsa
Al-Hurriya
Aldous Huxley
Alzheimer’s disease
Analog Hole
Andrew Huxley
Animism
Asparagus
Asshole
Attention
Attention-Deficit
Hyperactivity Disorder
Augmented Reality
Augmented Virtuality
Autobiography of Malcolm X
Axon
Ayurvedic
BBC
Babies
Banality of Evil
Bard College
Bellevue Hospital Center
The Birth of Tragedy from the Spirit of Music
Black and White Dualism
Bob Dylan
Bottom of the Pyramid
Boulder
Boy Soprano
Brewer’s Dictionary of Phrase and Fable
Broadmoor Hospital
Brothels
Central Intelligence Agency
Charles Sanders Peirce
Choir
Cobble

Cocktail Party Effect
The Colbert Report
Commodore 64
Constructed Language
Copy Protection
Crossbow
Cyberpunk
Data-mining
Daydream
Dealer
Depersonalization
Dharmacakra
Diane Vreeland
Distribution
Dream
Dualism
Dylan Thomas
Ego Death
Enclave and Exclave
European Microstates
Evangeline
Ewald Hering
Extraterritoriality
Eye Movement
Faces of Death
Fergie
Flowers
Ford Model T
Fordlandia
Formal Language
Friedrich Nietzsche
Gödel’s Incompleteness
Theorems
Geopolitics
Ghassan Kanafani
Ghost in the Machine
Goguryeo
The Goodies
Grape
Gravel
Great Upheaval
Greg Dyke
Hallucinogen-Persisting-Perception Disorder

Hannah Arendt
Harper’s Bazaar
Health Care
Henry Wadsworth
Longfellow
Hill
HizbelHur
Horizontal Gene Transfer
Human Animal
Communication
Human Speechome
Project
Hunter vs. Farmer Theory
Hyperfocus
I’m Sorry, I’ll Read That
Again
I’m Sorry I Haven’t a Clue
Illegal Drug Trade
Illness
Infinite Set
Infinity
Interspecies
Communication
Islamic calligraphy
Jabberwocky
James Joyce
Japan
June and Jennifer Gibbons
Kara Walker
Kibera
Kilroy Was Here
Korea
LSD
Libya National Football Team
Liechtenstein
Light
List of deities
The Magical Number Seven, Plus or Minus Two
Mantra
Marcel Duchamp
Mary’s Room

Materialism
Meditation
Menachem Begin
Michel Foucault
Mixed Reality
Mnemonic
Mobile Phone
Mountain
Mushroom
Mushroom Cloud
Mycelium
Mythology
Naive Set Theory
Naji al-Ali
Names of God
Nausea
Neologism
Neuralgia
Neuroscience
Nonce Word
Nonviolent
Nuclear Weapons
Objects of the Mind
Omnidirectional Treadmill
Optical Illusion
Organum
Origin of language
Our Band Could Be Your Life
Oxford English Dictionary
Pain
Peanuts
Pebble
Peppermint
Police Enforced ANPR in the UK
Polyphony
Population Bottleneck
Portmanteaux
Postmaterialism
Pragmatism
Precisionism
Principia Mathematica
Prohibition in the United

States
Qalam
Qualia
Quark
Rapid Eye Movement
Rasul v. Bush
Record Label
Reproduction
Rhizome
Rock
Roland Rat
Roman Numerals
Russian Roulette
SR-71 Blackbird
San Francisco
Sanskrit
Santiago Ramon Y Cajal
Sarah McLachlan
Satire
Set
Shamanism
Sheila E.
Shock Art
Silent Letter
Simulated Reality
Sing-along
Sleep Deprivation
Snowclone
Soapland
Songs of Mass
Destruction
Soul
Stanford Prison
Experiment
Still Life
Stimulation
Stokely Carmichael
Stress
Subitizing and Counting
Summit
Superior Colliculus
Systemic Bias
Talking Animal
Tally Sticks

Tandem
Tandem Bicycle
Taxus Baccata
Television
Tetragrammaton
Thomas Nagel
Titanium
Transhumanism
Turkish Bath
Underground Economy
Unison
Vaccination
Vegetarianism
Videotape
Vile Bodies
Virtual Reality
Voluntary Human
Extinction Movement
Waxwing
We Are the World
Western Europe
Wikipedia
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Health Care

Health care refers to the treatment and management of illness, and the preservation of health through services offered by the medical, dental, pharmaceutical, clinical laboratory sciences (in vitro diagnostics), nursing, and allied health professions. Health care embraces all the goods and services designed to promote health, including “preventive, curative and palliative interventions, whether directed to individuals or to populations.”

Before the term health care became popular, English-speakers referred to medicine or to the health sector and spoke of the treatment and prevention of illness and disease.

Illness

Illness (sometimes referred to as ill-health or ail) can be defined as a state of poor health.

It is sometimes considered a synonym for disease. Others maintain that fine distinctions exist. Some have described illness as the subjective perception by a patient of an objectively defined disease.

Conditions of the body or mind that cause pain, dysfunction, or distress to the person afflicted or those in contact with the person can be deemed an illness. Sometimes the term is used broadly to include injuries, disabilities, syndromes, infections, symptoms, deviant behaviors, and atypical variations of structure and function, while in other contexts these may be considered distinguishable categories. A pathogen or infectious agent is a biological agent that causes disease or illness to its host. A passenger virus is a virus that simply hitchhikes in the body of a person or infects the body without causing symptoms, illness or disease. Foodborne illness or food poisoning is any illness resulting from the consumption of food contaminated with pathogenic bacteria, toxins, viruses, prions or parasites.

Pain

Physical pain is the unpleasant feeling common to a headache and a stubbed toe. It typically consists of unpleasantness, motivation to withdraw or protect, and an awareness of the quality, location, intensity and duration of the pain, though it is possible to experience pain in the absence of one or more of these elements. Pain is often accompanied by negative emotions (e.g., fear, anxiety, rage) and cognitive impairment (e.g., attention and working memory deficits).

Pain is part of the body’s defense system, triggering a reflex reaction to retract from a painful stimulus, and helps adjust behavior to increase avoidance of that particular harmful situation in the future. Given its significance, physical pain is also linked to various cultural, religious, philosophical, or social issues.

Clarification on the use of certain pain-related terms:

“Pain” used without a modifier usually refers to physical pain, but it may also refer to pain in the broad sense, i.e., suffering. The latter includes physical pain and mental pain, or any unpleasant feeling, sensation, and emotion.

Health Care

Illness

Pain

It may be described as a private feeling of unpleasantness and aversion associated with harm or threat of harm in an individual. Care should be taken to make the right distinction when required between the two meanings. For instance, philosophy of pain is essentially about physical pain, while a philosophical outlook on pain is rather about pain in the broad sense. Or, as another quite different instance, nausea or itch are not ‘physical pains’, but they are unpleasant sensory or bodily experience, and a person ‘suffering’ from severe or prolonged nausea or itch may be said to be ‘in pain’.

Nociception, the unconscious activity induced by a harmful stimulus in sense receptors, peripheral nerves, spinal column and brain, should not be confused with physical pain, which is a conscious experience. Nociception or noxious stimuli usually cause pain, but not always, and sometimes pain occurs without them.

Qualifiers, such as mental, emotional, psychological, and spiritual, are often used for referring to more specific types of pain or suffering. In particular, ‘mental pain’ may be used along with ‘physical pain’ for distinguishing between two wide categories of pain. A first caveat concerning such a distinction is that it uses ‘physical pain’ in a broad sense that includes not only physical pain in the narrow sense but also other unpleasant bodily experiences such as itch or nausea. A second caveat is that the terms physical or mental should not be taken too literally: physical pain, as a matter of fact, happens through conscious minds and involves emotional aspects, while mental pain happens through physical brains and, being an emotion, it involves important bodily physiological aspects.

The term unpleasant or unpleasantness commonly means painful or painfulness in a broad sense. It is also used in (physical) pain science for referring to the affective dimension of pain, usually in contrast with the sensory dimension. For instance: “Pain-unpleasantness is often, though not always, closely linked to both the intensity and unique qualities of the painful sensation.” Pain science acknowledges, in a puzzling challenge to IASP definition, that pain may be experienced as a sensation devoid of any unpleasantness: see below pain asymbolia.

Suffering is sometimes used in the specific narrow sense of physical pain, but more often it refers to mental pain, or more often yet to pain in the broad sense. Suffering is described as an individual’s basic affective experience of unpleasantness and aversion associated with harm or threat of harm.

Nausea

Nausea (Latin: Nausea, from Greek: *Ναύτια*, “sea-sickness”, also called wamble) is the sensation of unease and discomfort in the stomach with an urge to vomit.

Nausea is also an adverse effect of many drugs, opiates in particular, and may also be a side-effect of a large intake of sugary foods.

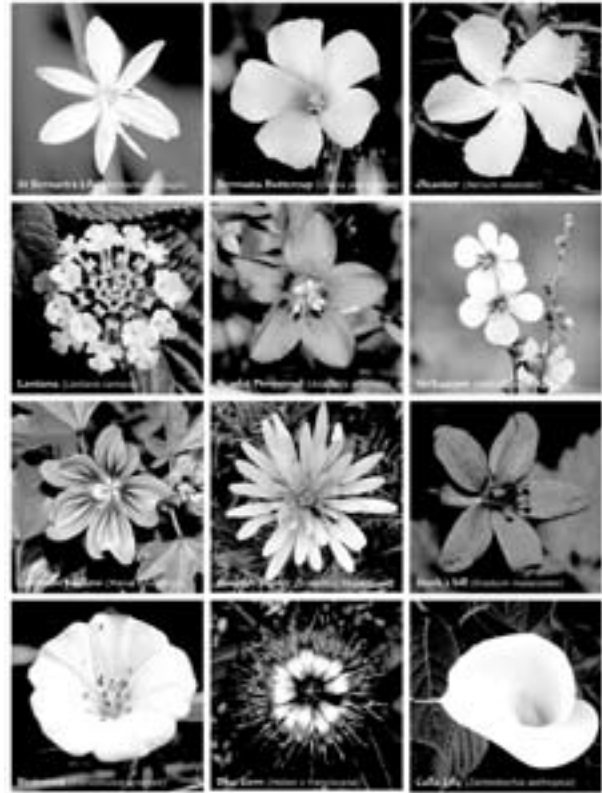
The spices ginger and peppermint have been used for centuries as traditional remedies for nausea, and recent research has validated these remedies. Also, citron fruit was once widely considered to relieve nausea.

Peppermint

Peppermint (*Mentha* × *piperita*, also known as *M. balsamea* Willd.) is a hybrid mint, a cross between the water-mint (*Mentha aquatica*) and spearmint (*Mentha spicata*). The plant, indigenous to Europe, is now widespread in cultivation throughout all regions of the world. It is found wild occasionally with its parent species.

Peppermint was first described by Carolus Linnaeus from specimens that had been collected in England; he treated it as a species, but it is now universally agreed to be a hybrid.

It is a herbaceous rhizomatous perennial plant growing to 30-90 cm (12-35 in) tall, with smooth stems, square in cross section. The rhizomes are wide-spreading, fleshy, and bare fibrous roots. The leaves are from 4-9 cm (1.6-3.5 in) long and 1.5-4 cm (0.59-1.6 in) cm



broad, dark green with reddish veins, and with an acute apex and coarsely toothed margins. The leaves and stems are usually slightly hairy. The flowers are purple, 6-8 mm (0.24-0.31 in) long, with a four-lobed corolla about 5 mm (0.20 in) diameter; they are produced in whorls (verticillasters) around the stem, forming thick, blunt spikes. Flowering is from mid to late summer. The chromosome number is variable, with 2n counts of 66, 72, 84, and 120 recorded.

Rhizome

In botany, a rhizome (from Greek: *ῥιζωμα* “rootstalk”) is a characteristically horizontal stem of a plant that is usually found underground, often sending out roots and shoots from its nodes. Rhizomes may also be referred to as creeping rootstalks, or rootstocks.

A stolon is similar to a rhizome, but, unlike a rhizome, which is the main stem of the plant, a stolon sprouts from an existing stem, has long internodes, and generates new shoots at the end, e.g., the strawberry plant. In general, rhizomes have short internodes; they send out roots from the bottom of the nodes and new upward-growing shoots from the top of the nodes. It is a method of reproduction for plants. A stem tuber is a thickened part of a rhizome or stolon that has been enlarged for use as a storage organ. In general, a tuber is high in starch, for example, the common potato, which is a modified stolon. The term tuber is often used imprecisely, and is sometimes applied to plants with rhizomes.

For many plants, the rhizome is used by farmers and gardeners to propagate the plants by a process known as vegetative reproduction. Examples of plants

that are propagated this way include hops, asparagus, ginger, irises, Lily of the Valley, Cannas, and sympodial orchids.

Asparagus

Asparagus officinalis is a flowering plant species in the genus *Asparagus* from which the vegetable known as asparagus is obtained. It is native to most of Europe, northern Africa and western Asia. It is now also widely cultivated as a vegetable crop.

often stir-fried. Cantonese restaurants in the United States often serve asparagus stir-fried with chicken, shrimp, or beef, also wrapped in bacon. Asparagus may also be quickly grilled over charcoal or hardwood embers. It is also used as an ingredient in some stews and soups. In the French style, it is often boiled or steamed and served with hollandaise sauce, melted butter or olive oil, Parmesan cheese or mayonnaise. It may even be used in a dessert. The best asparagus tends to be early growth (meaning first of the season) and is often simply steamed and served along with melted butter. Tall, narrow asparagus cooking pots allow the shoots to be steamed gently, their tips staying out of the water.

The bottom portion of asparagus often contains sand and dirt and as such thorough cleaning is generally advised in cooking asparagus.

Green asparagus is eaten worldwide, though the availability of imports throughout the year has made it less of a delicacy than it once was. However, in the UK, due to the short growing season and demand for local produce, asparagus commands a premium and the “asparagus season is a highlight of the foodie calendar.” In continental northern Europe, there is also a strong seasonal following for local white asparagus, nicknamed “white gold.”

Nutrition studies have shown that asparagus is a low-calorie source of folate and potassium. Its stalks are high in antioxidants.

“Asparagus provides essential nutrients: six spears contain some 135 micrograms (mcg) of folate, almost half the adult RDI (recommended daily intake), 545 mcg of beta carotene, and 20 milligrams of potassium,” notes an article which appeared in ‘Reader’s Digest.’ Research suggests folate is key in taming homocysteine, a substance implicated in heart disease.

Folate is also critical for pregnant mothers, since it protects against neural tube defects in babies. Several studies indicate that getting plenty of potassium may reduce the loss of calcium from the body.

Particularly green asparagus is a good source of vitamin C, packing in six times more than those found in citrus fruits.

“Asparagus contains substances that act as a diuretic, neutralize ammonia that makes us tired, and protect small blood vessels from rupturing. Its fiber content makes it a laxative too.”

White asparagus, known as spargel, is cultivated by denying the plants light and increasing the amount of ultraviolet light the plants are exposed to while they are being grown. Less bitter than the green variety, it is very popular in the Netherlands, France, Belgium and Germany where 57,000 tonnes (61% of consumer demands) are produced annually.

Purple asparagus differs from its green and white counterparts, having high sugar and low fibre levels. Purple asparagus was originally developed in Italy and commercialised under the variety name *Violetto d’ Albenga*.

Asparagus is a useful companion plant for

Flower

tomatoes. The tomato plant repels the asparagus beetle, as do several other common companion plants of tomatoes, meanwhile asparagus may repel some harmful root nematodes that affect tomato plants.

It is known in French and Dutch as asperge, in Italian as asparago (old Italian asparagio), in Portuguese as espargo hortense, in Spanish as espárrago, in German as Spargel, in Hungarian as spárga.

The Sanskrit name of Asparagus is Shatavari and it has been historically used in India as a part of Ayurvedic medicines. In Kannada, it is known as Ashadhi, Majjigegadde or Sipariberuballi.

Urine
The effect of eating asparagus on the eater’s urine has long been observed:

“asparagus... affects the urine with a foetid smell (especially if cut when they are white) and therefore have been suspected by some physicians as not friendly to the kidneys; when they are older, and begin to ramify, they lose this quality; but then they are not so agreeable”

Marcel Proust claimed that asparagus “...transforms my chamber-pot into a flask of perfume.”

Flower

A flower, sometimes known as a bloom or blossom, is the reproductive structure found in flowering plants (plants of the division Magnoliophyta, also called angiosperms). The biological function of a flower is to mediate the union of male sperm with female ovum in order to produce seeds. The process begins with pollination, is followed by fertilization, leading to the formation and dispersal of the seeds. For the higher plants, seeds are the next generation, and serve as the primary means by which individuals of a species are dispersed across the landscape. The grouping of flowers on a plant is called the inflorescence.

In addition to serving as the reproductive organs of flowering plants, flowers have long been admired and used by humans, mainly to beautify their environment but also as a source of food.

Many flowers have important symbolic meanings in Western culture. The practice of assigning meanings to flowers is known as florigraphy. Some of the more common examples include:

- Red roses are given as a symbol of love, beauty, and passion.
- Poppies are a symbol of consolation in time of death. In the UK, New Zealand, Australia and Canada, red poppies are worn to commemorate soldiers who have died in times of war.
- Irises/Lily are used in burials as a symbol referring to “resurrection/life”. It is also associated with stars (sun) and its petals blooming/shining.
- Daisies are a symbol of innocence.

Flowers within art are also representative of the female genitalia, as seen in the works of artists such as Georgia O’Keeffe, Imogen Cunningham, Veronica Ruiz de Velasco, and Judy Chicago, and in fact in Asian and western classical art. Many cultures around the world have a marked tendency to associate flowers with femininity.

Because of their varied and colorful appearance, flowers have long been a favorite

Still Life

subject of visual artists as well. Some of the most celebrated paintings from well-known painters are of flowers, such as Van Gogh’s sunflowers series or Monet’s water lilies. Flowers are also dried, freeze dried and pressed in order to create permanent, three-dimensional pieces of flower art.

The Roman goddess of flowers, gardens, and the season of Spring is Flora. The Greek goddess of spring, flowers and nature is Chloris.

Still Life

A still life (plural still lifes is a work of art depicting mostly inanimate subject matter, typically commonplace objects which may be either natural (food, flowers, plants, rocks, or shells) or man-made (drinking glasses, books, vases, jewelry, coins, pipes, and so on) in an artificial setting. With origins in ancient times and most popular in Western art since the 17th century, still life paintings give the artist more leeway in the arrangement of design elements within a composition than do paintings of other types of subjects such as landscape or portraiture. Still life paintings, particularly before 1700, often contained religious and allegorical symbolism relating to the objects depicted. Some modern still life breaks the two-dimensional barrier and employs three-dimensional mixed media, and uses found objects, photography, computer graphics, as well as video and sound.

Still life paintings often adorn the interior of ancient Egyptian tombs. It was believed that food objects and other items depicted there would, in the afterlife, become real and available for use by the deceased. Ancient Greek vase paintings also demonstrate great skill in depicting everyday objects and animals. Similar still life, more simply decorative in intent, but with realistic perspective, have also been found in the Roman wall paintings and floor mosaics unearthed at Pompeii, Herculaneum and the Villa Boscoreale, including the later familiar motif of a glass bowl of fruit. Decorative mosaics termed “emblema”, found in the homes of rich Romans, demonstrated the range of food enjoyed by the upper classes, and also functioned as signs of hospitality and as celebrations of the seasons and of life. By the 16th century, food and flowers would again appear as symbols of the seasons and of the five senses. Also starting in Roman times is the tradition of the use of the skull in paintings as a symbol of mortality and earthly remains, often with the accompanying phrase *Omnia mors aequat* (Death makes all equal).

The popular appreciation of the realism of still life painting is related in the ancient Greek legend of Zeuxis and Parrhasius, who are said to have once competed to create the most life-like objects, history’s earliest descriptions of trompe l’oeil painting.] As Pliny the Elder recorded in ancient Roman times, Greek artists centuries earlier were already advanced in the arts of portrait painting and still life. He singled out Peiraikos, “whose artistry is surpassed by only a very few...

He painted barbershops and shoemakers’ stalls, donkeys, vegetables, and such, and for that reason came to be called the ‘painter of vulgar subjects’; yet these works are altogether delightful, and they were sold at higher prices than



the greatest [paintings] of many other artists.”

By 1300, starting with Giotto and his pupils, still life painting was revived in the form of fictional niches on religious wall paintings which depicted everyday objects. Through the Middle Ages and the Renaissance, still life in Western art remained primarily an adjunct to Christian religious subjects, and convened religious and allegorical meaning. This was particularly true in the work of Northern European artists, whose fascination with highly detailed optical realism and symbolism led them to lavish great attention on their paintings’ overall message.

The 16th century witnessed an explosion of interest in the natural world and the creation of lavish botanical encyclopedias recording the discoveries of the New World and Asia. It also prompted the beginning of scientific illustration and the classification of specimens. Natural objects began to be appreciated as individual objects of study apart from any religious or mythological associations. The early science of herbal remedies began at this time as well, a practical extension of this new knowledge. In addition, wealthy patrons began to underwrite the collection of animal and mineral specimens, creating extensive “curio cabinets”. These specimens served as models for painters who sought realism and novelty. Shells, insects, exotic fruits and flowers began to be collected and traded, and new plants such as the tulip (imported to Europe from Turkey), were celebrated in still life paintings. The horticultural explosion was of wide spread interest in Europe and artist capitalized on that to produce thousands of still life paintings. Some regions and courts had particular interests. The depiction of citrus, for example, was a particular passion of the Medici court in Florence, Italy. This great diffusion of natural specimens and the burgeoning interest in natural illustration throughout Europe, resulted in the nearly simultaneous creation of modern still life paintings around 1600.

By the second half of the 16th century, the

autonomous still life evolved. Gradually, religious content diminished in size and placement in these painting, though moral lessons continued as sub-contexts. An example is “The Butcher Shop” by Joachim Beuckelaer (1568), with its

realistic depiction of raw meats dominating the foreground, while a background scene conveys the dangers of drunkenness and lechery. Annibale Carracci’s treatment of the same subject in 1583 begins to remove the moral messages, as did other “kitchen and market” still life paintings of this period.

Even though Italian still life painting was gaining in popularity, it remained historically less respected than the “grand manner” painting of historical, religious, and mythic subjects. Prominent Academicians of the early 1600s, like Andrea Sacchi, felt that genre and still life painting did not carry the “gravitas” merited for painting to be considered great. On the other hand, successful Italian still life artists found ample patronage in their day. Furthermore, women painters, few as they were, commonly chose or were restricted to painting topics such as still life, Giovanna Garzoni, Laura Bernasconi, and Fede Galizia for example.

Many leading Italian artists in other genre, also produced some still life paintings. In particular, Caravaggio applied his influential form of naturalism to still life. His *Basket of Fruit* (c. 1595-1600) is one of the first examples of pure still life, precisely rendered and set at eye level. Though not overtly symbolic, this painting was owned by Cardinal Borromeo and may have been appreciated for both religious and aesthetic reasons. Jan Bruegel painted his *Large Milan Bouquet* (1606) for the cardinal, as well, claiming that he painted it ‘fatta tutti del naturel’ (made all from nature) and he charged extra for the extra effort. These were among many still life paintings in the cardinal’s collection, in addition to his large collection of curios.

The symbolism of flowers had evolved since early Christian days. The most common flowers and their symbolic meanings include: rose (Virgin Mary, transience, Venus, love); lily (Virgin Mary, virginity, female breast, purity of mind or justice); tulip (showiness, nobility); sunflower (faithfulness, divine love,

devotion); violet (modesty, reserve, humility); columbine (melancholy); poppy (power, sleep, death). As for insects, the butterfly represents transformation and resurrection while the dragonfly symbolizes transience and the ant hard

work and attention to the harvest.

Especially popular in this period were vanitas paintings, in which sumptuous arrangements of fruit and flowers, books, statuettes, vases, coins, jewelry, paintings, musical and scientific instruments, military insignia, fine silver and crystal, were accompanied by symbolic reminders of life’s impermanence. Additionally, a skull, an hourglass or pocket watch, a candle burning down or a book with pages turning, would serve as a moralizing message on the ephemerality of sensory pleasures. Often some of the fruits and flowers themselves would be shown starting to spoil or fade to emphasize the same point.

Another type of still life, known as “breakfast paintings”, represent both a literal presentation of delicacies that the upper class might enjoy and a religious reminder to avoid gluttony. In another Dutch innovation, around 1650 Samuel van Hoogstraten painted one of the first wall-rack pictures, *trompe l’oeil* still life paintings which feature objects tied, tacked or attached in some other fashion to a wall board, a type of still life very popular in the United States in the 19th century.

German still life followed closely the Dutch models. German painter Georg Flegel was a pioneer in pure still life without figures and created the compositional innovation of placing detailed objects in cabinets, cupboards, and display cases, and producing simultaneous multiple views. Still life painting in Spain, also called *bodegones*, was austere. It differed from Dutch still life, which often contained rich banquets surrounded by ornate and luxurious items of fabric or glass. The game in Spanish paintings is often plain dead animals still waiting to be skinned. The fruits and vegetables are uncooked. The backgrounds are bleak or plain wood geometric blocks, often creating a surrealist air. Even while both Dutch and Spanish still life often had an embedded moral purpose, the austerity, which some find akin to the bleakness of some of the Spanish plateaus, appears to reject the sensual pleasures,

plenitude, and luxury of Dutch still life paintings. In Southern Europe there is more employment of the soft naturalism of Caravaggio and less emphasis on hyper-realism in comparison with Northern European styles.

By the 18th century, in many cases, the religious and allegorical connotations of still life paintings were dropped and kitchen table paintings evolved into calculated depictions of varied color and form, displaying everyday foods. The French aristocracy employed artists to execute paintings of bounteous and extravagant still life subjects that graced their dining table, also without the moralistic vanitas message of their Dutch predecessors. The Rococo love of artifice led to a rise in appreciation in France for *trompe l’oeil* (French: “trick the eye”) painting.

When Neo-Classicism started to go into decline by the 1830’s, genre and portrait painting became the focus for the Realist and Romantic artistic revolutions. Many of the great artists of that period included still life in their body of work. The still life paintings of Francisco Goya, Gustave Courbet, and Eugène Delacroix convey a strong emotional current, and are less concerned with exactitude and more interested in mood. Though patterned on the earlier still life subjects of Chardin, Edouard Manet’s still life paintings are strongly tonal and clearly headed toward Impressionism.

However, it was not until the final decline of the Academic hierarchy in Europe, and the rise of the Impressionist and Post-Impressionist painters, that technique and color harmony triumphed over subject matter, and that still life was once again avidly practiced by artists. In his early still life, Claude Monet shows the influence of Fantin-Latour, but is one of the first to break the tradition of the dark background, which Pierre-Auguste Renoir also discards in *Still Life with Bouquet and Fan* (1871), with its bright orange background. With Impressionist still life, allegorical and mythological content is completely absent, as is meticulously detailed brush work. Impressionists instead focused on experimentation in broad, dabbing brush strokes, tonal values, and color placement. The Impressionists and Post-Impressionists were inspired by nature’s color schemes but reinterpreted nature with their own color harmonies, which sometimes proved startlingly unnaturalistic.

Paul Cézanne found in still life the perfect vehicle for his revolutionary explorations in geometric spatial organization. For Cézanne, still life was a primary means of taking painting away from an illustrative or mimetic function to one demonstrating independently the elements of color, form, and line, a major step towards Abstract art. Additionally, Cézanne’s experiments can be seen as leading directly to the development of Cubist still life in the early 20th century.

Adapting Cézanne’s shifting of planes and axes, the Cubists subdued the color palette of the Fauves and focused instead on deconstructing objects into pure

geometrical forms and planes. Between 1910 and 1920, Cubist artists like Pablo Picasso, Georges Braque, and Juan Gris painted many still life compositions, often including musical instruments, as well as creating the first Synthetic Cubist collage works, such as Picasso’s oval “Still Life with Chair Caning” (1912). In these works, still life objects overlap and intermingled barely maintaining identifiable two-dimensional forms, losing individual surface texture, and merging into the background-achieving goals nearly opposite to those of traditional still life. Rejecting the flattening of space by Cubists, Marcel Duchamp and other members of the Dada movement, went in a radically different direction, creating 3-D “ready-made” still life sculptures. As part of restoring some symbolic meaning to still life, the Futurists and the Surrealists placed recognizable still life objects in their dreamscapes. In Joan Miró’s still life paintings, objects appear weightless and float in lightly suggested two-dimensional space, and even mountains are drawn as simple lines. In Italy during this time, Giorgio Morandi was the foremost still life painter, exploring a wide variety of approaches to depicting everyday bottles and kitchen implements.

When 20th century American artists became aware of European Modernism, they began to interpret still life subjects with a combination of American realism and Cubist-derived abstraction. Typical of the American still life works of this period are the paintings of Georgia O’Keeffe, Stuart Davis, and Marsden Hartley, and the photographs of Edward Weston. O’Keeffe’s ultra-closeup flower paintings reveal both the physical structure and the emotional subtext of petals and leaves in an unprecedented manner.

Starting in the 1930’s, Abstract Expressionism severely reduced still life to raw depictions of form and color, until by the 1950’s, total abstraction dominated the art world. However, Pop Art in the 1960’s and 1970’s reversed the trend and created a new form of still life. Much Pop Art (such as Andy Warhol’s “Campbell’s Soup Cans”) is based on still life, but its true subject is most often the commodified image of the commercial product represented rather than the physical still life object itself. Roy Lichtenstein’s *Still Life with Goldfish Bowl* (1972) combines the pure colors of Matisse with the pop iconography of Warhol. The Neo-dada movement, including Jasper Johns, returned to Duchamp’s three-dimensional representation of everyday household objects to create their own brand of still life work, as in Johns’ *Painted Bronze* (1960) and *Fool’s House* (1962).

Pragmatism

Pragmatism is the philosophy where practical consequences and real effects are vital components of meaning and truth. Pragmatism began in the late nineteenth century with Charles Sanders Peirce and his pragmatic maxim. Through the early twentieth-century it was developed further in the works of William James, John Dewey and—in a more unorthodox manner—by George Santayana. Other important aspects of pragmatism include anti-Cartesianism, radical empiricism, instrumentalism, anti-realism, verificationism, conceptual relativity, a denial of the fact-value distinction, a high regard for science, and fallibilism.

Pragmatism enjoyed renewed attention from the 1960s on when a new analytic school of philosophy (W. V. O. Quine and Wilfrid Sellars) put forth a revised pragmatism criticizing the logical positivism dominant in the United States and Britain since the 1930s. Richard Rorty further developed and widely publicized the concept of naturalized epistemology; his later work grew closer to continental philosophy and is considered relativistic by its critics.

Contemporary pragmatism is divided into a strict analytic tradition, a more relativistic strand (in the wake of Rorty), and “neo-classical” pragmatism (such as Susan Haack) that adheres to the work of Peirce, James, and Dewey.

Origins

Pragmatism as a philosophical movement began in the United States in the late 1800s. Its overall direction was determined by the thought and works of Charles Sanders Peirce (pronounced /ˈpɜrs/ like “purse”) and William James (both members of The Metaphysical Club) as well as John Dewey and George Herbert Mead. The term pragmatism was first used in print by James, who credited Peirce with coining the term during the early 1870s. Prompted by James’ use of the term and its attribution to him, Peirce also wrote and lectured on pragmatism to make clear his own interpretation. Peirce eventually coined the new name pragmaticism to mark what he regarded as the original idea, for clarity’s sake and possibly (but not certainly) because he disagreed with James. He claimed the term was so ugly, nobody would be tempted to steal it.



Pragmatist epistemology

The epistemology of early pragmatism was heavily influenced by Charles Darwin. Pragmatism was not the first to apply evolution to theories of knowledge: Schopenhauer advocated a biological idealism as what’s useful to an organism to believe might differ wildly from what is true. Here knowledge and action are portrayed as two separate spheres with an absolute or transcendental truth above and beyond any sort of inquiry organisms use to cope with life. Pragmatism challenges this

idealism by providing an “ecological” account of knowledge: inquiry is how organisms can get a grip on their environment. Real and true are functional labels in inquiry and cannot be understood outside of this context. It is not realist in a traditionally robust sense of realism (what Hilary Putnam would later call metaphysical realism), but it is realist in how it acknowledges an external world which must be dealt with.

With the tendency of philosophers to group all views as either idealistic or realistic, (along with William James’ occasional penchant for eloquence at the expense of public understanding), pragmatism was seen as a form of subjectivism or idealism. Many of James’ best-turned phrases—truth’s cash value and the true is only the expedient in our way of thinking—were taken out of context and caricatured in contemporary literature as representing the view where any idea with practical utility is true.

In reality, James asserts, the theory is a great deal more subtle.

The role of belief in representing reality is widely debated in pragmatism. Is a belief valid when it represents reality? Copying is one (and only one) genuine mode of knowing. Are beliefs dispositions which qualify as true or false depending on how helpful they prove in inquiry and in action? Is it only in the struggle of intelligent organisms with the surrounding environment that beliefs acquire meaning? Does a belief only become true when it succeeds in this struggle? In Pragmatism nothing practical or useful is held to be necessarily true, nor is anything which helps to survive merely in the short term. For example, to believe my cheating spouse is faithful may help me feel better now, but it is certainly not useful from a more long-term perspective because it doesn’t accord with the facts (and is therefore not true).



William James

William James (January 11, 1842 - August 26, 1910) was a pioneering American psychologist and philosopher trained as a medical doctor. He wrote influential books on the young science of psychology, educational psychology, psychology of religious experience and mysticism, and the philosophy of pragmatism. He was the brother of novelist Henry James and of diarist Alice James.

William James was born at the Astor House in New York City. He was the son of Henry James Sr., an independently wealthy and notoriously eccentric Swedenborgian theologian well acquainted with the literary and intellectual elites of his day. The intellectual brilliance of the James family milieu and the remarkable epistolary talents of several of its members have made them a subject of continuing interest

to historians, biographers, and critics.

James interacted with a wide array of writers and scholars throughout his life, including his godfather Ralph Waldo Emerson, his godson William James Sidis, as well as Bertrand Russell, Horace Greeley, William Cullen Bryant, Oliver Wendell Holmes, Jr., Charles Peirce, Josiah Royce, George Santayana, Ernst Mach, John Dewey, Walter Lippmann, W. E. B. Du Bois, Helen Keller, Mark Twain, Horatio Alger, Jr., James George Frazer, Henri Bergson, H. G. Wells, G. K. Chesterton, Sigmund Freud, Gertrude Stein, and Carl Jung.

Epistemology

James defined true beliefs as those that prove useful to the believer. His pragmatic theory of truth was a synthesis of correspondence theory of truth and coherence theory of truth, with an added dimension. Truth is verifiable to the extent that thoughts and statements correspond with actual things, as well as the extent to which they “hang together,” or cohere, as pieces of a puzzle might fit together; these are in turn verified by the observed results of the application of an idea to actual practice.

“The most ancient parts of truth . . . also once were plastic. They also were called true for human reasons. They also mediated between still earlier truths and what in those days were novel observations. Purely objective truth, truth in whose establishment the function of giving human satisfaction in marrying previous parts of experience with newer parts played no role whatsoever, is nowhere to be found. The reasons why we call things true is the reason why they are true, for ‘to be true’ means only to perform this marriage-function,” he wrote.

James held a world view in line with pragmatism, declaring that the value of any truth was utterly dependent upon its use to the person who held it. Additional tenets of James’ s pragmatism include the view that the world is a mosaic of diverse experiences that can only be properly interpreted and understood through an application of “radical empiricism.” Radical empiricism, not related to the everyday scientific empiricism, asserts that the world and experience can never be halted for an entirely objective analysis, if nothing else the mind of the observer and simple act of observation will affect the outcome of any empirical approach to truth as the mind and its experiences, and nature are inseparable. James’ s emphasis on diversity as the default human condition – over and against duality, especially Hegelian dialectical duality – has maintained a strong influence in American culture, especially among liberals (see Richard Rorty). James’ s description of the mind-world connection, which he described in terms of a “stream of consciousness (psychology),” had a direct and significant impact on avant-garde and modernist literature and art.

In What Pragmatism Means, James writes that the central point of his own doctrine of truth is, in brief, that “Truths emerge from facts, but they dip forward into

facts again and add to them; which facts again create or reveal new truth (the word is indifferent) and so on indefinitely. The ‘facts’ themselves meanwhile are not true. They simply are. Truth is the function of the beliefs that start and terminate among them.” Richard Rorty claims that James did not mean to give a theory of truth with this statement and that we should not regard it as such. However, other pragmatism scholars such as Susan Haack and Howard Mounce do not share Rorty’s instrumentalist interpretation of James.

In The Meaning of Truth, James seems to speaks of truth in relativistic terms:

“The critic’s [sc., the critic of pragmatism] trouble...seems to come from his taking the word ‘true’ irrelatively, whereas the pragmatist always means ‘true for him who experiences the workings.’ ”

However, James responded to critics accusing him of relativism, scepticism or agnosticism, and of believing only in relative truths. To the contrary, he supported an epistemological realism position.



Charles Sanders Peirce

Charles Sanders Peirce (pronounced /ˈpɜrs/ purse) (September 10, 1839 - April 19, 1914) was an American logician, mathematician, philosopher, and scientist, born in Cambridge, Massachusetts. Peirce was educated as a chemist and employed as a scientist for 30 years. It is largely his contributions to logic, mathematics, philosophy, and semiotics (and his founding of pragmatism) that are appreciated today. In 1934, the philosopher Paul Weiss called Peirce “the most original and versatile of American philosophers and America’s greatest logician”.

An innovator in mathematics, statistics, research methodology, philosophy of science, epistemology, and metaphysics, Peirce considered himself a logician first and foremost. He made major contributions to logic, but “logic” for him encompassed much of that which is now called epistemology and philosophy of science. He saw logic, in turn, as the formal branch of semiotics, of which he is a founder. As early as 1886 he saw that logical operations could be carried out by electrical switching circuits, an idea used decades later to produce digital computers.

Reception

Bertrand Russell opined, “Beyond doubt [...] he was one of the most original minds of the later nineteenth century, and certainly the greatest American thinker ever.” (His Principia Mathematica does not mention



Peirce, but Peirce’s work was not widely known until after this was written.) A. N. Whitehead, while reading some of Peirce’s unpublished manuscripts soon after arriving at Harvard in 1924, was struck by how Peirce had anticipated his own “process” thinking. Karl Popper viewed Peirce as “one of the greatest philosophers of all times”. Nevertheless, Peirce’s accomplishments were not immediately recognized. His imposing contemporaries William James and Josiah Royce admired him, and Cassius Jackson Keyser at Columbia and C. K. Ogden wrote about Peirce with respect, but to no immediate effect.

The first scholar to give Peirce his considered professional attention was Royce’s student Morris Raphael Cohen, the editor of a 1923 anthology of Peirce’s writings titled Chance, Love, and Logic and the author of the first bibliography of Peirce’s scattered writings. John Dewey had had Peirce as an instructor at Johns Hopkins, and from 1916 onwards, Dewey’s writings repeatedly mention Peirce with deference. His 1938 Logic: The Theory of Inquiry is Peircean through and through. The publication of the first six volumes of the Collected Papers (1931-35), the most important event to date in Peirce studies and one Cohen made possible by raising the needed funds, did not lead to an immediate outpouring of secondary studies. The editors of those volumes, Charles Hartshorne and Paul Weiss, did not become Peirce specialists. Early landmarks of the secondary literature include the monographs by Buchler (1939), Feibleman (1946), and Goudge (1950), the 1941 Ph.D. thesis by Arthur W. Burks (who went on to edit volumes 7 and 8 of the Collected Papers), and the edited volume Wiener and Young (1952). The Charles S. Peirce Society was founded in 1946. Its Transactions, an academic journal specializing in Peirce, pragmatism, and American philosophy, has appeared since 1965.

In 1949, while doing unrelated archival work, the historian of mathematics Carolyn Eisele (1902-2000) chanced on an autograph letter by Peirce. Thus began her 40 years of research on Peirce the mathematician and scientist, culminating in Eisele (1976, 1979, 1985). Beginning around 1960, the philosopher and historian of ideas Max Fisch (1900-1995) emerged as an authority on Peirce; Fisch (1986) reprints many of the relevant articles, including a wide-ranging survey of the

impact of Peirce’s thought through 1983.

Peirce has come to enjoy a significant international following. There are university research centers devoted to Peirce studies and pragmatism in Brazil, Finland, Germany, France, Spain, and Italy. His writings have been translated into several languages, including German, French, Finnish, Spanish, and Swedish. Since 1950, there have been French, Italian, Spanish and British Peirceans of note. For many years, the North American philosophy department most devoted to Peirce was the University of Toronto’s, thanks in good part to the leadership of Thomas Goudge and David Savan. In recent years, American Peirce scholars have clustered at Indiana University – Purdue University Indianapolis, the home of the Peirce Edition Project, and the Pennsylvania State University.

Principia Mathematica

The Principia Mathematica is a 3-volume work on the foundations of mathematics, written by Alfred North Whitehead and Bertrand Russell and published in 1910, 1912 & 1913. It is an attempt to derive all mathematical truths from a well-defined set of axioms and inference rules in symbolic logic. One of the main inspirations and motivations for the Principia was Frege’s earlier work on logic, which had led to paradoxes discovered by Russell. These were avoided in the Principia by building an elaborate system of types: a set of elements is of a different type than is each of its elements (set is not the element; one element is not the set) and one cannot speak of the “set of all sets” and similar constructs, which lead to paradoxes (see Russell’s paradox).

The Principia is widely considered by specialists in the subject to be one of the most important and seminal works in mathematical logic and philosophy since Aristotle’s Organon. The Modern Library placed it 23rd in a list of the top 100 English-language nonfiction books of the twentieth century.

Scope of foundations laid

The Principia covered only set theory, cardinal numbers, ordinal numbers, and real numbers. Deeper theorems from real analysis were not included, but by the end of the third volume it was clear to experts that a large amount of known mathematics could in principle be developed in the adopted formalism. It was also clear how lengthy such a development would be.

A fourth volume on the foundations of geometry had been planned, but the authors admitted to intellectual exhaustion upon completion of the third.

Consistency and criticisms

The questions remained:

- whether a contradiction could be derived from the Principia’s axioms (the question of inconsistency), and
- whether there exists a mathematical statement which could neither be proven nor disproven in the system (the question of completeness).

Propositional logic itself was known to be both consistent and complete, but the same had not been established for Principia’s axioms of set theory. (See Hilbert’s second problem.) Gödel’s incompleteness theorems cast unexpected light on these two related questions.

Gödel’s first incompleteness theorem showed that Principia could not be both consistent and complete. According to the theorem, for every sufficiently powerful logical system (such as Principia), there exists a statement G that essentially reads, “The statement G cannot be proved.” Such a statement is a sort of Catch-22: if G is provable, then it is false, and the system is therefore inconsistent; and if G is not provable, then it is true, and the system is therefore incomplete.

Gödel’s second incompleteness theorem shows that no formal system extending basic arithmetic can be used to prove its own consistency. Thus, the statement “there are no contradictions in the Principia system” cannot be proven in the Principia system unless there are contradictions in the system (in which case it can be proven both true and false).

Wittgenstein (e.g. in his Lectures on the Foundations of Mathematics, Cambridge 1939) criticised Principia on various grounds, such as:

- It purports to reveal the fundamental basis for arithmetic. However, it is our everyday arithmetical practices such as counting which are fundamental; for if a persistent discrepancy arose between counting and Principia, this would be treated as evidence of an error in Principia (e.g. that Principia did not characterize numbers or addition correctly), not as evidence of an error in everyday counting.
- The calculating methods in Principia can only be used in practice with very small numbers. To calculate using large numbers (e.g. billions), the formulae would become too long, and some short-cut method would have to be used, which would no doubt rely on everyday techniques such as counting (or else on non-fundamental – and hence questionable – methods such as induction). So again Principia depends on everyday techniques, not vice versa.

However Wittgenstein did concede that Principia may nonetheless make some aspects of everyday arithmetic clearer.

Gödel’s Incompleteness Theorems

In mathematical logic, Gödel’s incompleteness theorems, proved by Kurt Gödel in 1931, are two theorems stating inherent limitations of all but the most trivial formal systems for arithmetic of mathematical interest. The theorems are

of considerable importance to the philosophy of mathematics. They are widely regarded as showing that Hilbert’s program to find a complete and consistent set of axioms for all of mathematics is impossible, thus giving a negative answer to Hilbert’s second problem.

Background

In mathematical logic, a theory is a set of sentences expressed in a formal language. Some statements in a theory are included without proof (these are the axioms of the theory), and others (the theorems) are included because they are implied by the axioms.

Because statements of a formal theory are written in symbolic form, it is possible to mechanically verify that a formal proof from a finite set of axioms is valid. This task, known as automatic proof verification, is closely related to automated theorem proving; the difference is that instead of constructing a new proof, the proof verifier simply checks that a provided formal proof (or, in some cases, instructions that can be followed to create a formal proof) is correct. This is not merely hypothetical; systems such as Isabelle are used today to formalize proofs and then check their validity.

Many theories of interest include an infinite set of axioms, however. To verify a formal proof when the set of axioms is infinite, it must be possible to determine whether a statement that is claimed to be an axiom is actually an axiom. This issue arises in first order theories of arithmetic, such as Peano arithmetic, because the principle of mathematical induction is expressed as an infinite set of axioms (an axiom schema).

A formal theory is said to be effectively generated if its set of axioms is a recursively enumerable set. This means that there is a computer program that, in principle, could enumerate all the axioms of the theory without listing any statements that are not axioms. This is equivalent to the ability to enumerate all the theorems of the theory without enumerating any statements that are not theorems. For example, each of the theories of Peano arithmetic and Zermelo-Fraenkel set theory has an infinite number of axioms and each is effectively generated.

In choosing a set of axioms, one goal is to be able to prove as many correct results as possible, without proving any incorrect results. A set of axioms is complete if, for any statement in the axioms’ language, either that statement or its negation is provable from the axioms. A set of axioms is (simply) consistent if there is no statement so that both the statement and its negation are provable from the axioms. In the standard system of first-order logic, an inconsistent set of axioms will prove every statement in its language (this is sometimes called the principle of explosion), and is thus automatically complete. A set of axioms that is both complete and consistent, however, proves a maximal set of non-contradictory theorems. Gödel’s incompleteness theorems show that in certain cases it is not possible to obtain an effectively generated, complete, consistent theory.

Formal Language

A formal language is a set of words, i.e. finite strings of letters, or symbols. The inventory from which these letters are taken is called the alphabet over which the language is defined. A formal language is often defined by means of a formal grammar. Formal languages are a purely syntactical notion, so there is not necessarily any meaning associated with them. To distinguish the words that belong to a language from arbitrary words over its alphabet, the former are sometimes called well-formed words (or, in their application in logic, well-formed formulas).

Formal languages are studied in the fields of logic, computer science and linguistics. Their most important practical appli-



cation is for the precise definition of syntactically correct programs for a programming language. The branch of mathematics and computer science that is concerned only with the purely syntactical aspects of such languages, i.e. their internal structural patterns, is known as formal language theory.

Although it is not formally part of the language, the words of a formal language often have a semantic dimension as well. In practice this is always tied very closely to the structure of the language, and a formal grammar (a set of formation rules that recursively describes the language) can help to deal with the meaning of (well-formed) words. Well-known examples for this are “Tarski’s definition of truth” in terms of a T-schema for first-order logic, and compiler generators like lex and yacc.

Set (mathematics)

A set is a collection of distinct objects, considered as an object in its own right. Sets are one of the most fundamental concepts in mathematics. Although it was invented at the end of the 19th century, set theory is now a ubiquitous part of mathematics, and can be used as a foundation from which nearly all of mathematics can be derived. In mathematics education, elementary topics such as Venn diagrams are taught at a young age, while more advanced concepts are taught as part of a university degree.

Naive Set Theory

Naive set theory is one of several theories of sets used in the discussion of the foundations of mathematics. The informal content of this naive set theory supports both the aspects of mathematical sets familiar in discrete mathematics (for example Venn diagrams and symbolic reasoning about their Boolean algebra), and the everyday usage of set theory concepts in most contemporary mathematics.

Sets are of great importance in mathematics; in fact, in modern formal treatments, most mathematical objects (numbers, relations, functions, etc.) are defined in terms of sets. Naive set theory can be seen

as a stepping-stone to more formal treatments, and suffices for many purposes.

Requirements

In the sense of this article, a naive theory is a non-formalized theory, that is, a theory that uses a natural language to describe sets. The words and, or, if ... then, not, for some, for every are not subject to rigorous definition. It is useful to study sets naively at an early stage of mathematics in order to develop facility for working with them. Furthermore, a firm grasp of set theoretical concepts from a naive standpoint is important as a first stage in understanding the motivation for the formal axioms of set theory.

This article develops a naive theory. Sets are defined informally and a few of their properties are investigated. Links in this article to specific axioms of set theory describe some of the relationships between the informal discussion here and the formal axiomatization of set theory, but no attempt is made to justify every statement on such a basis. The first development of set theory was a naive set theory. It was created at the end of the 19th century by Georg Cantor as part of his study of infinite sets.

As it turned out, assuming that one can perform any operations on sets without restriction leads to paradoxes such as Russell’s paradox and Berry’s paradox. Some believe that Georg Cantor’s set theory was not actually implicated by these paradoxes (see Frápolli 1991); one difficulty in determining this with certainty is that Cantor did not provide an axiomatization of his system. It is undisputed that, by 1900, Cantor was aware of some of the paradoxes and did not believe that they discredited his theory. Frege did explicitly axiomatize a theory, in which the formalized version of naive set theory can be interpreted, and it is this formal theory which Bertrand Russell actually addressed when he presented his paradox.

Axiomatic set theory was developed in response to these early attempts to study set theory, with the goal of determining precisely what operations were allowed and when. Today, when mathematicians talk about “set theory” as a field, they usually mean axiomatic set theory. Informal applications of set theory in other fields are sometimes referred to as applications of “naive set theory”, but usually are understood to be justifiable in terms of an axiomatic system (normally the Zermelo-Fraenkel set theory).

A naive set theory is not necessarily inconsistent, if it correctly specifies the sets allowed to be considered. This can be done by the means of definitions, which are implicit axioms. It can be done by systematically making explicit all the axioms, as in the case of the well-known book Naive Set Theory by Paul Halmos, which is actually a somewhat (not all that) informal presentation of the usual axiomatic Zermelo-Fraenkel set theory. It is ‘naive’ in that the language and notations are those of ordinary informal mathematics, and in that it doesn’t deal with consistency or completeness of

the axiom system. However, the term naive set theory is also used in some literature to refer to the set theories studied by Frege and Cantor, rather than to the informal counterparts of modern axiomatic set theory; care is required to tell which sense is intended.

Infinite Set

In set theory, an infinite set is a set that is not a finite set. Infinite sets may be countable or uncountable. Some examples are:

- the set of all integers, {..., −1, 0, 1, 2, ...}, is a countably infinite set; and
- the set of all real numbers is an uncountably infinite set.

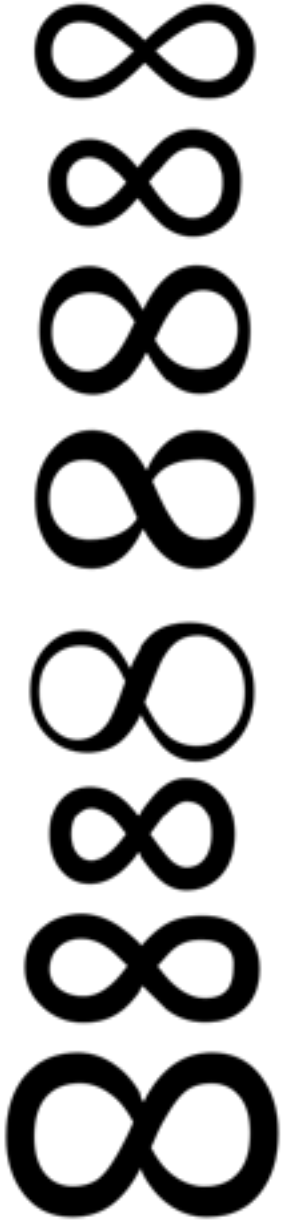
Properties

The set of natural numbers (whose existence is assured by the axiom of infinity) is infinite. It is the only set which is directly required by the axioms to be infinite. The existence of any other infinite set can be proved in ZFC only by showing that it follows from the existence of the natural numbers.

A set is infinite if and only if for every natural number the set has a subset whose cardinality is that natural number.

If the axiom of choice holds, then a set is infinite if and only if it includes a countable infinite subset.

If a set of sets is infinite or contains an infinite element, then its union is infinite. The powerset of



an infinite set is infinite. Any superset of an infinite set is infinite. If an infinite set is partitioned into finitely many subsets, then at least one of them must be infinite. Any set which can be mapped onto an infinite set is infinite. The Cartesian product of an infinite set and a nonempty set is infinite. The Cartesian

product of an infinite number of sets each containing at least two elements is either empty or infinite; if the axiom of choice holds, then it is infinite.

If an infinite set is well-ordered, then it must have a nonempty subset which has no greatest element.

In ZF, a set is infinite if and only if the powerset of its powerset is a Dedekind-infinite set, having a proper subset equinumerous to itself. If the axiom of choice is also true, infinite sets are precisely the Dedekind-infinite sets.

If an infinite set is well-orderable, then it has many well-orderings which are non-isomorphic.

Infinity

Infinity (symbolically represented by ∞) refers to several distinct concepts - usually linked to the idea of “without end” - which arise in philosophy, mathematics, and theology. The word comes from the Latin infinitas or “unboundedness.”

In mathematics, “infinity” is often used in contexts where it is treated as if it were a number (i.e., it counts or measures things: “an infinite number of terms”) but it is a different type of “number” from the real numbers. Infinity is related to limits, aleph numbers, classes in set theory, Dedekind-infinite sets, large cardinals, Russell’s paradox, non-standard arithmetic, hyperreal numbers, projective geometry, extended real numbers and the absolute Infinite.

The infinity symbol

The precise origin of the infinity symbol, ∞fty, is unclear. One possibility is suggested by the name it is sometimes called- the lemniscate, from the Latin lemniscus, meaning “ribbon”.

John Wallis is usually credited with introducing ∞fty as a symbol for infinity in 1655 in his De sectionibus conicis. One conjecture about why he chose this symbol is that he derived it from a Roman numeral for 1000 that was in turn derived from the Etruscan numeral for 1000, which looked somewhat like CIO and was sometimes used to mean “many.” Another conjecture is that he derived it from the Greek letter ω (omega), the last letter in the Greek alphabet. Also, before typesetting machines were invented, ∞ was easily made in printing by typesetting an 8 type on its side.

The infinity symbol is available in standard HTML as ∞ and in LaTeX as ∞fty. In Unicode, it is the character at code point U+221E (∞), or 8734 in decimal notation.

Early Indian views of infinity

The Isha Upanishad of the Yajurveda (c. 4th to 3rd century BC) states that “if you remove a part from infinity or add a part to infinity, still what remains is infinity”.

Pūrṇam adah̐ pūrṇam
idam Pūrṇāt pūrṇam
udacyate Pūrṇasya
pūrṇam ādāya Pūrṇam
evāvasīsyate.

That is whole, this is whole
From the whole, the whole arises
When the whole is taken from
the whole
The whole still will remain



Attention-Deficit Hyperactivity Disorder

Attention-deficit/hyperactivity disorder (ADHD or AD/HD) is a neurobehavioral developmental disorder. ADHD is primarily characterized by “the co-existence of attentional problems and hyperactivity, with each behavior occurring infrequently alone.” While symptoms may appear to be innocent and merely annoying nuisances to observers, “if left untreated, the persistent and pervasive effects of ADHD symptoms can insidiously and severely interfere with one’s ability to get the most out of education, fulfill one’s potential in the workplace, establish and maintain interpersonal relationships, and maintain a generally positive sense of self.”

ADHD is the most commonly studied and diagnosed psychiatric disorder in children, affecting about 3 to 5% of children globally with symptoms starting before seven years of age. ADHD is a common chronic disorder in children with 30 to 50% of those individuals diagnosed in childhood continuing to have symptoms into adulthood. Adolescents and adults with ADHD tend to develop coping mechanisms to compensate for some or all of their impairments. However, many aspects of daily life that most people take for granted are rendered more difficult by the symptoms of ADHD.

Though previously regarded as a childhood diagnosis, ADHD can continue throughout adulthood. 4.7 percent of American adults are estimated to live with ADHD. ADHD is diagnosed twice to four times as frequently in boys as in girls, though studies suggest this discrepancy may be due to subjective bias of referring teachers. ADHD management usually involves some combination of medications, behavior modifications, lifestyle changes, and counseling. Its symptoms can be difficult to differentiate from other psychiatric or other disorders, increasing the likelihood that the diagnosis of ADHD will be missed. Additionally, most clinicians have not received formal training in the assessment and treatment of ADHD, particularly in adult patients.

ADHD and its diagnosis and treatment have been considered controversial since the 1970s. The controversies have involved clinicians, teachers, policymakers, parents and the media. Opinions regarding ADHD range from not believing it exists at all to believing there are genetic and physiological bases for the condition as well as disagreement about the use of stimulant medications in treatment. Most healthcare providers accept that ADHD is a genuine disorder with debate in the scientific community centering mainly around how it is diagnosed and treated.

Symptoms

Inattention, hyperactivity, and impulsivity are the key behaviors of ADHD. The symptoms of ADHD are especially difficult to define because it is hard to draw the line at where normal levels of inattention, hyperactivity, and impulsivity end and clinically significant levels requiring intervention begin. In children with ADHD, these behaviors are

more severe and occur more often. To be diagnosed with the disorder, a child must have symptoms for 6 or more months and to a degree that is greater than other children of the same age

The symptom categories of ADHD in children yield three potential classifications of ADHD—predominantly inattentive type, predominantly hyperactive-impulsive type, or combined type if criteria for both subtypes are met:

Predominantly inattentive type symptoms may include:

- Be easily distracted, miss details, forget things, and frequently switch from one activity to another
- Have difficulty focusing on one thing
- Become bored with a task after only a few minutes, unless they are doing something enjoyable
- Have difficulty focusing attention on organizing and completing a task or learning something new
- Have trouble completing or turning in homework assignments, often losing things (e.g., pencils, toys, assignments) needed to complete tasks or activities
- Not seem to listen when spoken to
- Daydream, become easily confused, and move slowly
- Have difficulty processing information as quickly and accurately as others
- Struggle to follow instructions.

Predominantly hyperactive-impulsive type symptoms may include:

- Fidget and squirm in their seats
- Talk nonstop
- Dash around, touching or playing with anything and everything in sight
- Have trouble sitting still during dinner, school, and story time
- Be constantly in motion
- Have difficulty doing quiet tasks or activities.

and also these manifestations primarily of impulsivity:

- Be very impatient
- Blur out inappropriate comments, show their emotions without restraint, and act without regard for consequences
- Have difficulty waiting for things they want or waiting their turns in games

Most people exhibit some of these behaviors, but not to the degree where such behaviors significantly interfere with a person’s work, relationships, or studies. The core impairments are consistent even in different cultural contexts.

Symptoms may persist into adulthood for well over half of children diagnosed with ADHD. Estimating this is difficult as there are no official diagnostic criteria for ADHD in adults.

A 2009 study found that children with ADHD move around a lot because it helps them stay alert enough to complete challenging tasks.

Evolutionary theories

The hunter vs. farmer theory is a hypothesis proposed by author Thom Hartmann about the origins of ADHD. The theory proposes that hyperactivity may be an adaptive behavior in pre modern humans. And that those with ADHD retain some of the older “hunter” characteristics associated with early pre-agricultural human society. According to this theory, individuals with ADHD may be more adept at searching and seeking and less adept at staying put and managing complex tasks over time. Further evidence showing hyperactivity may be evolutionarily beneficial

was put forth in 2006 in a study which found it may carry specific benefits for a society.

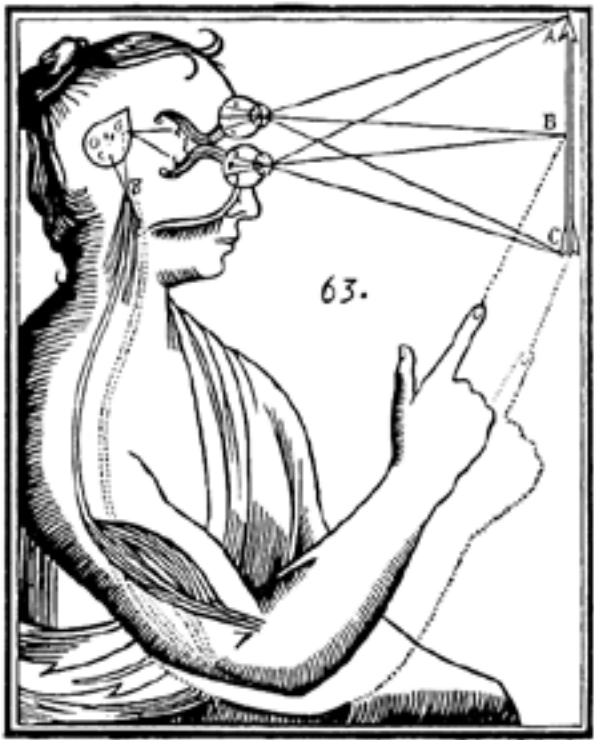
History

Hyperactivity has long been part of the human condition. Sir Alexander Crichton describes “mental restlessness” in his 1798 book. The terminology used to describe the symptoms of ADHD has gone through many changes over history including: “minimal brain damage”, “minimal brain dysfunction”, “learning/behavioral disabilities” and “hyperactivity”. In the DSM-II (1968) it was the “Hyperkinetic Reaction of Childhood”. In the DSM-III “ADD (Attention-Deficit Disorder) with or without hyperactivity” was introduced. In 1987 this was changed to ADHD in the DSM-III-R and subsequent editions. The use of stimulants to treat ADHD was first described in 1937.

Hunter vs. Farmer Theory

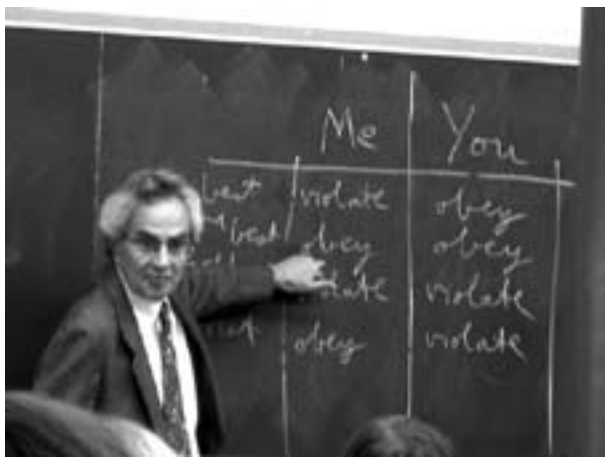
The hunter vs. farmer theory is a hypothesis proposed by Thom Hartmann about the origins of attention-deficit hyperactivity disorder (ADHD) and adult attention-deficit disorder (AADD), that these conditions may be a result of a form of adaptive behavior. Hartmann notes that most or all humans were nomadic hunter gatherers for many thousands of years, but that this standard gradually changed as agriculture developed in most societies, and more people worldwide became farmers. Over many years, most humans adapted to farming cultures, but people with ADHD retained some of the older hunter characteristics. A key component of the theory is that the proposed “hyperfocus” aspect of ADHD is a gift or benefit. The theory also explains the distractibility factor in ADHD individuals and their short attention span, along with various other characteristics, such as apathy towards social norms, poor planning and organizing ability, distorted sense of

as the formal school classroom.” However, one study showed that inattention and hyperactivity appear to be at least as problematic at home as at school. Hartmann, the originator of the theory, has stated that the hunter vs. farmer idea was intended as a mental model after his own son was diagnosed with ADHD, stating, “It’s not hard science, and was never intended to be,” while acknowledging that some researchers are now using the hunter vs. farmer



idea as a working hypothesis about the origin of ADHD.

Harpending and Cochran offer a three-phase view of history that includes hunter-gathering, female farming, and then intensive agriculture; they suggest the hypothesis that ADHD increased reproductive fitness in the second phase. An important view, with considerable genetic backing, is that some of these genetic variants may have value in certain kinds of social groups, such as those that have migrated. Genetic variants conferring susceptibility to ADHD are very



time, impatience, and impulsiveness. It is argued that in the hunter-gatherer cultures that preceded farming societies, hunters (presumably mostly men) needed hyperfocus more than gatherers (presumably mostly women). Hartmann speculates that this gender difference is reflected in the fact that ADHD is diagnosed in over twice as many boys as girls.

Science and the hunter vs. farmer theory

The hunter vs. farmer theory proposes that the high frequency of ADHD in contemporary settings “represents otherwise normal behavioral strategies that become maladaptive in such evolutionarily novel environments

frequent-implying that the trait had provided selective advantage in the past.

According to evolutionary anthropologist Ben Campbell of the University of Wisconsin-Madison, studies of the Ariaal, an isolated nomadic group in Kenya, suggest that impulsivity—a key trait of ADHD—has distinct advantages to nomadic peoples.

Hyperfocus

Hyperfocus is an intense form of mental concentration or visualization that focuses consciousness on a narrow subject, separate from objective reality and onto subjective mental planes, daydreams, concepts, fiction, the imagination, and other objects of the mind.

Interpretations

Interpretations vary widely, and there is no consensus among professionals.

In common parlance, hyperfocus is sometimes referred to as “zoning out.” When used to positive effect, it may also be accurately described as an exceptionally intense capacity to “zone in” on a specific thing, blocking out potential distractions at a greater level than is common for most people. When they “zone out” they can paint

that are objects of the mind. The incredible precision of mathematical expression permits a vast applicability of mental abstractions to real life situations.

Many more mathematical formulas describe shapes that are unfamiliar, or do not necessarily correspond to objects in the real world. For example, the Klein bottle, is a one-sided, sealed surface with no inside or outside (in other words, it is the three-dimensional equivalent of the Möbius strip) Such objects can be represented by twisting and cutting or taping pieces of paper together, as well as by computer simulations. To hold them in the imagination, abstractions such as extra or fewer dimensions are necessary.

Philosophy of mind

In philosophy, mind-body dualism is the doctrine that mental activities exist apart from the physical body. In The Concept of Mind, Gilbert Ryle characterizes the mind in relation to the body as the ghost in the machine, contrary to the argument posited by René Descartes in Meditations on First Philosophy. The ‘ghost’ is the imagined identity of the bodily ‘machine,’ which, Ryle argues, consists of individual parts none of which is the purposed identity.

In the argument of Descartes, the mind is held to be real because personal identity cannot be a deception. Ryle compares individual identity to a university. A university is composed of many buildings and offices, but none of them is the university. Similarly, an individual person is composed of limbs and a torso and a head, but none of these pieces is the person’s identity. Identity may be located in the brain, or it may not be. Individual identity is like collective identity in the respect that it follows by some association, but not necessarily by sequence. On the other hand, identity may begin as a consequent and become antecedent to further inclusions of individuals.

Ghost in the Machine

The “ghost in the machine” is British philosopher Gilbert Ryle’s derogatory description of René Descartes’ mind-body dualism. The phrase was introduced in Ryle’s book The Concept of Mind (1949) to highlight the perceived absurdity of dualist systems like Descartes’ where mental activity carries on in parallel to physical action, but where their means of interaction are unknown or, at best, speculative.

Much of the following material is from Arthur Koestler’s discussion in his 1967 book, The Ghost in the Machine, which takes Ryle’s phrase as its title. The book’s main focus is mankind’s movement towards self-destruction, particularly in the nuclear arms arena. It is particularly critical of B. F. Skinner’s behaviourist theory. One of the book’s central concepts is that as the human brain has grown, it has built upon earlier, more primitive brain structures, and that these are the “ghost in the machine” of the title. Koestler’s theory is that at times these structures can overpower higher logical functions, and are

Object of the Mind

An object of the mind is an object which exists in the imagination, but can only be represented or modeled in the real world. Some such objects are mathematical abstractions, literary concepts, or fictional scenarios.

Closely related are intentional objects, what thoughts and feelings are about, even if they are not about anything real (such as thoughts about unicorns, or feeling of apprehension about a dental appointment which is subsequently cancelled). However, intentional objects can coincide with real objects (as in thoughts about horses, or a feeling of regret about a missed appointment).

Mathematical objects

Mathematics and geometry describe abstract objects that sometimes correspond to familiar shapes, and sometimes do not. Circles, triangles, rectangles, and so forth describe two-dimensional shapes that are often found in the real world. However, mathematical formulas do not describe individual physical circles, triangles, or rectangles. They describe ideal shapes

responsible for hate, anger and other such destructive impulses.

Category mistakes

Ryle’ s philosophical argu- ments in his essay largely consist of the suggestion that to speak of mind and body as a substance, as a dualist does, is to commit a Category-mistake. Ryle attempts to prove that the official doctrine is entirely false, not in detail but in principle, by asserting that it arises out of incorrectly confusing two logical-types, or categories, as being com- patible; it represents the facts of mental life as if they belonged to one logi- cal type/category, when they actually belong to another. The dogma is therefore a philosopher’ s myth.

Category mistakes such as the ones Ryle makes note of are made by people who do not know how to properly wield the concepts with which they are working. Their puzzles arise from the inability to use certain items in human language. The theoretic- ally interesting category mistakes are those made by people who are perfectly competent to apply concepts, at least in the situations with which they are famil- iar, but are still liable in their abstract thinking to relocate those concepts to logical types to which they do not belong.

One paradigm set forth by Ryle that acts as an exemplary of an archetypal category mistake, is that of a foreign student vis- iting a university. As the student is shown the various campuses, buildings, librari- es, fields, et cetera, the student asks, “But where is the university?” This is to equate the level of exist- ence of the university with that of buildings, librari- es, and campuses. However, the being of the university exists above such a level, as an encompassing whole or essence of such things, extending beyond mere plants and buildings (to include staff, students, curricula, etc.), and not among them (i.e., on the same categori- cal level).

The dualist doctrine establishes a polar opposi- tion between mind and body. At the language level, the mental properties are logical negations (in Aristotelian sense) of the physical prop- erties. So they belong, in accordance with the concept of category, to the same logi- cal types, given that the expressions that are used for the descriptions of men- tal events are always mere negatives of the expressions used for the descriptions of material events. Ryle then says that such use implies a ‘categorical mistake’ for the descriptions of mental events that do not properly belong to the cat- egories used for describing the corporeal events. Hence, ‘mind’ and ‘matter’ can- not be the polar opposites that Dualism suggests. Ryle writes that this would be comparable to claiming that “She came home in floods of tears” and “She came home in a sedan chair” (from the sentence “She came home in floods of tears and a sedan chair”) to be polar oppo- sites. Such mistakes turned out to be, from the Rylean standpoint, the dogma of the mental ghost in the corpo- real machine. Then, dualist doctrines are mythic in an analytical sense.

Dualism

Dualism (philosophy of mind)

In philosophy of mind, dual- ism is a set of views about the relationship between mind and matter, which begins with the claim that men- tal phenomena are, in some respects, non-physical.

Ideas on mind/body dual- ism originate at least as far back as Zarathushtra. Plato and Aristotle deal with speculations as to the existence of an incorporeal soul that bore the faculties of intelligence and wisdom. They maintained, for differ- ent reasons, that people’ s “intelligence” (a faculty of the mind or soul) could not be identified with, or explained in terms of, their physical body.

A generally well-known version of dualism is attributed to René Descartes (1641), which holds that the mind is a nonphysical sub- stance. Descartes was the first to clearly identify the mind with consciousness and self-awareness and to distinguish this from the brain, which was the seat of intelligence. Hence, he was the first to formulate the mind-body problem in the form in which it exists today. Dualism is contrasted with various kinds of monism, including physicalism and phenomenalism. Substance dualism is contrasted with all forms of materialism, but property dualism may be considered a form of emer- gent materialism and thus would only be contrasted with non-emergent material- ism. This article discusses the various forms of dual- ism and the arguments which have been made both for and against this thesis.

Types of mind-body dualism
Ontological dualism makes dual commitments about the nature of existence as it relates to mind and mat- ter, and can be divided into three different types:

- (1) Substance dualism asserts that mind and matter are fun- damentally distinct kinds of substances.
- (2) Property dualism suggests that the ontological distinction lies in the differences between properties of mind and matter (as in emergentism).
- (3) Predicate dualism claims the irreducibility of mental predicates to physical predicates.



Subjective argument in support of dualism

A very important argument against physicalism (and hence in favor of some sort of dualism) consists in the idea that the mental and the physical seem to have quite different and perhaps irrec- oncilable properties.

Mental events have a cer- tain subjective quality to them, whereas physical seem not to. So, for example, one may ask what a burned fin- ger feels like, or what the blueness of the sky looks like, or what nice music sounds like.

Mary’s Room

Philosophers of mind call the subjective aspects of mental events qualia (or raw feels). There is something that it’ s like to feel pain, to see a familiar shade of blue, and so on. There are qualia involved in these mental events. And the claim is that qualia seem particu- larly difficult to reduce to anything physical.

Thomas Nagel, himself a physicalist, first character- ized the problem of qualia for physicalistic monism in his article, “What is it like to be a bat?”. Nagel argued that even if we knew everything there was to know from a third-person, sci- entific perspective about a bat’ s sonar system, we still wouldn’ t know what it is like to be a bat.

Frank Jackson formulated his famous knowledge argument based upon similar consid- erations. In this thought experiment, known as Mary’ s room, he asks us to consider a neuroscientist, Mary, who was born, and has lived all of her life, in a black and white room with a black and white television and computer monitor where she collects all the scientific data she possibly can on the nature of colours. Jackson asserts that as soon as Mary leaves the room, she will come to have new knowledge which she did not possess before: the knowledge of the experi- ence of colours (i.e., what they are like). Although, by hypothesis, Mary had already known everything there is to know about colours from an objective, third-person perspective, she never knew, according to Jackson, what it was like to see red, orange, or green.

If Mary really learns something new, it must be knowledge of something non- physical, since she already knew everything there is to know about the physical aspects of colour. David Lewis’ response to this argument, now known as the ability argument, is that what Mary really came to know was simply the ability to recognize and identify color sensations to which she had previously not been exposed. Daniel Dennett and oth- ers also provide arguments against this notion, see Mary’ s room for details.



Mary’s Room

Mary’ s room (also known as Mary the super-scientist) is a philosophical thought experiment proposed by Frank Jackson in his article “Epiphenomenal Qualia” (1982) and extended in “What Mary Didn’ t Know” (1986). The argument it is intended to motivate is often called the “Knowledge Argument” against physicalism-the view that the universe, includ- ing all that is mental, is entirely physical. The debate that emerged following its publication recently became the subject of an edited volume-There’ s Something About Mary (2004)-which

includes replies from such philosophers as Daniel Dennett, David Lewis, and Paul Churchland.

The thought experiment

The thought experiment was originally proposed by Frank Jackson as follows:

Mary is a brilliant scien- tist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specializes in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like ‘red’, ‘blue’, and so on. She discovers, for example, just which wavelength combinations from the sky stimu- late the retina, and exactly how this produces via the central ner- vous system the contraction of the vocal cords and expulsion of air from the lungs that results in the uttering of the sentence ‘The sky is blue’. [...] What will happen when Mary is released from her black and white room or is given a color television monitor? Will she learn anything or not?

In other words, we are to imagine a scientist who knows everything there is to know about the science of color, but has never experi- enced color. The interesting question that Jackson raises is: Once she experiences color, does she learn any- thing new?

Implications

Whether Mary learns something new upon experiencing color has two major implications: the existence of qualia and the knowledge argument against physicalism.

Qualia

First, if Mary does learn something new, it shows that qualia (the subjec- tive, qualitative properties of experiences) exist. If Mary gains something after she leaves the room – if she acquires knowledge of a par- ticular thing that she did not possess before – then that knowledge, Jackson argues, is knowledge of the qualia of seeing red. Therefore, it must be conceded that qua- lia are real properties, since there is a differ- ence between a person who has access to a particular quale and one who does not.

The knowledge argument

Second, if Mary does learn something new upon experi- encing color, physicalism is false. Specifically, the Knowledge Argument is an attack on the physicalist claim about the completeness of physical explanations of mental states. Mary may know everything about the science of color perception, but can she know what the experi- ence of red is like if she has never seen red? Jackson contends that, yes, she has learned something new, via experience, and hence, phys- icalism is false. Jackson states:

It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incom- plete. But she had all the physical information. Ergo there is more to have than that, and Physicalism is false.

It is important to note that in Jackson’s article, physicalism refers to the epistemological doctrine that all knowledge is knowledge of physical facts, and not the metaphysical doctrine that all things are physical things.

Qualia

Qualia, singular “quale,” from the Latin for “what sort” or “what kind,” is a term used in philosophy to describe the subjective quality of conscious expe- rience. Examples of qualia are the pain of a headache, the taste of wine, or the redness of an evening sky. Daniel Dennett writes that qualia is “an unfamiliar term for something that could not be more familiar to each of us: the ways things seem to us.”

The importance of qualia in philosophy of mind comes largely from the fact that they are often seen as pos- ing a fundamental problem for materialist explanations of the mind-body problem. Much of the debate over their existence hinges on the definition of the term that is used, as various philosophers emphasize or deny the existence of cer- tain properties.

Believers in qualia are known as qualophiles; non- believers as qualophobes.

Definitions of qualia

There are many definitions of qualia, which have changed over time. One of the sim- pler, broader definitions is

“The ‘what it is like’ character of mental states. The way it feels to have mental states such as pain, seeing red, smelling a rose, etc.’”

Clarence I. Lewis, in his book Mind and the World Order (1929), was the first to use the term “qualia” in its generally agreed modern sense.

There are recognizable qualitative characters of the given, which may be repeated in different experiences, and are thus a sort of universals; I call these “qualia.” But although such qualia are universals, in the sense of being recognized from one to another experience, they must be distinguished from the properties of objects. Confusion of these two is characteristic of many his- torical conceptions, as well as of current essence-theo- ries. The quale is directly intuited, given, and is not the subject of any possible error because it is purely subjective.

Frank Jackson (1982) later defined qualia as “...cer- tain features of the bodily sensations especially, but also of certain perceptual experiences, which no amount of purely physical informa- tion includes.”

Daniel Dennett identi- fies four properties that are commonly ascribed to qualia. According to these, qualia are:

- (1) ineffable; that is, they cannot be communicated, or apprehended by any other means than direct experience.
- (2) intrinsic; that is, they are non- relational properties, which do not change depending on the experi- ence’ s relation to other things.
- (3) private; that is, all interper- sonal comparisons of qualia are systematically impossible.
- (4) directly or immediately appre- hensible in consciousness; that is, to experience a quale is to know one experiences a quale, and to know all there is to know about that quale.

Arguments for the existence of qualia

Since it is by definition difficult or impossible to convey qualia verbally, it is difficult to demonstrate them directly in an argument; a more tangential approach is needed. Arguments for qualia generally come in the form of

What its Like to be a Bat?

(redirects to Thomas Nagel)

thought experiments designed to lead one to the conclu- sion that qualia exist.

The “What’s it like to be?” argument

Although it does not actually mention the word “qualia”, Thomas Nagel’ s paper What Is it Like to Be a Bat? is often cited in debates over qualia. Nagel argues that consciousness has an essen- tially subjective character, a what-it-is-like aspect. He states that “an organ- ism has conscious mental states if and only if there is something that it is to be that organism – something it is like for the organ- ism.” Nagel also suggests that the subjective aspect of the mind may not ever be sufficiently accounted for by the objective methods of reductionistic science. He claims that “[i]f we acknowledge that a physical theory of mind must account for the subjective character of experience, we must admit that no presently available conception gives us a clue how this could be done.” Furthermore, he states that “it seems unlikely that any physical theory of mind can be contemplated until more thought has been given to the general problem of sub- jective and objective.”

What its Like to be a Bat?

(redirects to Thomas Nagel)

Thomas Nagel (born July 4, 1937) is an American philos- opher, currently University Professor of Philosophy and Law at New York University, where he has taught since 1980. His main areas of philosophical interest are philosophy of mind, political philosophy and ethics. He is well-known for his critique of reductionist accounts of the mind in his essay “What Is it Like to Be a Bat?” (1974), and for his contri- butions to deontological and liberal moral and political theory in The Possibility of Altruism (1970) and subse- quent writings.

Biography

Thomas Nagel was born July 4, 1937, in Belgrade, Yugoslavia (now Serbia); his family was Jewish. He received a BA from Cornell University in 1958, a BPhil from Oxford University in 1960, and a PhD from Harvard University in 1963 under the supervision of John Rawls. Before settling in New York, Nagel taught briefly at the University of California, Berkeley (from 1963 to 1966) and at Princeton University (from 1966 to 1980), where he trained many well-known philosophers including Susan Wolf, Shelly Kagan, and Samuel Scheffler, who is now his colleague at NYU. In 2006 he was made a member of the American Philosophical Society.

Nagel is a Fellow of the American Academy of Arts and Sciences and a Corresponding Fellow of the British Academy, and has held fel- lowships from the Guggenheim Foundation, the National Science Foundation, and the National Endowment for the Humanities. In 2008, he was awarded a Rolf Schock Prize for his work in philosophy, the Balzan prize, and the honorary degree of Doctor of Letters from Oxford University.

Fordlândia (“Ford-land”) is a now-abandoned, prefabricated industrial town established in the Amazon Rainforest in 1928 by American industrialist Henry Ford for the purpose of securing a source of cultivated rubber for the automobile manufacturing operations of the Ford Motor Company in the United States. Ford had negotiated a deal with the Brazilian government granting his newly formed Companhia Industrial do Brasil a concession of 10,000 km² of land on the shores of the Rio Tapajós near the city of Santarém, Brazil in exchange for a nine percent interest in the profits generated.

History and decline

Ford intended to use Fordlândia to provide his company with a source of rubber for the tires on Ford cars, avoiding the dependence of British (Malayan) rubber. The land was hilly, rocky and infertile. None of Ford’s managers had the requisite knowledge of tropical agriculture. The rubber trees, packed closely together in plantations, as opposed to being widely spaced in the jungle, were easy prey for tree blight and insects, a problem avoided by the Asian rubber plantations where transplanted Amazonian rubber trees faced no such natural predators. The mostly indigenous workers on the plantations, given unfamiliar food such as hamburgers and forced to live in American-style housing, disliked the way they were treated – they had to wear ID badges, and to work midday hours under the tropical sun – and would often refuse to work. In 1930, the native workers revolted against the managers, many of whom fled into the jungle for a few days until the Brazilian Army arrived and the revolt ended.

Ford forbade alcohol and tobacco within the town, including inside the workers’ own homes. The inhabitants circumvented this prohibition by paddling out to merchant riverboats moored beyond town jurisdiction and a settlement was established five miles upstream on the “Island of Innocence” with bars, nightclubs and brothels.

Failure

The government of Brazil was suspicious of any foreign investments, particularly in the northern Amazonia region, and offered little help. Ford tried again, relocating downstream to Belterra where better weather conditions to grow rubber existed, but by 1945, synthetic rubber was developed, ending the world-wide demand for natural rubber. Ford’s investment opportunity dried up overnight without producing any rubber for Ford’s tires, making Fordlândia a total disaster. In 1945, Henry Ford sold it for a loss of over \$20 million. Despite repeated invitations from residents and periodic promises to do so, Henry Ford never actually visited his ill-fated jungle city.

Brothel

A brothel, also known as a bordello, cathouse, whorehouse, sporting house and various other euphemisms, is an establishment specifically dedicated to prostitution, providing the prostitutes a place to meet and to have sexual intercourse with

clients. In some places, brothels are legal, and in many countries, places such as massage parlors are allowed to function as brothels, with varying degrees of regulation and repression. Depending on zoning, brothels may be confined to special red-light districts or tolerance zones.

Brothels were very common in the past, but are prohibited today in most European countries. There are however exceptions, for example Netherlands or Germany (see Prostitution in Europe). In most countries from Europe, brothels were made illegal after World War II. During the first half of the 20th century, France and Italy were famous for their brothels. France outlawed all brothels in 1946 and Italy made them illegal in 1959. Today Amsterdam is well known for its red-light district and it is a destination for sex tourism.

Business models

Brothels use a variety of business models:



- In some, the prostitutes are held in involuntary servitude without the option to leave, receiving only a small portion (or none) of the money paid by the patron. This is typical where human trafficking procures a large percentage of prostitutes, and is common in (though not limited to) countries where prostitution is forbidden or repressed. In some cases, prostitutes are bought and sold by their keepers, reducing them to a state of chattel slavery. All of these are illegal in most jurisdictions.
- In others the prostitutes are employees, receiving a small fixed salary and a portion of the money spent by the customer. (Maison close French for “closed house”) The brothel owner receives the rest of the payment for services.
- In the regulated brothels in Nevada, the prostitutes are contract workers who split their earnings with the house and are often expected to “tip” support staff (cleaners, limo drivers, etc.); they receive no benefits, such as health insurance, and no withholding for Social Security taxes.

- * In still others, the prostitutes pay a fee for use of the facilities, with the brothel owner not being involved in the financial transaction between prostitute and client (maison de passe, French for “trick house”).

In those countries which restrict or forbid prostitution, the latter provides some level of plausible denial to the facility owner, who often (thinly) disguises the brothel as a massage parlor, bar, strip club or similar facility.

Military brothels

Until recently, in several armies around the world, a mobile brothel service was attached to the army as an auxiliary unit, especially attached to combat units on long-term deployments abroad. For example, during French and Japanese colonial campaigns of the 20th

century, such employees were mainly recruited among the local populace of Northeast Asia and Africa; often, some of the women were underage. Because it is a touchy subject, military brothels were often designated with creative euphemisms. Notable examples of such jargon are la boîte à bonbons (English: “the candy box”), replacing the term “bordel militaire de campagne” . Women forced into prostitution by the Japanese occupation armies throughout East Asia were known as “comfort battalions” . The prostitutes were individually referred to as “military comfort women” or jūgun-ianfu.

Soapland

A Soapland (ソープランド, sōpurando) is a type of brothel in Japan where male clients can engage in sexual activity with female prostitutes, although officially the clubs do business as places where the client is bathed. There are also a few soaplands specifically for female clients.

Eastern variant of a steam bath, which can be categorized as a wet relative of the sauna.



In Western Europe, the Turkish bath as a method of cleansing the body and relaxation was particularly popular during the Victorian era. The process involved in taking a Turkish bath is similar to that of a sauna, but is more closely related to the ancient Roman bathing practices.

A person taking a Turkish bath first relaxes in a room (known as the warm room) that is heated by a continuous flow of hot, dry air allowing the bather to perspire freely. Bathers may then move to an even hotter room (known as the hot room) before splashing themselves with cold water. After performing a full body wash and receiving a massage, bathers finally retire to the cooling-room for a period of relaxation.

Tellak (Staff)

Traditionally, the masseurs in the baths, tellak in Turkish, who were young boys, helped wash clients by soaping and scrubbing their bodies. They also worked as sex workers. We know today, by texts left by Ottoman authors, who they were, their prices, how many times they could bring their customers to orgasm, and the details of their sexual practices.

They were recruited from among the ranks of the non-Muslim subject nations of the Turkish empire, such as Greeks, Armenians, Jews, Albanians, Bulgarians, Roma and others.

At times the relationship between a tellak and his client became intensely per-



sonal. It is recorded that in the mid-18th century, a janissary – an elite soldier in the Ottoman army, also often of European descent – had a tellak for a lover. When the latter was kidnapped by the men of another regiment and given over to the use of their commander, a day-long battle between the two janissary regiments ensued, which was brought to an end only when the Sultan ordered

the tellak hanged.

After the defeat and dismemberment of the Ottoman army in the early 20th century, the role of tellak boys was filled by adult attendants that scrub and give massage.

Introduction of Turkish baths to Western Europe

Turkish baths were introduced to the United Kingdom by David Urquhart, diplomat and sometime Member of Parliament for Stafford, who for political and personal reasons wished to popularize Turkish culture. In 1850 he had written The Pillars of Hercules, a book about his travels in Spain and Morocco in 1848, in which he described the system of dry hot-air baths which had been in use there, and in the Ottoman Empire, very little changed from those which had been so popular in Roman times.

In 1856, Richard Barter, having read Urquhart’s book and worked on the construction of a bath with him, opened the first modern Turkish bath in the United Kingdom at St Ann’s Hydropathic Establishment near Blarney, County Cork, Ireland. The following year, the first Turkish bath to be built in England since Roman times was opened in Manchester, and the idea spread rapidly through the north of England. It reached London in July 1860 when Roger Evans, a member of one of Urquhart’s Foreign Affairs Committees, opened a Turkish bath at 5 Bell Street, near Marble Arch.

Western Europe

Western Europe refers to the countries in the westernmost half of Europe, though this definition is context-dependent and carries cultural and political connotations. One definition describes Western Europe as a cultural entity – the region lying west of Central Europe. Another definition was created during the Cold War and used to describe the non-Communist states of Europe; as a result, geographically central and eastern countries that steered clear of Soviet influence during the Cold War are usually included, while Western members of the former Eastern Bloc are excluded.

In addition, the term has geographic, economic and cultural aspects. Since the end

special to Western Europe any more.

Classical antiquity and medieval origins

As Roman domain expanded a cultural and linguistic division appeared between the mainly Greek-speaking eastern provinces which had formed the highly urbanized Hellenistic civilization. In contrast, the western territories largely adopted the Latin language. This cultural and linguistic division was eventually reinforced by the later political east-west division of the Roman Empire.

The division between these two was enhanced during Late Antiquity and the Middle Ages by a number of events. The Western Roman Empire collapsed starting the Early Middle Ages. By contrast, the Eastern Roman Empire, mostly known as Byzantine Empire, managed to survive and even to thrive for another 1000 years. The rise of the Frankish Empire in the west, and in particular the Great Schism that formally divided Eastern Orthodoxy and Roman Catholicism, enhanced the cultural and religious distinctiveness between Eastern and Western Europe.

The conquest of the Byzantine Empire, center of the Eastern Orthodox Church, by the Muslim Ottoman Empire in the 15th century, and the gradual fragmentation of the Holy Roman Empire (which had replaced the Frankish Empire) led to a change of the importance of Roman Catholic/Protestant vs. Eastern Orthodox concept in Europe.

Western Europe’s significant historical events include the Renaissance, the Protestant Reformation by Martin Luther and the Counter-Reformation of the Catholic Church, the Age of Enlightenment, the French Revolution and the Industrial Revolution. During the final stages of World War II the future of Europe was decided between the Allies in the 1945 Yalta Conference, between the British Prime Minister Winston Churchill, U.S. President Franklin Delano Roosevelt, and the Premier of the Soviet Union, Joseph Stalin.

Post-war Europe would be divided into two major spheres: the West, influenced by the United States, and the Eastern Bloc, dominated by the Soviet Union. With the onset of the Cold War, Europe was divided by the Iron Curtain.

This term had been used during World War II by German Propaganda Minister Joseph Goebbels and later Count Lutz Schwerin von Krosigk in the last days of the war; however, its use was hugely popularised by Winston Churchill, who used it in his famous “Sinews of Peace” address March 5, 1946 at Westminster College in Fulton, Missouri:

“ From Stettin in the Baltic to Trieste in the Adriatic an iron curtain has descended across the Continent. Behind that line lie all the capitals of the ancient states of Central and Eastern Europe. Warsaw, Berlin, Prague, Vienna, Budapest, Belgrade, Bucharest and Sofia; all these famous cities and the populations around them lie in what I must call the Soviet sphere, and all are subject, in one form or another, not only to Soviet influence but to a very high and in some cases increasing measure of control from Moscow. ”

Although some countries were officially neutral, they

were classified according to the nature of their political and economical systems. This division has largely defined the popular perception and understanding of Western Europe and its borders with Eastern Europe till this day.

Liechtenstein

The Principality of Liechtenstein is a doubly landlocked alpine microstate in Western Europe, bordered by Switzerland to the west and south by Austria to the east. Its area is just over 160 km² (about 61.7 square miles) and it has an estimated population of 35,000. Its capital is Vaduz, the biggest town is Schaan.

Liechtenstein is the smallest German-speaking country in the world and the only alpine country to lie entirely within the Alps. It is also the only German-speaking country not to share a common frontier with Germany. It is a constitutional monarchy divided into 11 municipalities. Much of Liechtenstein’s terrain



is mountainous, making it a winter sports destination. Many cultivated fields and small farms characterize its landscape both in the north (Unterland, lower land) and in the south (Oberland, upper land). The country has a strong financial sector located in the capital, Vaduz, and has been identified as a tax haven. It is a member of the European Free Trade Agreement. Liechtenstein is not part of the European Union.

European microstates

The European microstates or ministates are a set of very small sovereign states in Europe. While Andorra, Liechtenstein, Malta, Monaco, San Marino, and Vatican City, are usually included, Luxembourg, Cyprus, and Iceland share certain features as well. Microstates are small independent states, unlike “micronations,” which are neither states nor independent.

Dependencies

While the microstates have sovereignty over their own territory, there are also a number of small autonomous territories, which despite having (in almost all cases) their own independent government, executive branch, legislature, judiciary, police, and other trappings of independence, are nonetheless under the sovereignty of another state or monarch.

- Akrotiri and Dhekelia (British overseas territory, United Kingdom)
- Åland (Autonomous province, Finland)
- Faroe Islands (External territory, Denmark)
- Gibraltar (British overseas territory, United Kingdom)
- Bailiwick of Guernsey (British crown dependency), one of the Channel Islands and including Alderney, Herm and Sark

- Isle of Man (British crown dependency)
- Bailiwick of Jersey (British crown dependency), one of the Channel Islands
- Mount Athos or the Autonomous Monastic State of the Holy Mountain (Autonomous monastic state, Greece)

Other entities

- The Holy See is a unique sovereign entity under international law distinct from Vatican City with the pope as the head of both, maintaining diplomatic and official relations with over 170 states and entities and participating in various international organizations either in its own capacity or on behalf of Vatican City.
- The sovereignty of the sea fort of Sealand off the coast of the United Kingdom is controversial. It has asserted independence since the 1960s, but has not achieved clear recognition by other nations or international organizations.

Sovereign Military Order of Malta

The Sovereign Military Order of Malta is a Catholic order that is a sovereign entity under international law and has permanent observer status at the United Nations. The Order is the direct successor to the medieval Knights Hospitaller, also known as the Knights of Malta, and today operates as a largely charitable and ceremonial organization. It is a traditional example of a sovereign entity other than a state. Its headquarters in Rome are granted extraterritoriality by Italy; its historical headquarters are on Malta, in Fort St Angelo. Unlike the Holy See, which is sovereign over the Vatican City, SMOM has no other sovereign territory, yet it does have full diplomatic relations, including embassies, with 100 states and is in more informal relationship with five others. It issues its own stamps, coins, passports, and license plates, and has its own military.

Historical small territories

The wars of the French Revolution and the Napoleonic Wars caused the European map to be redrawn several times. A number of short-lived client republics were created, and the fall of the Holy Roman Empire gave sovereignty to each of its many surviving component states. The situation was not stabilized until after the Congress of Vienna in 1815. Following World War I and World War II a number of territories gained temporary status as international zones, protectorates or occupied territories. A few of them are discussed here:

- Couto Mixto, ?–1864
- Gersau, 14th century–1798
- Republic of Ragusa, 14th century–1808 (now Dubrovnik)
- Cospaia, 1440–1826
- Free City of Kraków, 1815–1846 (now Kraków)
- Neutral Moresnet, 1816–1919
- Kingdom of Tavolara, 1836–1962 (subsumed into Italy)
- Free City of Danzig, 1920–1939 (now Gdańsk)
- Free State of Fiume, 1920–1924 (now Rijeka)
- Saar, 1945–1956
- Free Territory of Trieste, 1947–1954 (now Trieste)
- Krusevo Republic, 2–12 August 1903, Krusevo

Enclave and Exclave

In political geography, an enclave is a territory whose geographical boundaries lie entirely within the boundaries of another territory.

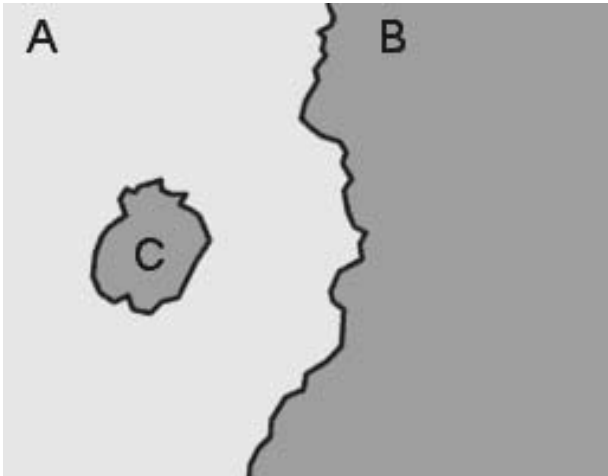
An exclave, on the other hand, is a territory legally attached to another territory with which it is not physically contiguous.

Origin and usage

The word enclave crept into the jargon of diplomacy rather late in English, in 1868, coming from French, the lingua franca of diplomacy, with a sense inherited from late Latin *inclavatus* meaning ‘shut in, locked up’ (with a key, late Latin *clavis*). The word exclave is a logical extension created three decades later.

Although the meanings of both words are close, an exclave may not necessarily be an enclave or vice versa. For example, Kaliningrad, an exclave of Russia, is not an enclave because it is surrounded not by one state, but by two: Lithuania and Poland; it also borders the Baltic Sea. On the other hand, Lesotho is an enclave in South Africa, but it is not politically attached to anything else, meaning that it is not an exclave.

In British administrative history, subnational enclaves were usually called detachments. In English ecclesiastic history, subnational enclaves were known



as peculiars (see also Royal Peculiar).

A country surrounded by another but having access to the sea is not considered to be an enclave, regardless of size. For this reason, in the same way that Portugal is not an enclave of Spain, The Gambia is not an enclave of Senegal.

Extraterritoriality

Embassies and military bases are usually exempted from the jurisdiction of the host country, i.e., the laws of the host nation in which an embassy is located do not typically apply to the land of the embassy or base itself. This exemption from the jurisdiction of the host country is defined as extraterritoriality. Areas of extraterritoriality are not true enclaves as they are still part of the host country. In addition to embassies some other areas have extraterritoriality.

- Examples of this include:
- Pavillon de Breteuil in France, used by the General Conference on Weights and Measures.
 - United Nations headquarters

in the United States of America, used by the United Nations.

- NATO (political) headquarters near Evre in Haren, a part of the City of Brussels, Belgium.
- Headquarters Allied Command Operations (NATO) at the area designated as Supreme Headquarters Allied Powers Europe (SHAPE), North of Mons, Belgium

Land ceded to a foreign country

Some areas of land in a country are owned by another country and in some cases it has special privileges, such as being exempt from taxes. These lands are not enclaves and do not have extraterritoriality.

- Examples of this include:
- Napoleon’s original grave in Longwood, Saint Helena, ceded to France.
 - Victor Hugo’s house in St Peter Port, Guernsey, ceded to the city of Paris.
 - The Normandy American Cemetery and Memorial in Normandy, France which contains the graves of 9,386 American military dead, most of whom gave their lives during the landings and ensuing operations of World War

Examples include:

- Salzburg to Innsbruck (Austria) (passes Rosenheim, Germany). A railway line within Austria exists as well, but trains take about 1.5 hours longer than across German territory.
- Trains from Neugersdorf, Saxony to Zittau pass Czech territory at Varnsdorf, while Czech trains from Varnsdorf to Chrastava pass through German territory at Zittau, and then a small part of Polish territory near the village of Porajów.
- Belgrade – Bar railway crosses into Bosnia and Herzegovina for 9 km, between stations Zlatibor and Priboj (both in Serbia). There is one station, Štrpci, but there are no border crossing facilities and trains do not call at the station.
- During the Cold War, underground lines in West Berlin ran under parts of East Berlin. Ghost stations (German: Geisterbahnhöfe) were stations on Berlin’s U-Bahn and S-Bahn metro networks that were closed during this period of Berlin’s division.

Extraterritoriality

Extraterritoriality is the state of being exempt from the jurisdiction of local law, usually as the result of diplomatic negotiations. Extraterritoriality can also be applied to physical places, such as military bases of foreign countries, or offices of the United Nations. Contrary to common belief embassies and consulates are not extraterritorial. The three most common cases recognized today internationally relate to the persons and belongings of foreign heads of state, the persons and belongings of ambassadors and certain other diplomatic agents, and public ships in foreign waters.

Extraterritoriality is often extended to friendly or allied militaries, particularly for the purposes of allowing that military to simply pass through one’s territory.

Extraterritoriality can also refer to the extension of the power of a nation’s laws to its citizens abroad. For example, if a person commits homicide abroad and goes back to his country of citizenship, the latter can still try him under its own laws, although this is likely to involve transfer of evidence and other judicial information.

Rasul v. Bush

Rasul v. Bush, 542 U.S. 466 (2004), is a landmark United States Supreme Court decision establishing that the U.S. court system has the authority to decide whether foreign nationals (non-U.S. citizens) held in Guantanamo Bay were wrongfully imprisoned. The 6–3 ruling on June 29, 2004, reversed a District Court decision, which held that the Judiciary had no jurisdiction to handle wrongful imprisonment cases involving foreign nationals who are held in Guantanamo Bay. Justice John Paul Stevens wrote the majority opinion and was joined by Sandra Day O’Connor, David Souter, Ruth Bader Ginsburg, and Stephen Breyer, with Anthony Kennedy concurring. Justice Antonin Scalia filed a dissenting opinion and was joined by William Rehnquist and Clarence Thomas. The claimant whose name the case bears, Shafiq Rasul, was released before the decision was handed down.

Overview

In early 2002, the Center for Constitutional Rights (CCR) was the first organization to file two habeas corpus

petitions, Rasul v. Bush and Habib v. Bush, challenging the U.S. government’s practice of holding foreign nationals captured in Afghanistan during the war against the Taliban regime and al-Qaida in detention indefinitely. The detainees had been designated enemy combatants and did not have access to counsel, the right to a trial or knowledge of the charges against them. The Supreme Court, over the administration’s objections, agreed in November 2003 to hear the cases of the Guantánamo detainees, namely Rasul v Bush and al Odah v. Bush. The arguments were heard on April 20, 2004. In a ruling on June 28th 2004, the Court ruled that the United States Constitution entitled the detainees to challenge the validity of their detention.

Circumstances of capture

The various plaintiffs came to be in Guantanamo Bay by different routes, but were generally captured or arrested during the U.S. invasion of Afghanistan.

The US Military transferred Rasul, Asif Iqbal and David Hicks, who denied voluntarily joining any terrorist forces, to Guantanamo Bay in December 2001. As noted by the District Court, they did not deny having fought for the Taliban, but claimed that if they did take up arms, it was only when being attacked and in self-defense. Rasul and Iqbal say they were with the Taliban because they were taken captive. Hicks is silent on the matter in court filings, but his father, in filing the brief, stated that he believed that his son had joined the Taliban forces.

The twelve Kuwaitis claimed that they were in Pakistan and Afghanistan giving humanitarian aid, and were seized by villagers seeking bounties. They were transferred to Guantanamo Bay starting in January 2002.

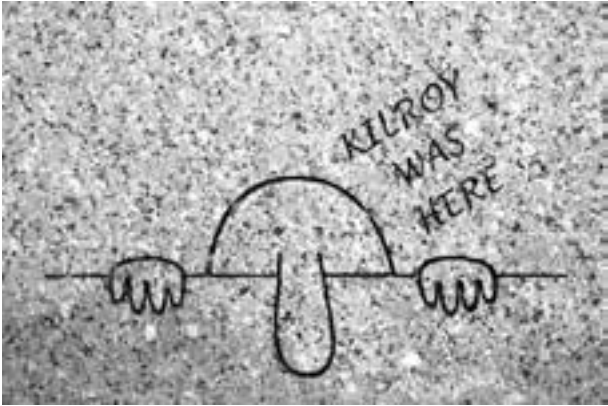
Mamdouh Habib was arrested by Pakistani authorities on October 5, 2001, two days before the fighting began.

Question of jurisdiction

The sole question before the Supreme Court in this case is whether foreign nationals in Guantanamo Bay may invoke habeas corpus (wrongful detainment) at all. Either U.S. citizenship or court jurisdiction is necessary for this invocation, and since the detainees are not citizens, U.S. court jurisdiction over Guantanamo Bay was at issue. According to the U.S. treaty with Cuba over Guantanamo Bay, the U.S. has “complete jurisdiction” over the base, but Cuba has “ultimate sovereignty.” The government alleges that the fact that the treaty says this implies that the courts have no jurisdiction; the detainees argue that regardless of what the treaty says, the U.S. has full legal control in the area and should have jurisdiction.

Release of Rasul and Iqbal

On March 9, 2004, two years after they were first detained, Rasul and Iqbal were released to the United Kingdom with no charges filed, along with three others. On the other hand, the government announced that it planned to charge Hicks and Habib before a military commission. Habib was later released.



Kilroy Was Here

Kilroy was here is an American popular culture expression, often seen in graffiti. Its origins are open to speculation, but recognition of it and the distinctive doodle of “Kilroy” peeking over a wall is known almost everywhere among U.S. residents who lived during World War II and through the Korean War.

Similar doodles also appear in other cultures. In an Australian variant, the character peeping over the wall is not named Kilroy but Foo, as in “Foo was here”. In the United Kingdom, such graffiti is known as a “chad”. In Chile, the graphic is known as a “sapo” (toad); this might refer to the character’s peeping, an activity associated with frogs because of their protruding eyes. In Mexico it is known as “El Fisgon”. A very similar figure is “Tosun” in Turkey. Tosun is both a less used male name and also refers to a bullock. It is used as “Bunu yazan Tosun” (“Tosun wrote this”). In Poland Kilroy is replaced with “Józef Tkaczuk”, as an urban legend says, an elementary school janitor. Graffiti writings have the form of sentences like “Gdzie jest Józef Tkaczuk?” (“Where is Joseph Tkatchuk?”) and “Tu byłem - Józef Tkaczuk” (“I was here - Joseph Thatchuk”). It has appeared in movies as well—at the end of the WW2 war comedy Kelly’s Heroes, Kelly and his men leave the doodle in a bank they’ve just robbed, along with the words, “UP YOURS, BABY”. It appears in the 1970 film Patton on the side of a tank.

Origins

The phrase appears to have originated through United States servicemen, who would draw the doodle and the text “Kilroy Was Here” on the walls or elsewhere they were stationed, encamped, or visited. Brewer’s Dictionary of Phrase and Fable notes that it was particularly associated with the Air Transport Command, at least when observed in the United Kingdom.

One theory identifies James J. Kilroy, an American shipyard inspector, as the man behind the signature. During World War II he worked at the Fore River Shipyard in Quincy, Massachusetts, where he claimed to have used the phrase to mark rivets he had checked. The builders, whose rivets J. J. Kilroy was counting, were paid depending on the number of rivets they put in. A riveter would make a chalk mark at the end of his or her shift to show where they had left off and the next riveter had started. Unscrupulous riveters discovered that, if they started work before the inspector arrived, they could receive extra pay by erasing the previous worker’s chalk mark and chalking a mark farther back

on the same seam, giving themselves credit for some of the previous riveter’s work. J.J. Kilroy stopped this practice by writing “Kilroy was here” at the site of each chalk mark. At the time, ships were being sent out before they had been painted, so when sealed areas were opened for maintenance, soldiers found an unexplained name scrawled. Thousands of servicemen may have potentially seen his slogan on the outgoing ships and Kilroy’s omnipresence and inscrutability sparked the legend. Afterwards, servicemen could have begun placing the slogan on different places and especially in new captured areas or landings. At some later point, the graffiti (Chad) and slogan (Kilroy was here) must have merged.

The New York Times indicated this as the origin in 1946, based on the results of a contest conducted by the American Transit Association to establish the origin of the phenomenon. The article noted that Kilroy had marked the ships themselves as they were being built—so, at a later date, the phrase would be found chalked in places that no graffiti-artist could have reached (inside sealed hull spaces, for example), which then fed the mythical significance of the phrase—after all, if Kilroy could leave his mark there, who knew where else he could go? Brewer’s Dictionary of Phrase and Fable notes this as a possible origin, but suggests that “the phrase grew by accident”.

Another possibility is that Kilroy was actually Richard Kilroy O’Malley, from Butte, Montana, author of “Mile High, Mile Deep” and an Associated Press correspondent during World War II who was subsequently posted in Berlin, Korea, Cyprus, Paris, North Africa and the Belgian Congo.

Author Charles Panati says:

“The mischievous face and the phrase became a national joke.” He goes on to say: “The outrageousness of the graffito was not so much what it said, but where it turned up.”

Kilroy was the most popular of his type in World War II, as well as today. Herbie (Canadian), Overby (Los Angeles—late 1960s), Chad (British—WW II), and Mr. Foo (Australian—WW I & II) never reached the popularity Kilroy did. The ‘major’ Kilroy graffito fad ended in the 1950s, but today people all over the world scribble ‘Kilroy was here’ in schools, trains, and other similar public areas.

Legends

There are many urban legends attached to the Kilroy graffiti. One states that Adolf Hitler believed that Kilroy was some kind of American super spy because the graffiti kept turning up in secure

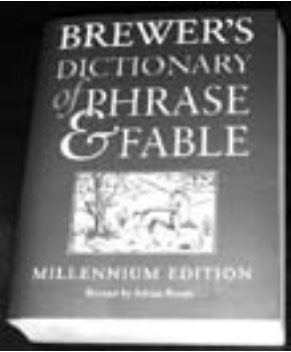
Nazi installations, presumably having been actually brought on captured Allied military equipment. Another states that Stalin was the first to enter an out-house especially built for the leaders at the Potsdam conference. Upon exiting, Stalin asked an aide: “Who is this Kilroy?” Another legend states that a German officer, having seen frequent “Kilroys” posted in different cities, told all of his men that if they happened to come across a “Kilroy” he wanted to question him personally. Another one states the entire gag was started by a soldier in the Army who was sick of the Air Force bragging that they were always the first on the scene; the little man and phrase then began appearing in ludicrous places to indicate that someone had, in fact, arrived prior to the Air Force.

The graffiti is supposedly located on various significant or difficult-to-reach places such as on the torch of the Statue of Liberty, on the Marco Polo Bridge in China, in huts in Polynesia, on a high girder on the George Washington Bridge in New York, at the peak of Mt. Everest, on the underside of the Arc de Triomphe, scribbled in the dust on the moon, in WWII pillboxes scattered around Germany, around the sewers of Paris, and, in tribute to its origin, engraved in the National World War II Memorial in Washington, D.C.

That the expression antedates World War II is indicated in a film on Fort Knox shown on the History Channel. According to the History Channel’s account, young men were hired in 1937 to help move the gold bars. In one scene, when the narrator mentions that some of these workers left graffiti, the message “Kilroy was here” appears on a wall briefly but distinctly with the date 5/13/37.

Brewer’s Dictionary of Phrase and Fable

Brewer’s Dictionary of Phrase and Fable, sometimes referred to simply as Brewer’s – is a reference work containing definitions and explanations of many famous phrases, allusions and figures, whether historical or mythical.



History of Brewer’s Dictionary of Phrase and Fable

Originally published in 1870 by the Reverend E. Cobham Brewer, it was aimed at the growing number of people who did not have a university education, but wanted to understand the origins of phrases and historical or literary allusions. The ‘phrase’ part of the title refers mainly to the explanation of various idioms and proverbs, while the ‘fable’ part might more accurately be labelled ‘folklore’ and ranges from classical mythology to relatively recent literature. On top of this,

Brewer added notes on important historical figures and events, and other things which he thought would be of interest, such as Roman numerals.

Although intended as a comprehensive reference work, early editions of Brewer’s are highly idiosyncratic, with certain editorial decisions highly suggestive of the author’s personal bias. For instance, a list under the entry for John purported to show the bad luck associated with that name, ending “Certainly a disastrous list of Popes” despite several being described merely as “nonentities.” Some entries seem so trivial as to be hardly worth including, and others are almost definitely apocryphal.

Despite this inconsistency, however, the book was a huge success, providing information often not included in more traditional dictionaries and encyclopedias. A revised and updated edition was published in 1896, shortly before Brewer died. Since then, it has been continually revised and reprinted, often in Facsimile, with the 15th Edition being the first to make truly wide-scale changes to the content.

The “Revised and Updated Edition” from the 1890s is now in the public domain, and web-based versions are available online.

Roman Numerals

Roman numerals are a numeral system of ancient Rome based on letters of the alphabet, which are combined to signify the sum of their



values. The first ten Roman numerals are:

I, II, III, IV, V, VI, VII, VIII, IX, X)

The Roman numeral system is decimal but not directly positional and does not include a zero. It is a cousin of the Etruscan numerals, and the letters derive from earlier non-alphabetical symbols; over time the Romans came to identify the symbols with letters of their Latin alphabet. The system was modified slightly during the Middle Ages to produce the system used today.

Roman numerals are commonly used in numbered lists (such as the outline format of an article), clock faces, pages preceding the main body of a book, chord triads in music analysis, the numbering of movie publication dates, months of the year, successive political leaders or children with identical names, and the numbering of annual events. See modern usage below.

For arithmetic involving Roman numerals, see Roman arithmetic and Roman abacus.

Origins

Although the Roman numerals are now written with letters of the Roman alphabet, they

were originally independent symbols. The Etruscans, for example, used I Λ X Ϡ 8 @ for I V X L C M, of which only I and X happened to be letters in their alphabet. One folk etymology has it that the V represented a hand, and that the X was made by placing two Vs on top of each other, one inverted. However, the Etrusco-Roman numerals actually appear to derive from notches on tally sticks, which continued to be used by Italian and Dalmatian shepherds into the 19th century.

Zero

In general, the number zero did not have its own Roman numeral, but a primitive form (nulla) was known by medieval computists (responsible for calculating the date of Easter). They included zero (via the Latin word nulla meaning “none”) as one of nineteen epacts, or the age of the moon on March 22. The first three epacts were nulla, xi, and xxii (written in minuscule or lower case). The first known computist to use zero was Dionysius Exiguus in 525. Only one instance of a Roman numeral for zero is known. About 725, Bede or one of his colleagues used the letter N, the initial of nulla, in a table of epacts, all written in Roman numerals.

Tally Stick

A tally (or tally stick) was an ancient memory aid device to record and document numbers, quantities, or even messages.

Tally sticks first appear as notches carved on animal bones, in the Upper



Paleolithic. A notable example is the Ishango Bone.

Historical reference is made by Pliny the Elder (AD 23 – 79) about the best wood to use for tallies and Marco Polo (1254-1324) who mentions the use of the tally in China.

Single tally

The single tally stick was an elongated piece of bone, ivory, wood, or stone which is marked with a system of notches (see: Tally marks). The single tally stick serves predominantly mnemonic purposes. Related to the single tally concept are messenger sticks (e.g. Inuit tribes), the knotted cords – khipus or quipus – as used by the Inca. Herodotus (485 (?) - 425 BC) reported the use of a knotted cord by Darius I of Persia (521 (?) - 486 BC). The rosary is a remnant of the technique represented in the knotted cord.

Split tally

The split tally was a technique which became common in medieval Europe, which was constantly short of money (coins) and predominantly illiterate, in order to record bilateral exchange and debts. A stick (squared Hazelwood sticks were most common) was marked with a system of notches and then

split lengthwise. This way the two halves both record the same notches and each party to the transaction received one half of the marked stick as proof. Later this technique was refined in various ways and became virtually tamper proof. One of the refinements was to make the two halves of the stick of different lengths. The longer part was called stock and was given to the party which had advanced money or (other items) to the receiver. The shorter portion of the stick was called foil and was given to the party which had received the funds/goods. Using this technique each of the parties had an identifiable and tamper-proof record of the transaction. The split tally was accepted as legal proof in medieval courts and the Napoleonic Code (1804) still makes reference to the tally stick in Article 1333. Along the Danube and in Switzerland the tally was still used in the 20th Century in rural economies.

Mnemonic

A mnemonic device is a mind memory and/or learning aid. Commonly, mnemonics are verbal—such as a very short poem or a special word used to help a person remember something—but may be visual, kinesthetic or auditory. Mnemonics rely on associations between easy-to-remember constructs which can be related back to the data that is to be remembered. This is based on the principle that the human mind much more easily remembers spatial, personal, surprising,



sexual or humorous or otherwise meaningful information than arbitrary sequences.

The word mnemonic is derived from the Ancient Greek word μνημονικός mnemonikos (“of memory”) and is related to Mnemosyne (“remembrance”), the name of the goddess of memory in Greek mythology. Both of these words refer back to μνημῶν mnema (“remembrance”). Mnemonics in antiquity were most often considered in the context of what is today known as the Art of Memory.

The major assumption in antiquity was that there are two sorts of memory: the “natural” memory and the “artificial” memory. The former is inborn, and is the one that everyone uses every day. The artificial memory is one that is trained through learning and practicing a variety of mnemonic techniques. The latter can be used to perform feats of memory that are quite extraordinary, impossible to carry out using the natural memory alone.

Arbitrariness of mnemonics

A curious characteristic of many memory systems is that mnemonics work despite being (or possibly because of being) illogical or arbitrary. “Roy” is a leg-

The Magical Number Seven, Plus or Minus Two

imate first name, but there is no actual surname “Biv” and of course the middle initial “G” is arbitrary. Why is “Roy G. Biv” easy to remember in order to memorise the order that the seven colours of the rainbow appear? ROYGBIV can also be expressed as the almost meaningless phrase “Roy Great Britain the Fourth” again referencing “Roy” but using the GB national code for Great Britain and the Roman numerals for 4, viz: IV. The sentence “Richard of York gave battle in vain” is commonly used in the UK. Any two of the three months ending in -ember would fit just as euphoniously as September and November in “Thirty days hath...”, yet most people can remember the rhyme correctly for a lifetime after having heard it once, and are never troubled by doubts as to which two of the -ember months have thirty days. A bizarre arbitrary association may stick in the mind better than a logical one.

One reason for the effectiveness of seemingly arbitrary mnemonics is the grouping of information provided by the mnemonic. Just as US phone numbers group 10 digits into three groups, the name “Roy G. Biv” groups seven colors into two short names and an initial. Various studies (most notably The Magical Number Seven, Plus or Minus Two) have shown that the human brain is capable of remembering only a limited number of arbitrary items in working memory; grouping these items into chunks permits the brain to hold more of them in memory.

The Magical Number Seven, Plus or Minus Two

“The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information” is one of the most highly cited papers in psychology. It was published in 1956 by the cognitive psychologist George A. Miller of Princeton University’s Department of Psychology in Psychological Review. In it Miller showed interesting coincidences existed between the channel capacity of a number of human cognitive and perceptual tasks. In each case, the effective channel capacity is equivalent to between 5 and 9 equally-weighted error-less choices: on average, about 2.5 bits of information. Miller did not draw any firm conclusions, hypothesizing that the recurring sevens might represent something deep and profound or be just coincidence.

Working memory capacity
Working memory is generally considered to have limited capacity. The earliest quantification of the capacity limit associated with short-term memory was the magical number seven introduced by Miller (1956). He noticed that the memory span of young adults was around seven elements, called ‘chunks,’ regardless of whether the elements were digits, letters, words, or other units. Later research revealed that memory span does depend on the category of chunks used (e.g., span is around seven for digits, around six for letters, and around five for words), and even on features of the chunks within a category. For instance, span is lower for long words than it is for short words. In general, memory span for verbal

contents (digits, letters, words, etc.) strongly depends on the time it takes to speak the contents aloud, and on the lexical status of the contents (i.e., whether the contents are words known to the person or not). Several other factors also affect a person’s measured span, and therefore it is difficult to pin down the capacity of short-term or working memory to a number of chunks. Nonetheless, Cowan (2001) has proposed that working memory has a capacity of about four chunks in young adults (and less in children and older adults).



Miller’s paper points out that channel capacity on various tasks was around 2.5 bits of information. Measurements of human short term memory capacity also found a 7±2 limit. However, this limit was eventually found to be a result of using subjects who were speakers of English to remember sequences of single digits. It turns out that one component of human working memory, the phonological loop, is capable of holding around 2 seconds of sound. Two seconds is the duration of the English spoken form of 7±2 digits (in Chinese it is around 10 and in Welsh around 6), the variation is highly correlated with the rate at which people speak.

Other cognitive numeric limits
The concept of a limit is illustrated by imagining the patterns on the faces of a dice. It is easy for many people to visualize each of the six faces. Now imagine seven dots, eight dots, nine dots, ten dots, and so on. At some point it becomes impossible to visualize the dots as a single pattern (a process known as subitizing), and one thinks of, say, eight as two groups of four. The upper limit of one’s visualization of a number represented as dots is the subitizing limit for that exercise.

The film Rain Man, starring Dustin Hoffman, portrayed an autistic savant, who was able to visualize the number represented by an entire box of toothpicks spilled on the floor. A similar feat was informally observed by neuropsychologist Oliver Sacks and reported in his book The Man Who Mistook His Wife for a Hat. Therefore one might suppose that this limit is an arbitrary limit imposed by our cognition rather than necessarily being a physical limit.

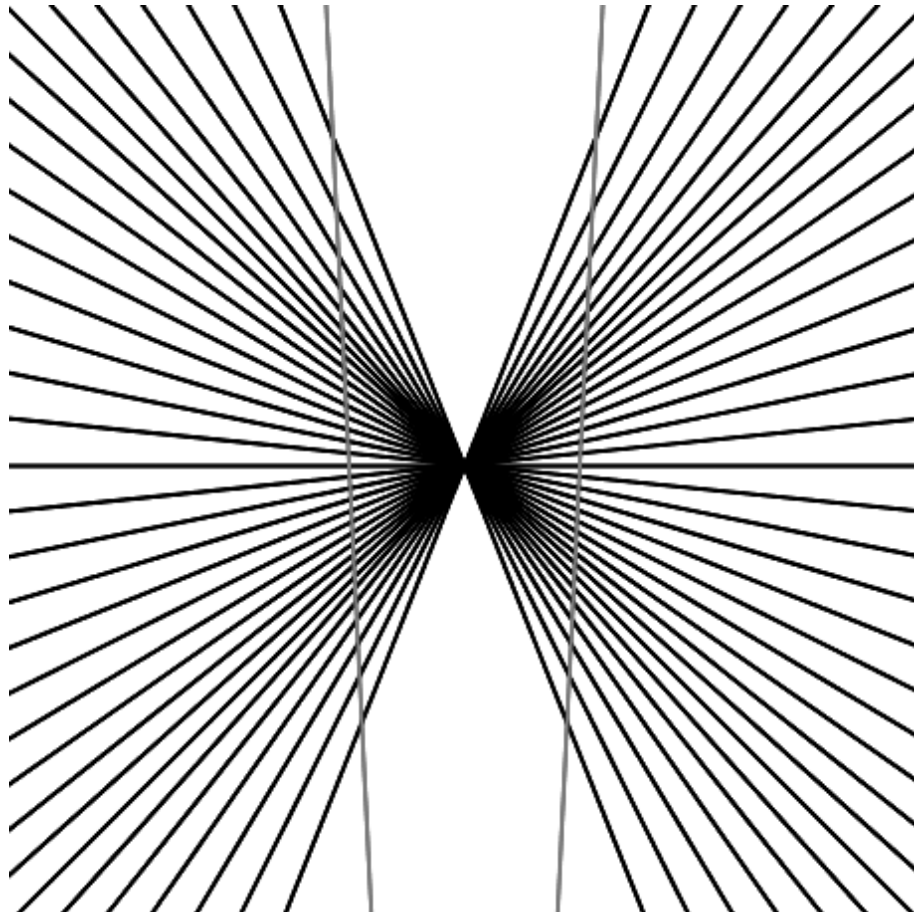
Subitizing and Counting
Subitizing, coined in 1949 by E.L. Kaufman et al. refers to the rapid, accurate, and confident judgments of number performed for small numbers of items. The term is derived from the Latin adjective subitus (meaning sudden) and captures a feeling of immediately knowing how many items lie within the visual scene, when the number of items present falls within

Subitizing and Counting

the subitizing range. Number judgments for larger set-sizes were referred to either as counting or estimating, depending on the number of elements present within the display, and the time given to observers in which to respond (i.e., estimation occurs if insufficient time is available for observers to accurately count all the items present).

The accuracy, speed, and confidence with which observers make judgments of the number of items are critically dependent on the number of elements to be enumerated. Judgments made for displays composed of around one to four items are rapid, accurate and confident. However, as the number of items to be enumerated increases beyond this amount, judgments are made with decreasing accuracy and confidence. In addition, response times rise in a dramatic fashion, with an extra 250 ms - 350 ms added for each additional item within the display beyond about four.

While the increase in response time for each additional element within a display is relatively large outside the subitizing range (i.e., 250 ms - 350 ms per item), there is still a significant, albeit smaller,



increase within the subitizing range, for each additional element within the display (i.e., 40 ms - 100 ms per item). A similar pattern of reaction times is found in young children, although with steeper slopes for both the subitizing range and the enumeration range. This suggests there is no span of apprehension as such, if this is defined as the number of items which can be immediately apprehended by cognitive processes, since there is an extra cost associated with each additional item enumerated. However, the relative difference in costs associated with enumerating items within the subitizing range are small, whether measured in terms of accuracy, confidence, or speed of response. Furthermore, the values of all measures appear to differ markedly inside and outside the subitizing range. So, while there may be no span of apprehension, there appear to be real differences in the ways in which a

small number of elements is processed by the visual system (i.e., approximately < 4 items), compared with larger numbers of elements (i.e., approximately > 4 items). Recent findings demonstrated that subitizing and counting are not restricted to visual perception, but also extend to tactile perception (when observers had to name the number of stimulated fingertips).

Enumerating afterimages
As the derivation of the term “subitizing” suggests, the feeling associated with making a number judgment within the subitizing range is one of immediately being aware of the displayed elements. When the number of objects presented exceeds the subitizing range, this feeling is lost, and observers commonly report an impression of shifting their viewpoint around the display, until all the elements presented have been counted. The ability of observers to count the number of items within a display can be limited, either by the rapid presentation and subsequent masking of items, or by requiring observers to respond quickly. Both procedures have little, if any, effect on enumeration within the subitizing range. These techniques may restrict

Afterimage



errors in both the 10 s and 60 s conditions. In contrast, no errors occurred within the subitizing range (i.e., 1 - 4 disks), in either the 10 s or 60 s conditions. This result was replicated by Simon and Vaishnavi.

Afterimage
An afterimage or ghost image is an optical illusion that refers to an image continuing to appear in one’s vision after the exposure to the original image has ceased. One of the most common afterimages is the bright glow that seems to float before one’s eyes after staring at a light bulb or a headlight for a few seconds. The phenomenon of afterimages may be closely related to persistence of vision, which allows a rapid series of pictures to portray motion,

Ewald Hering

or adapt and stop responding. The rod cells can also be affected by this.

When the eyes are then diverted to a blank space, the adapted photoreceptors send out a weak signal and those colors remain muted. However, the surrounding cones that were not being excited by that colour are still “fresh”, and send out a strong signal. The signal is exactly the same as if looking at the opposite color, which is how the brain interprets it.

Ewald Hering explained how the brain sees afterimages, in terms of three pairs of primary colors. This opponent process theory states that the human visual system interprets color information by processing signals from cones and rods in an antagonistic manner. The opponent color theory suggests that there are three opponent channels: red versus cyan, blue versus yellow, and black versus white. Responses to one colour of an opponent channel are antagonistic to those to the other colour. Therefore, a green image will produce a magenta afterimage. The green color tires out the green photoreceptors, so they produce a weaker signal. Anything resulting in less green, is interpreted as its paired primary colour, which is magenta.

Ewald Hering
Karl Ewald Konstantin Hering (August 5, 1834 - January 26, 1918) was a German physiologist who did much research into color vision and spatial perception. His uncle was the homeopath Constantine Hering. Born in Alt-Gersdorf, Kingdom of Saxony, Hering studied at the University of Leipzig and became a professor at Charles University in Prague.

Color theory
Hering disagreed with the leading theory developed mostly by Thomas Young and Hermann von Helmholtz. Helmholtz’s theory stated that the human eye perceived all colors in terms of three primary colors: red, green, and blue. Hering instead believed that the visual system worked based on a system of color opponency, a proposal now widely recognized as correct.

Hering looked more at qualitative aspects of color and said there were six primary colors, coupled in three pairs: red-green, yellow-blue and white-black. Any receptor that was turned off by one of these colors, was excited by its coupled color. This results in six different receptors. It also explained afterimages. His theory was rehabilitated in the 1970s when Edwin Land developed the Retinex theory that stated that whereas Helmholtz’s colors hold for the eye, in the brain the three colors are translated into six.

Other research
In 1861 Hering described an optical illusion which now bears his name – Hering illusion. He also developed Hering’s law of equal innervation to describe the conjugacy of saccades in animals. The Hering-Breuer reflex is also named for him.

Hannah Arendt

Hannah Arendt (October 14, 1906 - December 4, 1975) was an influential German-Jewish political theorist. She has often been described as a philosopher, although she refused that label on the grounds that philosophy is concerned with “man in the singular.” She described herself instead as a political theorist because her work centers on the fact that “men, not Man, live on the earth and inhabit the world.”

Arendt’s work deals with the nature of power, and the subjects of politics, authority, and totalitarianism. Much of her work focuses on affirming a conception of freedom which is synonymous with collective political action among equals.

Biography

Hannah Arendt was born into a family of secular Jewish Germans in the city of Linden (now part of Hanover), and grew up in Königsberg and Berlin.

At the University of Marburg, she studied philosophy with Martin Heidegger, with whom she embarked on a long, stormy and romantic relationship for which she was later criticized because of Heidegger’s support for the Nazi party while he was rector of Freiburg University.

In the wake of one of their breakups, Arendt moved to Heidelberg, where she wrote her dissertation on the concept of love in the thought of Saint Augustine, under the existentialist philosopher-psychologist Karl Jaspers.

She married Günther Stern, later known as Günther Anders, in 1929 in Berlin (they divorced in 1937).

The dissertation was published the same year, but Arendt was prevented from habilitating, a prerequisite for teaching in German universities, because she was Jewish. She worked for some time researching anti-Semitism before being interrogated by the Gestapo, and thereupon fled Germany for Paris. Here she met and befriended the literary critic and Marxist philosopher Walter Benjamin, her first husband’s cousin. While in France, Arendt worked to support and aid Jewish refugees. She was imprisoned in Camp Gurs but was able to escape after a couple of weeks.

However, with the German military occupation of northern France during World War II, and the deportation of Jews to Nazi concentration camps, even by the Vichy collaborator regime in the unoccupied south, Arendt was forced to flee France. In 1940, she married the German poet and Marxist philosopher Heinrich Blücher, by then a former Communist Party member.

In 1941, Arendt escaped with her husband and her mother to the United States with the assistance of the American diplomat Hiram Bingham IV, who illegally issued visas to her and around 2500 other Jewish refugees, and an American, Varian Fry, who paid for her travels and helped in securing these visas. Arendt then became active in the German-Jewish community in New York. In 1941-1945, she wrote a column for the German-language Jewish newspaper, Aufbau. From 1944, she directed research for the Commission of European Jewish Cultural Reconstruction and traveled frequently to Germany in this capacity.



After World War II she returned to Germany and worked for Youth Aliyah. She became a close friend of Jaspers and his Jewish wife, developing a deep intellectual friendship with him and began corresponding with Mary McCarthy. In 1950, she became a naturalized citizen of the United States. Arendt served as a visiting scholar at the University of California, Berkeley, Princeton University and Northwestern University. She also served as a professor on the Committee on Social Thought at the University of Chicago, as well as at The New School in New York City, and served as a fellow on the faculty at Yale University and Wesleyan University in the Center for Advanced Studies (1962-1963). In 1959, she became the first woman appointed to a full professorship at Princeton.

She died at age 69 in 1975, and was buried at Bard College in Annandale-on-Hudson, New York, where her husband taught for many years.

Arendt was instrumental in the creation of Structured Liberal Education (SLE) at Stanford University. She wrote a letter to the then president of Stanford University to convince the university to enact Mark Mancall’s vision of a residually-based humanities program.

Commemoration

- The asteroid 100027 Hannaharendt is named in her honour.
- The German railway authority operates a Hannah Arendt Express between Karlsruhe and Hanover.
- The German post office has issued a Hannah Arendt commemorative stamp.
- Hannah-Arendt-Straße in the Mitte district of Berlin is named in her honor.

Banality of Evil

The banality of evil is a phrase coined by Hannah Arendt and incorporated in the title of her 1963 work Eichmann in Jerusalem: A Report on the Banality of

on the scale of Eichmann’s cannot be committed by “ordinary people”. Those people who commit such crimes “actively identify with groups whose ideology justifies and condones the oppression and destruction of others.” That is, they know that it is a crime, but simply find a way to justify it.

On the other hand, the Milgram Experiment, conducted by Dr. Stanley Milgram, and the Stanford Prison Experiment, both appear to support Arendt’s central thesis.

The Banality of the “Banality of Evil”

In the May 23 2009 edition of the New York Post, various uses of the phrase over the last 10 years were collected, with writer Spencer Rosenstein arguing that the phrase has been overused to the point making it, essentially, a worsened word.

Stanford Prison Experiment

The Stanford prison experiment was a study of the psychological effects of becoming a prisoner or prison guard. The experiment was conducted in 1971 by a team of researchers led by Psychology Professor Philip Zimbardo at Stanford University. Twenty-four undergraduates were selected out of 70 to play the roles of both guards and prisoners and live in a mock prison in the basement of the Stanford psychology building. Those selected were chosen for their lack of psychological issues, crime history, and medical disabilities, in order to obtain a representative sample. Roles were assigned based on a coin toss.

Prisoners and guards rapidly adapted to their roles, stepping beyond the boundaries of what had been predicted and leading to dangerous and psychologically damaging situations. One-third of the guards were judged to have exhibited “genuine” sadistic tendencies, while many prisoners were emotionally traumatized

at Yale University by Stanley Milgram, Zimbardo’s former college friend. Tom Peters and Robert H. Waterman Jr wrote in 1981 that the Milgram experiment and the Stanford prison experiment were frightening in their implications about the danger which lurks in the darker side of human nature.

Conclusions

The Stanford experiment ended on August 20, 1971, only six days after it began instead of the fourteen it was supposed to have lasted. The experiment’s result has been argued to demonstrate the impressionability and obedience of people when provided with a legitimizing ideology and social and institutional support. It is also used to illustrate cognitive dissonance theory and the power of authority.

In psychology, the results of the experiment are said to support situational attribution of behaviour rather than dispositional attribution. In other words, it seemed the situation caused the participants’ behaviour, rather than anything inherent in



their individual personalities. In this way, it is compatible with the results of the also-famous Milgram experiment, in which ordinary people fulfilled orders to administer what appeared to be damaging electric shocks to a confederate of the experimenter.

Shortly after the study had been completed, there were bloody revolts at both the San Quentin and Attica prison facilities, and Zimbardo reported his findings on the experiment to the U.S. House Committee on the Judiciary.

Depersonalization

Depersonalization is a malfunction or anomaly of the mechanism by which an individual has self awareness. It is a feeling of watching oneself act, while having no control over a situation. It can be considered desirable, such as in the use of recreational drugs, but it usually refers to the severe form found in anxiety and, in the most intense cases, panic attacks. A sufferer feels they have changed and the world has become less real, vague, dreamlike, or lacking in significance. It can sometimes be a rather disturbing experience, since many feel that, indeed, they are living in a “dream.”

Depersonalization is a subjective experience of unreality in one’s sense of self, while derealization is unreality of the outside world. Although most authors currently regard depersonalization (self) and derealization (surroundings) as independent constructs, many do not want to separate derealization from depersonalization. The main reason for this is nosological, because these symptoms often co-occur, but there is another reason of great

philosophical importance, namely, that the phenomenological experience of self, others, and world is one continuous whole. Thus, feelings of unreality may blend in and the person may puzzle over whether it is the self or the world that feels unreal.

Chronic depersonalization refers to depersonalization disorder, which is classified by the DSM-IV as a dissociative disorder. Though depersonalization-derealization feelings can happen to anyone subject to temporary severe anxiety/stress, chronic depersonalization is more related to individuals who have experienced a severe trauma or prolonged stress/anxiety. (See depersonalization disorder.) Depersonalization-derealization is the single most important symptom in the spectrum of dissociative disorders, including Dissociative Identity Disorder and Dissociative Disorder Not Otherwise Specified. It is a very prominent symptom also in some other, non-dissociative, disorders – such as anxiety disorders, clinical depression, bipolar disorder,



der, obsessive-compulsive disorder, migraine, sleep deprivation, and some types of epilepsy.

Prevalence

The symptom of depersonalization is the third most common psychological symptom, after feelings of anxiety and feelings of depression. Depersonalization can also accompany sleep deprivation (often occurring when suffering from jet lag), migraine, obsessive-compulsive disorder, stress, and anxiety; it is a symptom of anxiety disorders, such as panic disorder. Interoceptive exposure is a non-pharmacological method that can be used to induce depersonalization.

A study of undergraduate students found that individuals high on the depersonalization/derealization subscale of the Dissociative Experiences Scale exhibited a more pronounced cortisol response. Individuals high on the absorption subscale, which measures a subject’s experiences of concentration to the exclusion of awareness of other events, showed weaker cortisol responses.

Hallucinogen Persisting Perception Disorder

Hallucinogen Persisting Perception Disorder or HPPD is a disorder characterized by a continual presence of visual disturbances that are reminiscent of those generated by the ingestion of hallucinogenic substances. Previous use of hallucinogens is needed, though not sufficient, for diagnosing someone with the disorder. For an individual to be diagnosed with HPPD, the symptoms cannot be due to another medical condition. HPPD is distinct from flashbacks by reason of its relative permanence; while

flashbacks are transient, HPPD is persistent. HPPD is a DSM-IV diagnosis with diagnostic code 292.89.

Symptoms

There are a number of perceptual changes that can accompany HPPD. Typical symptoms of the disorder include: halos surrounding objects, trails following objects in motion, difficulty distinguishing between colors, apparent shifts in the hue of a given item, the illusion of movement in a static setting, air assuming a grainy or textured quality (visual snow or static, by popular description), distortions in the dimensions of a perceived object, and a heightened awareness of floaters. The visual alterations experienced by those with HPPD are not homogeneous and there appear to be individual differences in both the number and intensity of symptoms.

Visual aberrations can occur periodically in healthy individuals - e.g. afterimages after staring at a light, noticing floaters inside the eye, or seeing specks of light in a darkened room. However, in people with HPPD, symptoms are typically so severe that the individual cannot ignore them and HPPD is associated with new visual disturbances. It does not appear to merely increase those already in existence.

It also should be noted that the visuals do not constitute true hallucinations in the clinical sense of the word; people with HPPD recognize the visuals to be illusory, or pseudohallucinations, and thus demonstrate no inability to determine what is real (in contrast to, e.g., Schizophrenia).

Other disorders with similar symptoms

It must be emphasized that individuals without HPPD will sometimes notice visual abnormalities. These include floaters (material floating in the eye fluid that appears as black/dark objects floating in front of the eyes and are particularly visible when looking at the bright sky or on a white wall) and the white blood cells of the retinal blood vessels (seen as tiny, fast-moving and quickly disappearing white specks). Likewise, bright lights in an otherwise dark environment may generate trails and halos. Most people don’t notice these effects, because they are so used to them. A person fearful of having acquired HPPD may be much more conscious about any visual disturbance, including those that are normal. In addition, visual problems can be caused by brain infections or lesions, epilepsy, and a number of mental disorders (e.g., delirium, dementia, schizophrenia, Parkinson’s disease). For an individual to be diagnosed with HPPD, these other potential causes must be ruled out.

Afterimage

An afterimage or ghost image is an optical illusion that refers to an image continuing to appear in one’s vision after the exposure to the original image has ceased. One of the most common afterimages is the bright glow that seems to float before one’s eyes after staring at a light bulb or a headlight for a few seconds. The phenomenon of afterimages may be closely related to



Evil. It describes the thesis that the great evils in history generally, and the Holocaust in particular, were not executed by fanatics or sociopaths but rather by ordinary people who accepted the premises of their state and therefore participated with the view that their actions were normal.

Criticism

The concept of the banality of evil is criticized in an article under British Psychology journal The Psychologist. S. Alexander Haslam and Stephen D. Reicher argued that crimes

and two had to be removed from the experiment early. After being confronted by Christina Maslach, a graduate student in psychology whom he was dating, and realizing that he had been passively allowing unethical acts to be performed under his direct supervision, Zimbardo concluded that both prisoners and guards had become too grossly absorbed in their roles and terminated the experiment after six days.

Ethical concerns surrounding the famous experiment often draw comparisons to the Milgram experiment, which was conducted in 1961

Optical Illusion

persistence of vision, which allows a rapid series of pictures to portray motion, which is the basis of animation and cinema.

Afterimages come in two forms, negative (inverted) and positive (retaining original color). The process behind positive afterimages is unknown, though thought to be related to neural adaptation. On the other hand, negative afterimages are a retinal phenomenon and are well understood.

Negative afterimages

Negative afterimages are caused when the eye’s photoreceptors, primarily those known as cone cells, adapt from the over stimulation and lose sensitivity. Normally the eye deals with this problem by rapidly moving small amounts (see: micro-saccade), the motion later being “filtered out” so it is not noticeable. However if the colour image is large enough that the small movements are not enough to change the color under one area of the retina, those cones will eventually tire or adapt and stop responding. The rod cells can also be affected by this.

When the eyes are then diverted to a blank space, the adapted photoreceptors send out a weak signal and those colors remain muted. However, the surrounding cones that were not being excited by that colour are still “fresh”, and send out a strong signal. The signal is exactly the same as if looking at the opposite color, which is how the brain interprets it.

Ewald Hering explained how the brain sees after-images, in terms of three pairs of primary colors. This opponent process theory states that the human visual system interprets color information by processing signals from cones and rods in an antagonistic manner. The opponent color theory suggests that there are three opponent channels: red versus cyan, blue versus yellow, and black versus white. Responses to one colour of an opponent channel are antagonistic to those to the other colour. Therefore, a green image will produce a magenta afterimage. The green color tires out the green photoreceptors, so they produce a weaker signal. Anything resulting in less green, is interpreted as its paired primary colour, which is magenta.

Afterimage on empty shape

Afterimage on empty shape is a type of afterimage which result in “positive” afterimage. After viewing a colored background that contains a white shape (such as the color dove illusion).When the background color disappears (becomes white) an illusionary color, similar to the original background is perceived within the shape.

Optical Illusion

An optical illusion (also called a visual illusion) is characterized by visually perceived images that differ from objective reality. The information gathered by the eye is processed in the brain to give a percept that does not tally with a physical measurement of the stimulus source. There are three main types: literal optical illusions that create images that are different from the objects that make them, physiological ones that are

Marcel Duchamp

the effects on the eyes and brain of excessive stimulation of a specific type (brightness, tilt, color, movement), and cognitive illusions where the eye and brain make unconscious inferences.

Physiological illusions

Physiological illusions, such as the afterimages following bright lights, or adapting stimuli of excessively longer alternating patterns (contingent perceptual aftereffect), are presumed to be the effects on the eyes or brain of excessive stimulation of a specific type – brightness, tilt, color, movement, etc. The theory is that stimuli have individual dedicated neural paths in the early stages of visual processing, and that repetitive stimulation of only one or a few channels causes a physiological imbalance that alters perception.

The Hermann grid illusion and Mach bands are two illusions that are best explained using a biological approach. Lateral inhibition, where in the receptive field of the retina light and dark receptors compete with one another to become active, has been used to explain why we see bands of increased brightness at the edge of a color difference when viewing Mach bands. Once a receptor is active it inhibits adjacent receptors. This inhibition creates contrast, highlighting edges. In the Hermann grid illusion the gray spots appear at the intersection because of the inhibitory response which occurs as a result of the increased dark surround. Lateral inhibition has also been used to explain the Hermann grid illusion, but this has been disproved.

Cognitive illusions

Cognitive illusions are assumed to arise by interaction with assumptions about the world, leading to “unconscious inferences”, an idea first suggested in the 19th century by Hermann Helmholtz. Cognitive illusions are commonly divided into ambiguous illusions, distorting illusions, paradox illusions, or fiction illusions.

- Ambiguous illusions are pictures or objects that elicit a perceptual ‘switch’ between the alternative interpretations. The Necker cube is a well known example; another instance is the Rubin vase.
- Distorting illusions are characterized by distortions of size, length, or curvature. A striking example is the Café wall illusion. Another example is the famous Müller-Lyer illusion.
- Paradox illusions are generated by objects that are paradoxical or impossible, such as the Penrose triangle or impossible staircases seen, for example, in M. C. Escher’s Ascending and Descending and Waterfall. The triangle is an illusion dependent on a cognitive misunderstanding that adjacent edges must join.
- Fictional illusions are defined as the perception of objects that are genuinely not there to all but a single observer, such as those induced by schizophrenia or a hallucinogen. These are more properly called hallucinations.

Marcel Duchamp

Marcel Duchamp (28 July 1887 - 2 October 1968) was a French artist whose work is most often associated with the Dadaist and Surrealist movements. Duchamp’s output influenced the development of post-World War I Western art. He advised modern art collectors, such as Peggy

Guggenheimandotherprominent figures, thereby helping to shape the tastes of Western art during this period.

A playful man, Duchamp challenged conventional thought about artistic processes and art marketing, not so much by writing, but through subversive actions such as dubbing a urinal “art” andnamingitFountain. He produced relatively few artworks, while moving quickly through the avant-garde circles of his time.

<div></div>	<div>“The creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act.”</div>
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Transition from art to chess

In 1918 Duchamp made a hiatus from the New York art scene, interrupting his work on the Large Glass, and went to Buenos Aires, Argentina. He remained for nine months and often played chess. He even carved from wood his own chess set, with the assistance of a local craftsman who made the knights. He moved to Paris in 1919, and then back to the United States in 1920. Upon his return to Paris in 1923, Duchamp was, in essence, no longer a practicing artist. Instead, he played chess, which he studied for the rest of his life to the exclusion of most other activities.

Duchamp can be seen, very briefly, playing chess with Man Ray in the short film Entr’acte (1924) by Rene Clair. He designed the 1925 Poster for the Third French Chess Championship, and as a competitor in the event, finished at fifty percent (3–3, with two draws). Thus he earned the title of chess master. During this period his fascination with chess so distressed his first wife that she glued his pieces to the board. Duchamp continued to play in the French Championships and also in the Olympiads from 1928–1933, favoring hypermodern openings such as the Nimzo–Indian.

Sometime in the early 1930s, Duchamp reached the height of his ability, but realized that he had little chance of winning recognition in top-level chess. In following years, his participation in chess tournaments declined, but he discovered correspondence chess and became a chess journalist, writing weekly newspaper columns. While his contemporaries were achieving spectacular success in the art world by selling their works to high-society collectors, Duchamp observed “I am still a victim of chess. It has all the beauty of art – and much more. It cannot be commercialized. Chess is much purer than art in its social position.” On another occasion, Duchamp elaborated, “The chess pieces are the block alphabet which shapes thoughts; and these thoughts, although making a visual design on the chess-board, express their beauty abstractly, like a poem... I have come to the personal conclusion that while all artists are not chess players, all chess players are artists.”

In 1932 Duchamp teamed with chess theorist Vitaly Halberstadt to publish “L’opposition et cases conjuguées sont réconciliées” (Opposition and Sister Squares are Reconciled). This treatise describes the Lasker-Reichhelm position,

Shock Art

an extremely rare position that can arise in the endgame. Using enneagram-like charts that fold upon themselves, the authors demonstrated that in this position, the most Black can hope for is a draw.

The theme of the “endgame” is important to an understanding of Duchamp’s complex attitude towards his artistic career. Irish playwright Samuel Beckett was an associate of Duchamp, and used the theme as the narrative device for the 1957 play of the same name, “Endgame.” In 1968, Duchamp played an artistically important chess match with avant-garde composer John



Cage, at a concert entitled “Reunion”. Music was produced by a series of photoelectric cells underneath the chessboard, triggered sporadically by normal game play.

On choosing a career in chess, Duchamp said: “If Bobby Fischer came to me for advice, I certainly would not discourage him – as if anyone could – but I would try to make it positively clear that he will never have any money from chess, live a monk-like existence and know more rejection than any artist ever has, struggling to be known and accepted.” Duchamp left a legacy to chess in the form of an enigmatic endgame problem he composed in 1943. The problem was included in the announcement for Julian Lev’s gallery exhibition “Through the Big End of the Opera Glass”, printed on translucent paper with the faint inscription: “White to play and win.” Grandmasters and endgame specialists have since grappled with the problem, with most concluding that there is no solution.

Death and burial

Marcel Duchamp died on October 2, 1968 in Neuilly-sur-Seine, France, and is buried in the Rouen Cemetery, in Rouen, France. His grave bears the epitaph, “D’ ailleurs, c’est toujours les autres qui meurent;” or “Besides, it’s always other people who die.”

Shock Art

Shock art is contemporary art that incorporates disturbing imagery, sound or scents to create a shocking experience. While the art form’s proponents argue that it is “embedded with social commentary” and critics dismiss it as “cultural pollution”, it is an increasingly marketable art, described by one art critic in 2001 as “the safest kind of art that an artist can go into the business of making

today”. While shock art attracts curators and makes headlines, Reason magazine’s 2007 review of The Art Newspaper suggested that traditional art shows continue to have more popular appeal.

History

While the movement has become increasingly mainstream, the roots of shock art run deep into art history; Royal Academy curator Norman Rosenthal noted in the catalog for the “shock art” exhibit Sensation in 1997 that artists have always been in the business of conquering “territory that hitherto has been taboo”. In China, which experi-

Kara Walker

- Myra, (1997) a portrait of murderer Myra Hindley constructed of children’s handprints, by Marcus Harvey.
- Orgies of Mystery Theatre, by Hermann Nitsch, a display of music and dance in the midst of “dismembered animal corpses”, at 1966’s Destruction in Art Symposium.

Kara Walker

Kara Walker (born November 26, 1969) is a contemporary African American artist who explores race, gender, sexuality, violence and identity in her work. She is best known for her room-size tableaux of black cut-paper silhouettes.

Career

Some of Walker’s exhibitions have been shown at The Renaissance Society in Chicago, the Museum of Modern Art in New York, the San Francisco Museum of Modern Art, the Walker Art Center in Minneapolis, the Modern Art Museum of Fort Worth, and the Museum of Contemporary Art in Chicago. Walker has also been shown internationally and featured on PBS. Her work graces the cover of musician Arto Lindsay’s recording, Salt (2004).

Walker’s silhouette images work to bridge unfinished folklore in the Antebellum South, raising identity and gender issues for African American women in particular. However, because of her confrontational approach to the topic, Walker’s artwork is reminiscent of Andy Warhol’s Pop Art during the 1960s (indeed, Walker says she adored Warhol growing up as a child). Her nightmarish yet fantastical images incorporate a cinematic feel. Walker uses images from historical textbooks to show how African American slaves were depicted during Antebellum South. Some of her images are grotesque, for example, in The Battle of Atlanta, a white man, presumably a Southern soldier, is raping a black girl while her brother watches in shock, a white child is about to insert his sword into a nearly-lynched black woman’s vagina, and a male black slave rains tears all over an adolescent white boy.

In 1997, Walker—who was 28 at the time—was one of the youngest people to receive a MacArthur fellowship.

In response to Hurricane Katrina, Walker created “After the Deluge,” since the hurricane had devastated many poor and black areas of New Orleans. Walker was bombarded with news images of “black corporeality,” including fatalities from the hurricane reduced to bodies and nothing more. She likened these casualties to African slaves piled onto ships for the Middle Passage, the Atlantic crossing to America.

“I was seeing images that were all too familiar. It was black people in a state of life-or-death desperation, and everything corporeal was coming to the surface: water, excrement, sewage. It was a re-inscription of all the stereotypes about the black body.”

In 2007, Walker was listed among Time Magazine’s 100 Most Influential People in The World, Artists and Entertainers, in a citation written by fellow artist Barbara Kruger..

Walker lives in New York and is on the faculty of the MFA program at Columbia University.

Zach Houston

Light is electromagnetic radiation, particularly radiation of a wavelength that is visible to the human eye (about 400-700 nm, or perhaps 380-750 nm). In physics, the term light sometimes refers to electromagnetic radiation of any wavelength, whether visible or not.

Four primary properties of light are: <div> <div></div> <div>– Intensity</div> <div>– Frequency or wavelength</div> <div>– Polarization</div> <div>– Phase</div> </div>
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Light, which exists in tiny “packets” called photons, exhibits properties of both waves and particles. This property is referred to as the wave-particle duality. The study of light, known as optics, is an important research area in modern physics.

Light sources

There are many sources of light. The most common light sources are thermal: a body at a given temperature emits a characteristic spectrum of black-body radiation. Examples include sunlight (the radiation emitted by the chromosphere of the Sun at around 6,000 K peaks in the visible region of the electromagnetic spectrum when plotted in wavelength units and roughly 40% of sunlight is visible), incandescent light bulbs (which emit only around 10% of their energy as visible light and the remainder as infrared), and glowing solid particles in flames. The peak of the blackbody spectrum is in the infrared for relatively cool objects like human beings. As the temperature increases, the peak shifts



to shorter wavelengths, producing first a red glow, then a white one, and finally a blue color as the peak moves out of the visible part of the spectrum and into the ultraviolet. These colors can be seen when metal is heated to “red hot” or “white hot”. Blue thermal emission is not often seen. The commonly seen blue colour in a gas flame or a welder’s torch is in fact due to molecular emission, notably by CH radicals (emitting a wavelength band around 425 nm).

Atoms emit and absorb light at characteristic energies. This produces “emission lines” in the spectrum of each atom. Emission can be spontaneous, as in light-emitting diodes, gas discharge lamps (such as neon lamps and neon signs, mercury-vapor lamps, etc.), and flames (light from the hot gas itself–so, for example, sodium in a gas flame emits characteristic yellow light). Emission can also be stimulated, as in a laser or a microwave maser.

Deceleration of a free charged particle, such as an

electron, can produce visible radiation: cyclotron radiation, synchrotron radiation, and bremsstrahlung radiation are all examples of this. Particles moving through a medium faster than the speed of light in that medium can produce visible Cherenkov radiation.

Certain chemicals produce visible radiation by chemoluminescence. In living things, this process is called bioluminescence. For example, fireflies produce light by this means, and boats moving through water can disturb plankton which produce a glowing wake.

Certain substances produce light when they are illuminated by more energetic radiation, a process known as fluorescence. Some substances emit light slowly after excitation by more energetic radiation. This is known as phosphorescence.

Phosphorescent materials can also be excited by bombarding them with subatomic particles. Cathodoluminescence is one example of this. This mechanism is used in cathode ray tube televisions.

Certain other mechanisms can produce light:

- scintillation
- electroluminescence
- sonoluminescence
- triboluminescence
- Cherenkov radiation

When the concept of light is intended to include very-high-energy photons (gamma rays), additional generation mechanisms include:

- Radioactive decay**
- Particle-antiparticle annihilation**

Light pressure

Light pushes on objects in its path, just as the wind would do. This pressure is most easily explainable in particle theory: photons hit and transfer their momentum. Light pressure can cause asteroids to spin faster, acting on their irregular shapes as on the vanes of a windmill. The possibility to make solar sails that would accelerate spacecrafts in space is also under investigation.

Although the motion of the Crookes radiometer was originally attributed to light pressure, this interpretation is incorrect; the characteristic Crookes rotation is the result of a partial vacuum. This should not be confused with the Nichols radiometer, in which the motion is directly caused by light pressure.

Spirituality

The sensory perception of light plays a central role in spirituality (vision, enlightenment, darshan, Tabor Light). The presence of light as opposed to its absence (darkness) is a common Western metaphor of good and

Black-and-White Dualism

evil, knowledge and ignorance, and similar concepts.

Black-and-White Dualism

The colors White and Black are widely used to depict opposites. Visually, white and black offer the highest possible contrast. In western culture, white and black traditionally symbolize the dichotomy of good and evil, metaphorically related to light and darkness and day and night. The dichotomy of light and darkness appears already in the Pythagorean Table of Opposites

- in mythology
 - the account of creation in Genesis has God “separate light from darkness” on the First Day.
 - War of the Sons of Light Against the Sons of Darkness
 - the underworld (Hades, Tartarus) was imagined as a chthonic place of darkness, contrasting with the celestial realm of the gods. Christian notions of heaven and hell inherit this conception, as do the “dark angels” vs. the unfallen angels, often with aureola (halos), in Christian mythology.
 - “Black and white thinking” is the false dichotomy of assuming anything not good is evil and vice versa.
- Dress
 - White often represents purity or innocence in Western culture, particularly as white clothing or objects are easy to stain. In most Western countries white is the color worn by brides at weddings. Angels are typically depicted as clothed in white robes. In many Hollywood Westerns, bad cowboys wear black hats while the good ones wear white. Melodrama villains are dressed in black and heroines in white dresses. Evil witches are stereotypically dressed in black and good fairies in white.
 - This can be reversed as a deliberate play on conventions, by having the evil character dress in white, as a symbol of their hypocrisy or arrogance. For example, Don Fanucci in “The Godfather, Part II” is an evil character, but wears an expensive all-white suit as a sign of his esteem, power and prestige. Sometimes protagonists can wear black too, as in Star Wars Episode VI: Return of the Jedi, wherein Luke Skywalker wears black during the final battle.
 - In computer security, a black hat is an attacker with evil intentions, while a white hat bears no such ill will. (This is derived from the Western movie convention.)
- Magic
 - Healing or “good” paranormal magic is called White magic. Black magic is a destructive or evil form of magic.
 - A Treatise on White Magic is a book by Alice Bailey, a Theosophist.
 - White witch
- the Yin and yang symbol (太极图 tàijítú), attributed to Lái Zhī-Dé (1525–1604)
- the Dark Ages vs. the Age of Enlightenment

The topos of “light and darkness” is also reflected in numerous titles in popular culture, such as Light in My Darkness (1927), Darkness and the Light (1942), Creatures of Light and Darkness (1969), From Darkness to Light (1973), Darkness and Light (1989), The Lord of the Light and of the Darkness (1993), The Darkness and the Light (1997), Between the Darkness and the Light (1997), Out of the Darkness, Into the Light (1998).

Mythology

The term “mythology” sometimes refers to the study of myths and sometimes refers to a body of myths. For example, comparative mythology is the study of connections between myths from different cultures, whereas Greek mythology is the body of myths from ancient Greece.

Mythology

The term “myth” is often used colloquially to refer to a false story; however, the academic use of the term generally does not refer to truth or falsity. In the field of folkloristics, a myth is conventionally defined as a sacred narrative explaining how the world and humankind



came to be in their present form. Many scholars in other academic fields use the term “myth” in somewhat different ways. In a very broad sense, the word can refer to any traditional story.

Typical characteristics

The main characters in myths are usually gods or super-natural heroes. As sacred stories, myths are often endorsed by rulers and priests and closely linked to religion. In the society in which it is told, a myth is usually regarded as a true account of the remote past. In fact, many societies have two categories of traditional narrative–(1) “true stories”, or myths, and (2) “false stories”, or fables. Myths generally take place in a primordial age, when the world had not yet achieved its current form. They explain how the world gained its current form and how customs, institutions, and taboos were established.

Related concepts

Closely related to myth are legend and folktale. Myths, legends, and folktales are different types of traditional story. Unlike myths, folktales can take place at any time and any place, and they are not considered true or sacred even by the societies that tell them. Like myths, legends are stories that are traditionally considered true; however, they are set in a more recent time, when the world was much as it is today. Also, legends generally feature humans as their main characters, whereas myths generally focus on superhuman characters.

The distinction between myth, legend, and folktale is meant simply as a useful tool for grouping traditional stories. In many cultures, it is hard to draw a sharp line between myths and legends. Instead of dividing their traditional stories into myths, legends, and folktales, some cultures divide them into two categories – one that roughly corresponds to folktales, and one that combines myths and legends. Even myths and folktales are not completely distinct: a story may be considered true – and therefore a myth – in one society, but considered fictional – and therefore a folktale – in another society. In fact, when a myth loses its status as part of a religious system, it often takes on traits more

List of Deities

typical of folktales, with its formerly divine characters reinterpreted as human heroes, giants, or fairies.

Myth, legend, and folktale are only a few of the categories of traditional stories. Other categories include anecdotes and some kinds of jokes. Traditional stories, in turn, are only one category within folklore, which also includes items such as gestures, costumes, and music.

List of Deities

This list of deities is an index to polytheistic deities of the different religions, cultures and mythologies of the world, listed by type and by region. This is not a list of names or epithets of God in monotheistic religions, for which see Names of God. For deified individuals see List of people who have been considered deities, Apotheosis, Imperial cult. For fictional deities (that is, deities whose cult is fictional) see List of fictional deities.

Names of God

Judaism
In the Hebrew scriptures the Jewish name of God is considered sacred and, out of deep respect for the name, Jews do not say the name of God and do not erase it if it is written. (See Exodus 20:7) The tetragrammaton (Hebrew: יהוה, English: YHVH or YHWH) is the name for the group of four Hebrew letters which represent the name of God. The Tetragrammaton occurs 6,828 times in the Hebrew text in the Biblia Hebraica and the Biblia Hebraica Stuttgartensia. Neither vowels nor vowel points were used in ancient Hebrew writings.

Some claim the pronunciation of YHWH has been lost, other authorities say it has not and that it is pronounced Yahweh. References, such as The New Encyclopædia Britannica, validate the above by offering additional specifics:

Early Christian writers, such as Clement of Alexandria in the 2nd century, had used a form like Yahweh, and claim that this pronunciation of the tetragrammaton was never really lost. Other Greek transcriptions also indicated that YHWH should be pronounced Yahweh.

Clement of Alexandria transliterated the tetragrammaton as Ι α ο υ. The above claims were founded upon the understanding that Clement of Alexandria had transliterated YHWH as Ι α ο υ ε in Greek, which is pronounced “Yahweh” in English. However, the final -e in the latter form has been shown as having been a later addition. For a more in-depth discussion of this, see the article Yahweh. Instead of pronouncing YHWH during prayer, Jews say Adonai (“Lord”). Halakha requires that secondary rules be placed around the primary law, to reduce the chance that the main law will be broken. As such, it is common Jewish practice to restrict the use of the word Adonai to prayer only. In conversation, many Jewish people, even when not speaking Hebrew, will call God “Hashem” , **הַשֵּׁם**, which is Hebrew for “the Name” (this appears in Leviticus 24:11).

A common title of God in the Hebrew Bible is Elohim (Hebrew: **אֱלֹהִים**); as opposed to other titles of God in

Judaism, this name also describes gods of other religions, angels, or even humans of great importance (John 10:34-36).

Taboos

Judaism
Most observant Jews forbid discarding holy objects, including any document with a name of God written on it. Once written, the name must be preserved indefinitely. This leads to several noteworthy practices:

- Commonplace materials are written with an intentionally abbreviated form of the name. For instance, a Jewish letter-writer may substitute “G-d” for the name God. Thus, the letter may be discarded along with ordinary trash. (Note that not all Jews agree that non-Hebrew words like God are covered under the prohibition.)
- Since the Divine presence (or possibly an appearance of God) can supposedly be called simply by pronouncing His true name correctly, substitute names are used.
- Copies of the Torah are, like most scriptures, heavily used during worship services, and will eventually become worn out. Since they may not be disposed of in any way, including by burning, they are removed, traditionally to the synagogue attic. See genizah. There they remain until they are buried.
- All religious texts that include the name of God are buried.

Zoroastrianism

Most Zoroastrians believe that once a product with the name or image of Zoroaster or Ahura Mazda cannot be throw away in the garbage. Yet, it does not have to be kept indefinitely. There are several ways to dispose of the item :

- They can be thrown away if they mix back with the seven creations:
 - Placed in a river, lake or other body of water
- Buried in the ground (earth)

Islam

- In Islam, the name (or any names) of God is generally treated with the utmost respect. It is referred to in many verses of the Qur'an that the real believers respect the name of God very deeply. (e.g. stated in 33/35, 57/16, 59/21, 7/180, 17/107, 17/109, 2/45, 21/90, 23/2). On the other hand the condition is openly stressed by prohibiting people from unnecessary swearing using the name of Allah. (e.g. stated in 24/53, 68/, 63/2, 58/14, 58/16, 2/224) Thus the mention of the name of God is expected to be done so reverently. In Islam there are 100 different names of Allah, 99 of which are known to mankind, and 1 which, in the Islamic religion, is told to those who enter heaven.

Christianity

- In Christianity, God’s name may not “be used in vain” (see the Ten Commandments), which is commonly interpreted to mean that it is wrong to curse while making reference to God (ex. “Oh my God!” as an expression of frustration or anger). A more natural interpretation of this passage is in relation to oath taking, where the command is to hold true to those commands made ‘in God’s name’. (The idea that Christians should hold to their word is reinforced by certain statements by Jesus in the Gospels – cf Matthew 5:37) God’s name being used in vain can also be interpreted as trying to invoke the power of God, as a means to impress, intimidate, punish, condemn, and/or control others. This can also be used to refer to the idea of saying that one acts “in God’s behalf” when doing things that are clearly personal actions.
- Some Christians capitalize all references to God in writing, including pronouns. (ex. “The Lord, He is God, Holy is His Name.”)
- Different Christian cultures have different views on the



Infant

An infant or baby is the term used to refer to the very young offspring of humans and other primates.



Newborn and neonate

In general contexts, a newborn is an infant who is within hours, days, or up to a few weeks from birth. In medical contexts, newborn or neonate (from Latin, neonatus, newborn) refers to an infant in the first 28 days of life (less than a month old).

Infant mortality

Infant mortality is the death of an infant in the first year of life. Major causes of infant mortality include dehydration, infection, congenital malformation and SIDS.

This epidemiological indicator is recognized as a very important measure of the level of health care in a country because it is directly linked with the health status of infants, children, and pregnant women as well as access to medical care, socioeconomic conditions, and public health practices.

Care and feeding

Infants cry as a form of basic instinctive communication. A crying infant may be trying to express a variety of feelings including hunger, discomfort, overstimulation, boredom, wanting something, or loneliness.

Breastfeeding is the recommended method of feeding by all major infant health organizations. Infants are born with a sucking reflex allowing them to extract the milk from the nipples of the breasts or the nipple of the baby bottle, as well as an instinctive behavior known as rooting with which they seek out the nipple.

Until they are toilet-trained, infants in industrialized countries wear diapers. Children need more sleep than adults—up to 18 hours for newborn babies, with a declining rate as the child ages. Until babies learn to walk, they are carried in the arms, held in slings or baby carriers, or transported in baby carriages or strollers

Attachment

Attachment theory is primarily an evolutionary and ethological theory whereby the infant or child seeks proximity to a specified attachment figure in situations of alarm or distress, for the purpose of survival. The forming of attachments is considered to be the foundation of the infant/child’s capacity to form and conduct relationships throughout life. Attachment is not the same as love and/or affection although they often go together. Attachment and attachment behaviors tend to develop between the age of 6 months and 3 years. Infants become attached to adults who are sensitive and responsive in social

interactions with the infant, and who remain as consistent caregivers for some time. Parental responses lead to the development of patterns of attachment which in turn lead to ‘internal working models’ which will guide the individual’s feelings, thoughts, and expectations in later relationships. There are a number of attachment ‘styles’ namely ‘secure’, ‘anxious-ambivalent’, ‘anxious-avoidant’, (all ‘organized’) and ‘disorganized’, some of which are more problematic than others. A lack of attachment or a seriously disrupted capacity for attachment could potentially amount to serious disorders.

Adaptation

Adaptation is one of the basic phenomena of biology. It is the process whereby an organism becomes better suited to its habitat. Also, the term adaptation may refer to a characteristic which is especially important for an organism’s survival.

General principles

Adaptation is, first of all, a process, rather than a physical part of a body. The distinction may be seen in an internal parasite (such as a fluke), where the bodily structure is greatly simplified, but nevertheless the organism is highly adapted to its unusual environment. From this we see that adaptation is not just a matter of visible traits: in such parasites critical adaptations take place in the life-cycle, which is often quite complex. However, as a practical term, adaptation is often used for the product: those features of a species which result from the process. Many aspects of an animal or plant can be correctly called adaptations, though there are always some features whose function is in doubt. By using the term adaptation for the evolutionary process, and adaptive trait for the bodily part or function (the product), the two senses of the word may be distinguished.

All adaptations help organisms survive in their ecological niches. These adaptative traits may be structural, behavioral or physiological. Structural adaptations are physical features of an organism (shape, body covering, defensive or offensive armament); and also the internal organization). Behavioural adaptations are composed of inherited behaviour chains and/or the ability to learn: behaviours may be inherited in detail (instincts), or a tendency for learning may be inherited (see neuropsychology). Examples: searching for food, mating, vocalizations. Physiological adaptations permit the organism to perform special functions (for instance, making venom, secreting slime, phototropism); but also more general functions such as growth and development, temperature regulation, ionic balance and other aspects of homeostasis. Adaptation, then, affects all aspects of the life of an organism.

Changes in habitat

Before Darwin, adaptation was seen as a fixed relationship between an organism and its habitat. It was not appreciated that as the climate changed, so did the habitat; and as the habitat

changed, so did the biota. Also, habitats are subject to changes in their biota: for example, invasions of species from other areas. The relative numbers of species in a given habitat are always changing. Change is the rule, though much depends on the speed and degree of the change.

Intimate relationships: co-adaptations

In co-evolution, where the existence of one species is tightly bound up with the life of another species, new or ‘improved’ adaptations which occur in one species are often followed by the appearance and spread of corresponding features in the other species. There are many examples of this: the idea emphasises that the life and death of living things is intimately connected, not just with the physical environment, but with the life of other species. These relationships are intrinsically dynamic, and may continue on a trajectory for millions of years, as has the relationship between flowering plants and insects (pollination).

Reproduction

Reproduction is the biological process by which new individual organisms are produced. Reproduction is a fundamental feature of all known life; each individual organism exists as the result of reproduction. The known methods of reproduction are broadly grouped into two main types: sexual and asexual.

In asexual reproduction, an individual can reproduce without involvement with another individual of that species. The division of a bacterial cell into two daughter cells is an example of asexual reproduction. Asexual reproduction is not, however, limited to single-celled organisms. Most plants have the ability to reproduce asexually.

Sexual reproduction requires the involvement of two individuals, typically one of each sex. Normal human reproduction is a common example of sexual reproduction.

Life without reproduction

The existence of life without reproduction is the subject of some speculation. The biological study of how the origin of life led from non-reproducing elements to reproducing organisms is called abiogenesis. Whether or not there were several independent abiogenetic events, biologists believe that the last universal ancestor to all present life on earth lived about 3.5 billion years ago.

Today, some scientists have speculated about the possibility of creating life non-reproductively in the laboratory. Several scientists have succeeded in producing simple viruses from entirely non-living materials. The virus is often regarded as not alive. Being nothing more than a bit of RNA or DNA in a protein capsule, they have no metabolism and can only replicate with the assistance of a hijacked cell’s metabolic machinery.

The production of a truly living organism (e.g., a simple bacterium) with no ancestors would be a much more complex task, but may well be possible according to current biological knowledge.

Horizontal Gene Transfer

Horizontal gene transfer (HGT), also Lateral gene transfer (LGT), is any process in which an organism incorporates genetic material from another organism without being the offspring of that organism. By contrast, vertical transfer occurs when an organism receives genetic material from its ancestor, e.g. its parent or a species from which it evolved. Most thinking in genetics has focused upon vertical transfer, but there is a growing awareness that horizontal gene transfer is a highly significant phenomenon, and amongst single-celled organisms perhaps the dominant form of genetic transfer. Artificial horizontal gene transfer is a form of genetic engineering.

Due to the increasing amount of evidence suggesting the importance of these phenomena for evolution, molecular biologists such as Peter Gogarten have described horizontal gene transfer as “A New Paradigm for Biology”.

Rhizome

Rhizome is a philosophical concept developed by Gilles Deleuze and Félix Guattari in their Capitalism and Schizophrenia (1972–1980) project. It is what Deleuze calls an “image of thought,” based on the botanical rhizome, that apprehends multiplicities.

Rhizome as a mode of knowledge

Gilles Deleuze and Félix Guattari used the term “rhizome” to describe theory and research that allows for multiple, non-hierarchical entry and exit points in data representation and interpretation. In A Thousand Plateaus, they opposed it to an arborescent conception of knowledge, which worked with dualist categories and binary choices. A rhizome works with horizontal and trans-species connections, while an arborescent model works with vertical and linear connections. Their use of the “orchid and the wasp” was taken from the biological concept of mutualism, in which two different species interact together to form a multiplicity (i.e. a unity that is multiple in itself). Horizontal gene transfer would also be a good illustration.

Rhizome theory is also gaining currency in the educational field, as a means of framing knowledge creation and validation in the online era: Dave Cormier (2008) criticizes the limitations of the expert-centered pedagogical planning and publishing cycle and posits instead a rhizomatic model of learning. In this rhizomatic model, knowledge is negotiated, and the learning experience is a social as well as a personal knowledge creation process with mutable goals and constantly negotiated premises. The rhizome metaphor, which represents a critical leap in coping with the loss of a canon against which to compare, judge, and value knowledge, may be particularly apt as a model for disciplines on the bleeding edge where the canon is fluid and knowledge is a moving target.

Mycelium

Mycelium (plural mycelia) is the vegetative part of a fungus, consisting of a mass of branching, thread-like hyphae. The mass of hyphae

is sometimes called shiro, especially within the fairy ring fungi. Fungal colonies composed of mycelia are found in soil and on or in many other substrates. Typically a single spore germinates into a monokaryotic mycelium which cannot reproduce sexually; when two compatible monokaryotic mycelia join and form a dikaryotic mycelium, that mycelium may form fruiting bodies such as mushrooms. A mycelium may be minute, forming a colony that is too small to see, or it may be extensive.

Is this the largest organism in the world? This 2,400-acre (9.7 km2) site in eastern Oregon had a contiguous growth of mycelium before logging roads cut through it. Estimated at 1,665 football fields in size and 2,200 years old, this one fungus has killed the forest above it several times over, and in so doing has built deeper soil layers that allow the growth of ever-larger stands of trees. Mushroom-forming forest fungi are unique in that their mycelial mats can achieve such massive proportions.

Mycelium is vital in terrestrial and aquatic ecosystems for its role in the decomposition of plant material. It contributes to the organic fraction of soil and its growth releases carbon dioxide back into the atmosphere. The mycelium of mycorrhizal fungi increases the efficiency of water and nutrient absorption of most plants and confers resistance to some plant pathogens. Mycelium is an important food source for many soil invertebrates.

Mushroom

A mushroom is the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground on soil or on its food source

Human use

Edible mushrooms are used extensively in cooking, in many cuisines (notably Chinese, European, and Japanese). Though mushrooms are commonly thought to have little nutritional value, many species are high in fiber and provide vitamins such as thiamine, riboflavin, niacin, biotin, cobalamins, ascorbic acid. Though not normally a significant source of vitamin D, some mushrooms can become significant sources after exposure to ultraviolet light, though this also darkens their skin. Mushrooms are also a source of some minerals, including selenium, potassium and phosphorus.

Most mushrooms that are sold in supermarkets have been commercially grown on mushroom farms. The most popular of these, Agaricus bisporus, is generally considered safe for most people to eat because it is grown in controlled, sterilized environments, though some individuals do not tolerate it well. Several varieties of A. bisporus are grown commercially, including whites, crimini, and portobello. Other cultivated species now available at many grocers include shiitake, maitake or hen-of-the-woods, oyster, and enoki.

Toxic mushrooms

Of central interest with respect to the chemical properties of mushrooms is the fact that many species produce secondary metabolites that render them toxic, mind-altering, or

even bioluminescent.

Although there are only a small number of deadly species, several others can cause particularly severe and unpleasant symptoms.

Psychoactive mushrooms

Psilocybin mushrooms possess psychedelic properties. They are commonly known as “magic mushrooms” “mushies” or “shrooms” and are available in smart shops in many parts of the world, though some countries have outlawed their sale. An article in the Journal of Psychopharmacology has made correlations between the induced hallucinations and subjects’ experiences up to several months later.

Because of their psychoactive properties, some mushrooms have played a role in native medicine, where they have been used in an attempt to effect mental and physical healing, and to facilitate visionary states. One such ritual is the Velada ceremony. A practitioner of traditional mushroom use is the shaman and curandera (priest-healer).

Psilocybin mushrooms are not the only psychoactive fungi. Amanita muscaria pictured above is also psychoactive. The active constituents are Ibotenic acid and Muscimol.

Psilocybin, a naturally occurring chemical in certain psychedelic mushrooms like Psilocybe cubensis, is being studied for its ability to help people suffering from psychological disorders, such as obsessive-compulsive disorder. Minute amounts have been reported to stop cluster and migraine headaches.

Medicinal mushrooms

Many species of medicinal mushrooms have been used in folk medicine for thousands of years. The use of medicinal mushrooms in folk medicine, is best documented in the East. Medicinal mushrooms are now the subject of study for many ethnobotanists and medical researchers. The ability of some mushrooms to inhibit tumor growth and enhance aspects of the immune system has been a subject of research for approximately 50 years. International mushroom research continues today, with a focus on mushroom’s that may have hypoglycemic activity, anti-cancer activity, anti-pathogenic activity, and immune system enhancing activity. Discoveries so far include, that the oyster mushroom naturally contains significant amounts of lovastatin, and that certain fungi may be a future source of taxol. To date, penicillin, lovastatin, ciclosporin, griseofulvin, cephalosporin, and ergometrine, are the most famous pharmaceuticals which have been isolated from the fungi kingdom.

Other uses

Mushrooms can be used for dyeing wool and other natural fibers. The chromophores of mushrooms are organic compounds and produce strong and vivid colors, and all colors of the spectrum can be achieved with mushroom dyes. Before the invention of synthetic dyes mushrooms were the source of many textile dyes.

Some fungi, types of polypores loosely called mushrooms, have been used as fire starters (known as tinder fungi).

Mushrooms and other fungi

Mushroom Cloud

Nuclear Weapon

play a role in the development of effective biological remediation and filtration technologies. The US Patent and Trademark Office can be searched for patents related to the latest developments in mycoremediation and mycofiltration.

Mushroom Cloud

A mushroom cloud is a distinctive pyrocumulus mushroom-shaped cloud of condensed water vapor or debris resulting from a very large explosion. They are most commonly associated with nuclear explosions, but any sufficiently large blast will produce the same sort of effect. Volcano eruptions and impact events can produce natural mushroom clouds.

Mushroom clouds form as a result of the sudden formation of a large mass of hot, low-density gases near the ground creating a Rayleigh-Taylor instability. The mass of gas rises rapidly, resulting in turbulent vortices curling downward around its edges and drawing up a column of additional smoke and debris in the center to form its “stem”. The mass of gas eventually reaches an altitude where it is no longer of lower density than the surrounding air and disperses, the debris drawn upward from the ground scattering and drifting back down (see fallout).

Origin of the term

Although the term itself appears to have been coined at the start of the 1950s, mushroom clouds generated by explosions were being described before the atomic era. For instance, The Times published a report on 1 October 1937 of a Japanese attack on Shanghai in China which generated “a great mushroom of smoke”. During the Second World War, descriptions of mushroom clouds were relatively common.

The atomic bomb cloud over Nagasaki, Japan was described in The Times of London of 13 August 1945 as a “huge mushroom of smoke and dust.” On 9 September 1945, the New York Times published an eyewitness account of the Nagasaki bombing, written by William L. Laurence, the official newspaper correspondent of the Manhattan Project, who accompanied one of the three aircraft that made the bombing run. He wrote of the bomb producing a “pillar of purple fire”, out of the top of which came “a giant mushroom that increased the height of the pillar to a total of 45,000 feet.” (See the effect in the picture of the Nagasaki bomb cloud shown above.)

Later in 1946, the Operation Crossroads nuclear bomb tests were described as having a “cauliflower” cloud, but a reporter present also spoke of “the mushroom, now the common symbol of the atomic age.” Mushrooms have traditionally been associated both with life and death, food and poison, making them a more powerful symbolic connection than, say, the “cauliflower” cloud. (Weart 1988)

Nuclear weapon

A nuclear weapon is an explosive device that derives its destructive force from nuclear reactions, either fission or a combination of fission and fusion. Both reactions release vast quantities of energy from relatively small amounts of matter; a modern thermonuclear weapon

weighing little more than a thousand kilograms can produce an explosion comparable to the detonation of more than a billion kilograms of conventional high explosive. Thus, even single small nuclear devices no larger than traditional bombs can devastate an entire city by blast, fire and radiation. Nuclear weapons are considered weapons of mass destruction, and their use and control has been a major aspect of international policy since their debut.

In the history of warfare, only two nuclear weapons have been detonated offensively, both near the end of World War II. The first was detonated on the morning of 6 August 1945, when the United States dropped a uranium gun-type device code-named “Little Boy” on the Japanese city of Hiroshima. The second was detonated three days later when the United States dropped a plutonium implosion-type device code-named “Fat Man” on the city of Nagasaki, Japan. These bombings resulted in the immediate deaths of around 120,000 people (mostly civilians) from injuries sustained from the explosion and acute radiation sickness, and even more deaths from long-term effects of ionizing radiation. The use of these weapons was and remains controversial.

Since the Hiroshima and Nagasaki bombings, nuclear weapons have been detonated on over two thousand occasions for testing purposes and demonstration purposes. A few states have possessed such weapons or are suspected of seeking them. The only countries known to have detonated nuclear weapons—and that acknowledge possessing such weapons—are (chronologically) the United States, the Soviet Union (succeeded as a nuclear power by Russia), the United Kingdom, France, the People’s Republic of China, India, Pakistan, and North Korea. Israel is also widely believed to possess nuclear weapons, though it does not acknowledge having them.

Nuclear strategy

Nuclear warfare strategy is a way for either fighting or avoiding a nuclear war. The policy of trying to ward off a potential attack by a nuclear weapon from another country by threatening nuclear retaliation is known as the strategy of nuclear deterrence. The goal in deterrence is to always maintain a second strike status (the ability of a country to respond to a nuclear attack with one of its own) and potentially to strive for first strike status (the ability to completely destroy an enemy’s nuclear forces before they could retaliate). During the Cold War, policy and military theorists in nuclear-enabled countries worked out models of what sorts of policies could prevent one from ever being attacked by a nuclear weapon.

There are critics of the very idea of nuclear strategy for waging nuclear war who have suggested that a nuclear war between two nuclear powers would result in mutual annihilation. From this point of view, the significance of nuclear weapons is purely to deter war because any nuclear war would immediately escalate out of mutual distrust and fear, resulting in mutually assured destruction. This

threat of national, if not global, destruction has been a strong motivation for anti-nuclear weapons activism.

Critics from the peace movement and within the military establishment have questioned the usefulness of such weapons in the current military climate. The use of (or threat of use of) such weapons would generally



be contrary to the rules of international law applicable in armed conflict, according to an advisory opinion issued by the International Court of Justice in 1996.

Perhaps the most controversial idea in nuclear strategy is that nuclear proliferation would be desirable. This view argues that, unlike conventional weapons, nuclear weapons successfully deter all-out war between states, and they are said to have done this during the Cold War between the U.S. and the Soviet Union. Political scientist Kenneth Waltz is the most prominent advocate of this argument.

It has been claimed that the threat of potentially suicidal terrorists possessing nuclear weapons (a form of nuclear terrorism) complicates the decision process. Mutually assured destruction may not be effective against an enemy who expects to die in a confrontation, as they may feel they will be rewarded in a religious afterlife as martyrs and would not therefore be deterred by a sense of self-preservation. Further, if the initial act is from rogue groups of individuals instead of a nation, there is no fixed nation or fixed military targets to retaliate against. It has been argued, especially after the September 11, 2001 attacks, that this complication is the sign of the next age of nuclear strategy, distinct from the relative stability of the Cold War.

Disarmament proposals

Beginning with the 1963 Partial Test Ban Treaty and continuing through the 1996 Comprehensive Test Ban Treaty, there have been many treaties to limit or reduce nuclear weapons testing and stockpiles. The 1968 Nuclear Non-Proliferation Treaty has as one of its explicit conditions that all signatories must “pursue negotiations in good faith” towards the long-term goal of “complete disarmament”. However, no nuclear state has treated that aspect of the agreement as having binding force.

Nonviolence

Only one country—South Africa—has ever fully renounced nuclear weapons they had independently developed. A number of former Soviet republics—Belarus, Kazakhstan, and Ukraine—returned Soviet nuclear arms stationed in their countries to Russia after the collapse of the USSR.

On the other hand, presupposes the intent of (but does not limit it to) social or political change as a reason for the rejection of violence. Also, a person may advocate nonviolence in a specific context while advocating violence in other contexts.

Philosophical

Love of the enemy, or the realization of the humanity of all people, is a fundamental concept of philosophical nonviolence. The goal of this type of nonviolence is not to defeat the enemy, but to win them over and create love and understanding between all. It is this principle which is most closely associated with spiritual or religious justifications of nonviolence, the central tenets of which can be found in each of the major Abrahamic religious traditions (Islam, Judaism and Christianity) as well as in the major Dharmic religious traditions (Hinduism, Buddhism, Jainism and Sikhism). It is also found in many pagan religious traditions. Nonviolent movements, leaders, and advocates have at times referred to, drawn from and utilised many diverse religious basis for nonviolence within their respective struggles. Examples of nonviolence found in religion and spirituality include the Sermon on the Mount when Jesus urges his followers to “love thine enemy,” in the Taoist concept of wuwei, or effortless action, in the philosophy of the martial art Aikido, in the Buddhist principle of metta, or loving-kindness towards all beings; and in the principle of ahimsa, or nonviolence toward any being, shared by Buddhism, Jainism and some forms of Hinduism. Additionally, focus on both nonviolence and forgiveness of sin can be found in the story of Abel in the Qur’an; Liberal movements within Islam have consequently used this story to promote Jewish ideals of nonviolence.

Respect or love for opponents also has a pragmatic justification, in that the technique of separating the deeds from the doers allows for the possibility of the doers changing their behaviour, and perhaps their beliefs. Martin Luther King said, “Nonviolence means avoiding not only external physical violence but also internal violence of spirit. You not only refuse to shoot a man, but you refuse to hate him.”

Revolution

Certain individuals (Barbara Deming, Danilo Dolci, Devere Allen etc.) and party groups (eg. Committees of Correspondence for Democracy and Socialism, Democratic Socialists of America, Socialist Party USA, Socialist Resistance or War Resisters League) have advocated nonviolent revolution as an alternative to violence as well as elitist reformism. This perspective is usually connected to militant anti-capitalism.

Many leftist and socialist movements have hoped to mount a “peaceful revolution” by organizing enough strikers to completely paralyze it. With the state and corporate apparatus thus crippled, the workers would be able to reorganize society along radically different lines. Some have argued that a relatively nonviolent revolution would

Voluntary Human

Extinction Movement

require fraternisation with military forces.

Voluntary Human

Extinction Movement

The Voluntary Human Extinction Movement, or VHEMT (pronounced “vehement”, is a movement which calls for the voluntary self-extinction of the human species. It was founded in 1991 in Portland, Oregon, by Les U. Knight.

Basic concept

As summarized in Disinfo in 2001, the basic concept behind VHEMT is the belief that the Earth would be better off without humans, and as such, humans should refuse to breed. Or, as the movement puts it: “The Movement presents an encouraging alternative to the callous exploitation and wholesale destruction of Earth’s ecology. [...] the hopeful alternative to the extinction of millions of species of plants and animals is the voluntary extinction of one species: Homo sapiens... us. [...] When every human chooses to stop breeding, Earth’s biosphere will be allowed to return to its former glory [...] the day there are no human beings on the planet.”

Support

VHEMT recognizes two levels of support:

“Volunteers” are people who believe in the VHEMT goal of eventual human extinction, and have decided to have no children (or no more, if they already have children).

“Supporters” are people who believe that “intentional creation of one more of us by any of us is unjustifiable at this time, but extinction of our species goes too far.”

VHEMT requests participants to declare which type of member they are, and the movement also requires the choice to be implicitly made.

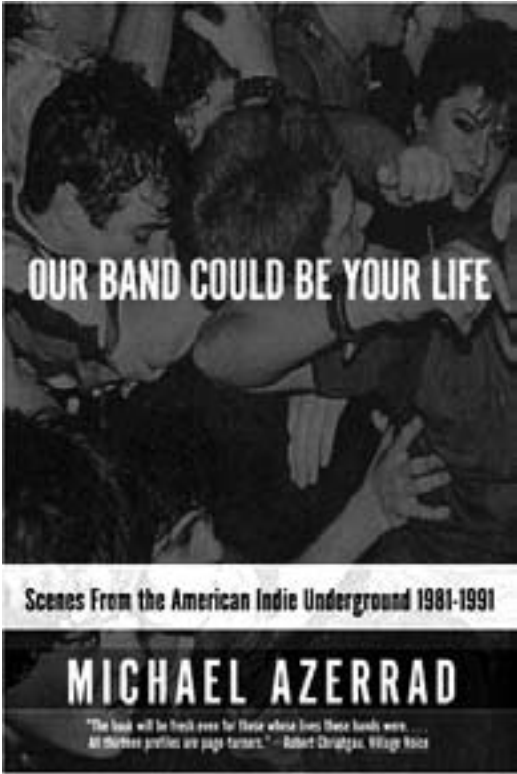
Interviews and media coverage

Knight was also interviewed by MSNBC’s Tucker Carlson, during which he debated with the host on the merits of the movement. Knight stressed the movement’s peaceful, nonviolent goals and reiterated that the movement’s motivation is environmental protection.

Criticism

VHEMT spreads its message through the Internet, thus reaching mainly wealthier nations. A few of these countries already have fertility rates below the replacement rate and are thus already trending towards “human extinction”, or at least a reduced population. However, according to VHEMT, wealthier nations have the largest impact on world resources.

Transhumanists and other critics reject the VHEMT assumption that humans have ceased to be a part of nature. Instead they argue that nature has, through humanity, become conscious and self-reflective for the first time, and that it is inconsistent for those who claim to value the biosphere to seek to extinguish one of its creations. Furthermore, as transhumanist Nick Bostrom has argued, only humanity is in a position to avert existential risks to the biosphere, such as asteroid impact.



Our Band Could Be Your Life

Our Band Could Be Your Life: Scenes from the American Indie Underground, 1981-1991 is a book by Michael Azerrad (ISBN 0-316-78753-1).

The title comes from the opening line of an autobiographical song written by Mike Watt of The Minutemen, one of the groups featured in the book. The song, “History Lesson, Pt II” is on Double Nickels on the Dime and details the band’s working class origins and populist sentiments: “Punk rock changed our lives.”

The book chronicles the careers of several underground rock groups who, while finding little or no mainstream success, were hugely influential in establishing American alternative and indie rock, mostly through nearly constant touring and records released on small, regional record labels.

Azerrad conducted many interviews with the members of the featured bands, and also conducted extensive research of old fanzines, as well as more mainstream newspapers and books.

Chapters in the book focus on each of thirteen groups:

- Black Flag (from Hermosa Beach/Los Angeles, California)
- Minutemen (from San Pedro/Los Angeles, California)
- Mission of Burma (from Boston, Massachusetts)
- Minor Threat (from Washington, D.C.)
- Hüsker Dü (from Minneapolis–St. Paul, Minnesota)
- The Replacements (from Minneapolis–St. Paul, Minnesota)
- Sonic Youth (from New York City)
- Butthole Surfers (from San Antonio, Texas)
- Big Black (from Evanston/Chicago, Illinois)
- Dinosaur Jr. (from Amherst, Massachusetts)
- Fugazi (from Washington, D.C.)
- Mudhoney (from Seattle, Washington)
- Beat Happening (from Olympia, Washington)

Record Label

In the music industry, a record label is a brand and a trademark associated with the marketing of music recordings and music videos. Most commonly, a record label is the company that manages such brands and trademarks, coordinates the production, manufacture, distribution, marketing and promotion, and enforcement of copyright protection of sound recordings and music videos; conducts talent scouting and development of new artists (“artists and

repertoire” or A&R); and maintains contracts with recording artists and their managers.

The term “record label” originally referred to the circular label in the center of a vinyl record that prominently displayed the manufacturer’s name, along with other information.

The music industry

Within the music industry, recording artists have been increasingly reliant upon record labels to broaden their audience, market their albums, and be both promoted and heard on radio, television, with publicists that assist performers in positive media reports to market their merchandise, and make it available via stores and other media outlets. The internet has increasingly been a way that some artists avoid costs and gain new audiences, as well as the use of videos in some cases, to sell their products.

Major vs. Independent record labels

Record labels may be small, localized, and “independent” (“indie”), or they may be part of a large international media group, or somewhere in between. The largest 4 record labels are called major labels. A sub-label is a label that is part of, but trades under a different name from, a larger record company.

Imprint

When a label is strictly a trademark or brand, not a company, then it is usually called an imprint, a term used for the same concept in the publishing industry. An imprint is sometimes marketed as being a project, unit, or division of a record label company, even though there is no legal business structure associated with the imprint.

Independent

Record companies and music publishers that are not under the control of the big four are generally considered to be independent (indie), even if they are large corporations with complex structures. Some prefer to use the term indie label to refer to only those independent labels that adhere to an arbitrary, ill-defined criteria of corporate structure and size, and some consider an indie label to be almost any label that releases non-mainstream music, regardless of its corporate structure.

Relationship with artists

A label typically enters into an exclusive recording contract with an artist to market the artist’s recordings in return for royalties on the selling price of the recordings. Contracts may extend over short or long durations, and may or may not refer to specific recordings. Established, successful artists tend to be able to renegotiate their contracts to get terms more favorable to them, but Prince’s much-publicized 1994-1996 feud with Warner Bros. provides a strong counterexample, as does Roger McGuinn’s claim, made in July 2000 before a U.S. Senate committee, that The Byrds never received any of the royalties they had been promised for their biggest hits, “Mr. Tambourine Man” and “Turn, Turn, Turn.”

A contract either provides for the artist to deliver completed recordings to the label, or for the label to undertake the recording with the artist. For artists without a recording history, the label is often involved in selecting producers, recording studios, additional musicians, and songs to be recorded, and may supervise the output of recording sessions. For established artists, a label is usually less involved in the recording process.

Although both parties allegedly need each other to survive, the relationship between record labels and artists can be a difficult one. Many artists have had albums altered or censored in some way by the labels before they are released—songs being edited, artwork or titles being changed, etc. Record labels generally do this because they believe that the album will sell better if the changes are made. Often the record label’s decisions are prudent ones from a commercial perspective, but this typically frustrates the artist who feels that their artwork is being diminished or misrepresented by such actions.



History
Industry consolidation

In the 1970s and 1980s, there was a phase of consolidation in the record industry that led to almost all major labels being owned by a very few multinational companies. CDs still flow through a handful of sources, with the majority of the sales going through the “big four” record labels. The online digital distribution of music shows some potential in breaking up the number of avenues for artists to find markets but the exact outcome is impossible to predict.

Resurgence of independent labels

In the 1990s, as a result of the widespread use of home studios, consumer recording technology, and the Internet, independent labels began to become more commonplace. Independent labels are often artist-owned (although not always), with a stated

intent often being to control the quality of the artist’s output. Independent labels usually do not enjoy the resources available to the “big four” and as such will often lag behind them in market shares. Often independent artists manage a return by recording for a much smaller production cost of a typical big label release. Sometimes they are able to recoup their initial advance even with much lower sales numbers.

There are many independent labels; folk singer Ani DiFranco’s Righteous Babe Records is often cited as an ideal example. The singer turned down lucrative contracts from several top-name labels in order to establish her own New York-based company. Constant touring resulted in noteworthy success for an act without significant major funding. Ani and others from the company have spoken on several occasions about their business model in hopes of encouraging others.

Some independent labels become successful enough that major record companies negotiate contracts to either distribute music for the label or in some cases, purchase the label completely.

On the punk rock scene, the DIY ethic encourages bands to self-publish and self-distribute. This approach has been around since the early 1980s, in an attempt to stay true to the punk ideals of doing it yourself and not selling out to corporate profits and control. Such labels have a reputation for being fiercely uncompromising and especially unwilling to cooperate with the big six (now big four) record labels at all. One of the most notable and influential labels of the Do-It-Yourself attitude was SST Records, created by the band Black Flag. No labels wanted to release their material, so they simply created their own label to release not only their own material but the material of many other influential underground bands all over the country. Ian MacKaye’s Dischord is often cited as a model of success in the DIY community, having survived for over twenty years with less than twelve employees at any one time.

Distribution

The Distribution Channel

Chain of intermediaries, each passing the product down the chain to the next organization, before it finally reaches the consumer or end-user. This process is known as the ‘distribution chain’ or the ‘channel.’ Each of the elements in these chains will have their own specific needs, which the producer must take into account, along with those of the all-important end-user.

Channels

A number of alternate ‘channels’ of distribution may be available:

- Distributor, who sells to retailers
- Retailer (also called dealer or reseller), who sells to end customers
- Advertisement typically used for consumption goods

Distribution channels may not be restricted to physical products alone. They may be just as important for moving a service from producer to consumer in certain

sectors, since both direct and indirect channels may be used. Hotels, for example, may sell their services (typically rooms) directly or through travel agents, tour operators, airlines, tourist boards, centralized reservation systems, etc.

The Distribution Channel

Distribution channels can thus have a number of levels. Kotler defined the simplest level, that of a direct contact with no intermediaries involved, as the ‘zero-level’ channel.

The next level, the ‘one-level’ channel, features just one intermediary; in consumer goods a retailer, for industrial goods a distributor. In small markets (such as small countries) it is practical to reach the whole market using just one- and zero-level channels.

In large markets (such as larger countries) a second level, a wholesaler for example, is now mainly used to extend distribution to the large number of small, neighborhood retailers or dealers.

Dealer

Dealer may refer to:

- Antiques dealer, someone who sells Antiques
- Broker–dealer, a legal term for a business firm that buys and sells securities before selling the securities to customers
- Croupier or poker dealer, the player who deals cards, or the employee of a gaming establishment who deals the cards
- Dealer (franchising), a person who sells on behalf of a company or organization, particularly in the automobile industry
- Car dealership
- Drug dealer, someone who sells illegal drugs
- Dealer (band), an Austrian hard rock band
- An alternative usage of the term trader, being generally someone who trades
- “Dealer”, a song by Deep Purple from their 1975 album Come Taste the Band
- Dealers (film), a 1989 British film

Illegal Drug Trade

The illegal drug trade or drug trafficking is a global black market consisting of the cultivation, manufacture, distribution and sale of illegal controlled drugs. Most jurisdictions prohibit trade, except under license, of many types of drugs by drug control laws. Some drugs, notably alcohol and tobacco, are outside the scope of these laws, but may be subject to control under other laws.

The illicit drug trade operates similarly to other underground markets. Various drug cartels specialize in the separate processes along the supply chain, often localized to maximize production efficiency and minimize damages caused by law enforcement. Depending on the profitability of each layer, cartels usually vary in size, consistency, and organization. The chain ranges from low-level street dealers who may be individual drug users themselves, through street gangs and contractor-like middle men, up to multinational empires that rival governments in size.

Consumption of illegal drugs is widespread globally. While consumers avoid taxation by buying on the black market, the high costs involved in protecting trade routes from law enforcement lead to inflated prices.

Additionally, various laws criminalize certain

kinds of trade of drugs that are otherwise legal (for example, untaxed cigarettes). In these cases, the drugs are often manufactured and partially distributed by the normal legal channels, and diverted at some point into illegal channels.

Underground Economy

The underground economy or black market is a market where all commerce is conducted without regard to taxation, law or regulations of trade. The term is also often known as the underdog, shadow economy, black economy, parallel economy or phantom trades.

In modern societies the underground economy covers a vast array of activities. It is generally smallest in countries where economic freedom is greatest, and becomes progressively larger in those areas where corruption, regulation, or legal monopolies restrict legitimate economic activity.

Illegal drugs

From the late 19th and early 20th centuries, many countries began to ban the keeping or using of some recreational drugs, such as the United States’ war on drugs. Many people nonetheless continue to use illegal drugs, and a black market exists to supply them. Despite law enforcement efforts to intercept them, demand remains high, providing a large profit motive for organized criminal groups to keep drugs supplied. The United Nations has reported that the retail market value of illegal drugs is \$321.6 billion USD.

Although law enforcement officers do capture a small proportion of the illegal drugs, the high and very stable demand for such drugs ensures that black market prices will simply rise in response to the decrease in supply—encouraging new distributors to enter the market. Many drug legalisation activists draw parallels between the illegal drug trade and the Prohibition of alcohol in the United States in the 1920s.

Prostitution

Prostitution is illegal or highly regulated in most countries across the world. These places form a classic study of the underground economy, because of consistent high demand from customers, relatively high pay, but labor intensive and low skilled work, which attracts a continual supply of workers. While prostitution exists in almost every country, studies show that it tends to flourish more in poorer countries, and in areas with large numbers of unattached men, such as around military bases.

Prostitutes in the black market generally operate with some degree of secrecy, sometimes negotiating prices and activities through code-words and subtle gestures. In countries such as the Netherlands, where prostitution is legal but regulated, illegal prostitutes exist whose services are offered cheaper without regard for the legal requirements or procedures—health checks, standards of accommodation, and so on.

Alcohol and tobacco

It has been reported that smuggling one truckload of cigarettes from a low-tax US state to a high-tax state can lead to a profit of up

to \$2 million. The low-tax states are generally the major tobacco producers, and have come under enormous criticism for their reluctance to increase taxes. North Carolina eventually agreed to raise its taxes from 5 cents to 35 cents per pack of 20 cigarettes, although this remains far below the national average. But South Carolina has so far refused to follow suit and raise taxes from seven cents per pack (the lowest in the USA).

In the UK it has been reported that “27% of cigarettes and 68% of roll your own tobacco is purchased on the black market” .

Booze Cruise

In the UK, the Booze Cruise– a day-trip ferry to continental Europe simply to get alcohol and tobacco at lower tax rates– is still very popular. Its popularity varies on the Euro to Sterling exchange rate, and the relative tax rates between the different countries. Some people do not even bother to get off the boat, they buy their stock on board and sail straight back. Ferry companies offer extremely low fares, in the expectation that they will make the money up in sales on the boat. The same system exists for boats between Liverpool in the UK and Dublin in Eire.

Copyrighted media

Street vendors in countries where there is scant enforcement of copyright law, particularly in Asia, often sell deeply discounted copies of films, music CDs, and computer software such as video games, sometimes even before the official release of the title. Anyone with a few hundred dollars can make copies that are digitally identical to an original and suffer no loss in quality; innovations in consumer DVD and CD writers and the widespread availability of cracks on the Internet for most forms of copy protection technology make this cheap and easy to do.

This has proved very difficult for copyright holders to combat through the law courts, because the operations are distributed and widespread– there is no “Mr. Big” . The issue is compounded by widespread indifference to enforcing copyright law, both with governments and the public at large. To steal a car is seen as a crime in most people’ s eyes, but to obtain illicit copies of music or a game is not.

Currency

Money itself is traded on the black market. This may happen for one or more of several reasons:

- The government sets (“pegs”) the local currency at some arbitrary level to another currency that does not reflect its true market value.
- A government makes it difficult or illegal for its citizens to own much or any foreign currency.
- The government taxes exchanging the local currency with other currencies, either in one direction or both (e.g. foreigners are taxed to buy local currency, or residents are taxed to buy foreign currency)
- The currency is counterfeit.
- The currency has been acquired illegally and need to be laundered before the money can be used.

A government may officially set the rate of exchange of its currency with that

Copy Protection

of other currencies– typically the US dollar. When it does, it is often pegged at an exchange rate that is artificially low– that is, below what would be the market value if it were a floating currency. Others in possession of the foreign currency, for example expatriate workers, will sell the foreign currency to buy local currency at higher exchange rates than they can get officially. If foreign currency is difficult or illegal for local citizens to acquire, they will pay a premium to acquire it. Taxation is generally less important but, if it is high enough, can



still encourage a black market simply for tax avoidance even if currency trading is generally legal.

Copy Protection

Copy protection, also known as content protection, copy obstruction, copy prevention and copy restriction, is a technology for preventing the reproduction of copyrighted software, movies, music, and other media.

Terminology

Media corporations have always used the term copy protection, but critics argue that the term tends to sway the public into identifying with the publishers, who favor restriction technologies, rather than with the users. Copy prevention and copy control may be more neutral terms. “Copy protection” is a misnomer for some systems, because any number of copies can be made from an original and all of these copies will work, but only in one computer, or only with one dongle, or only with another device that cannot be easily copied.

Business rationale

In the absence of copy protection, many media formats are easy to copy in their entirety using a machine (as opposed to photocopying each page of a book). This results in a situation where consumers can easily make copies of the items to give to their friends, a practice known as “casual copying” . Copy protection is most commonly found on videotapes, DVDs, computer software discs, video game discs and cartridges, and some audio CDs.

Companies that choose to publish works under copy protection do so because they believe that the added expense of implementing the copy protection will be offset by even greater increases in revenue by creating a greater scarcity of casually copied media.

Opponents of copy protection argue that people who

obtain free copies only use what they can get for free, and would not purchase their own copy if they were unable to obtain a free copy. Some even argue that it increases profit; people who receive a free copy of a music CD may then go and buy more of that band’ s music, which they would not have done otherwise.

Some publishers have avoided copy-protecting their products, on the theory that the resulting inconvenience to their users outweighs any benefit of frustrating “casual copying.”

It is worth noting that from the perspective of the end user, copy protection is



always a cost. In practice DRM and license managers sometimes fail, are inconvenient to use, and do not afford the user all of the legal use of the product they have purchased.

Technical challenges

From a technical standpoint, it would seem theoretically impossible to completely prevent users from making copies of the media they purchase, as long as a “writer” is available that can write to blank media. The basic technical fact is that all types of media require a “player” –a CD player, DVD player, videotape player, computer, or video game console. The player has to be able to read the media in order to display it to a human. In turn, then, logically, a player could be built that first reads the media, and then writes out an exact copy of what was read, to the same type of media, or perhaps to some other format, such as a file on a hard disk. If to another disk, then the result is a carbon copy of the copy protected disc.

At a minimum, digital copy protection of non-interactive works is subject to the analog hole: regardless of any digital restrictions, if music can be heard by the human ear, it can also be recorded (at the very least, with a microphone and tape recorder); if a movie can be viewed by the human eye, it can also be recorded (at the very least, with a video camera and recorder). In practice, almost-perfect copies can typically be made by tapping into the analog output of a player (e.g. the speaker output or headphone jacks) and, once redigitized into an unprotected form, duplicated indefinitely. Copying text-based content in this way is more tedious, but the same principle applies: if it can be printed or displayed, it can also be scanned and OCRed. With basic software and some

Analog Hole

patience, these techniques can be applied by a typical computer-literate user.

Since these basic technical facts exist, it follows that a determined individual will definitely succeed in copying any media, given enough time and resources. Media publishers understand this; copy protection is not intended to stop professional operations involved in the unauthorized mass duplication of media, but rather to stop “casual copying” .

Analog Hole

The analog hole (also, the Analog Loophole) is a fundamental and inevitable vulnerability in copy



protection schemes for noninteractive works in digital formats which can be exploited to duplicate copy-protected works that are ultimately reproduced using analog means. Once digital information is converted to a human-perceptible (analog) form, it is a relatively simple matter to digitally recapture that analog reproduction in an unrestricted form, thereby fundamentally circumventing any and all restrictions placed on copyrighted digitally-distributed work. Media publishers who use digital rights management (DRM), to restrict how a work can be used, perceive the necessity to make it visible and/or audible as a “hole” in the control that DRM otherwise affords them.

The term “analog hole” was first popularized by the Motion Picture Association of America and some of its members during speeches and legislative advocacy in 2002; this term later fell into disrepute within the industry after it was abbreviated to “a. hole” (which was misconstrued as an allusion to the word asshole), thus being replaced by analog reconversion problem, analog reconversion issue and similar terms.



Overview

Although the technology for creating digital recordings from analog sources has existed for some time, it was not necessarily viewed as a “hole” until the widespread deployment of DRM in the late 1990s. It should be pointed out that this kind of duplication is not a direct digital copy, and therefore has flaws, the magnitude of which depends on

Asshole

the nature of the reproduction methods used. This kind of reproduction is, in many ways, similar to the initial digitization of any analog medium or performance, with all the pitfalls and benefits of such digitization. For example, bootleg films may have poor audio, or highly washed-out video. At a minimum, copy protection can be circumvented for types of material whose value is aesthetic, and does not depend on its exact digital duplication. In general, performing a digital-to-analog conversion followed by an analog-to-digital conversion results in the addition of noise in an information-theoretic sense relative to the original digital signal. This noise can be measured and quantified. Naturally, the use of high quality conversion equipment reduces the amount of noise added, to the point where such noise is essentially imperceptible to the human senses. For instance, playing a video in a DVD player and using a DVD recorder to record the output can create a high-quality copy of the video.

Regardless of any digital or software copy control mechanisms, if sound can be heard by an ear, it can also be recorded by a microphone. And if images (static images or video/film), including text, can be seen by the eye, it can also be recorded by a camera. In the case of text the image can be converted back to text using optical character recognition.

In 2002 and 2003, the U.S. motion picture industry publicly discussed the possibility of legislation to “close the analog hole” – most likely through regulation of digital recording devices, limiting their ability to record analog video signals that appear to be commercial audiovisual works. These proposals are discussed in the Content Protection Status Report, Consumer Broadband and Digital Television Promotion Act, and Analog Reconversion Discussion Group. Inventors of digital watermark technologies were particularly interested in this possibility because of the prospect that recording devices could be required to screen inputs for the presence of a particular watermark (and hence, presumably, their manufacturers would need to pay a patent royalty to the watermark’ s inventor).

Consumer vs. professional equipment

In every copy-restricted medium, there are two grades of equipment: consumer, which may include copy restriction, and professional, which by necessity, allows access in a way that is above copy restriction. In most countries, the sale of professional equipment is not regulated, although price alone prevents most users from getting access to it. The price may not put off piracy organizations that still regard it as a good return on investment, especially as the cost of such equipment continues to drop and as direct digital piracy becomes more difficult.

Asshole

Asshole (or arsehole in British English) is slang for the anus and is often used as an insult. It is formed from arse, which according to the Oxford English Dictionary has been used since the 11th century to refer to the rump

of an animal and since the 14th century to refer to a person’ s buttocks. The combined form arsehole is first attested from 1500 in its literal use to refer to the anus. The metaphorical use of the word to refer to the worst place in a region (e.g., “the arsehole of the world”) is first attested in print in 1865; the use to refer to a contemptible person is first attested in 1933. Its first appearance as an insult term in a newspaper indexed by Google News is in 1965. But as with other vulgarities, these uses of the word may have been common in oral speech for some time before their first print appearances. By the 1970s, Hustler magazine featured people they didn’ t like as “Asshole of the month.”

Semantics

The word is mainly used as a profanity towards someone the speaker does not like or whose behavior is hurtful, self-centered, or particularly abrasive. Usually, the term is directed at a male (in female anatomy, the focus is deflected to the nearby genitals; see cunt). It may also sometimes be used to describe people who are viewed as stupid or useless or even meaningless, similar to wanker.

The English word ass (meaning donkey, a cognate of its zoological name *Equus asinus*) may also be used as a term of contempt, referring to a silly or stupid person. In North America, the words arse and ass have become synonymous; however, in the rest of the English-speaking world, ass still only refers to the donkey, rather than the arse (buttocks). It is worth noting that speakers of some varieties of English “drop their Rs” before consonants, leading to a pronunciation of arse that is quite similar to ass.

Until the early 1990s, the word was considered one of a number of words that could not be uttered on commercial television in the United States. Comedian Andrew Dice Clay caused a major shock when he uttered the word during a televised awards show in the 1980s. However, there were PG-13 and R rated films in the 1980s that featured use of the word, such as “The Terminator” (1984) and the PG-13 “National Lampoon’ s Christmas Vacation” (1989) and “Back to the Future Part II” (1989). By 1994, however, the word was considered less vulgar and was featured in dialog on the long-running television series NYPD Blue, though it has yet to become anything close to commonplace on network TV.

Songs using the word asshole

In 1972, Jonathan Richman’ s Modern Lovers recorded his song “Pablo Picasso,” which includes the immortal line “Pablo Picasso was never called an asshole.” The song was not released until 1976, after the break-up of the original Modern Lovers. In 1976, Chinga Chavin released the single “Asshole from El Paso” from his album Country Porn. Chavin’ s song was a parody of Merle Haggard’ s “Okie from Muskogee.”

Shamanism

Shamanism comprises a range of traditional beliefs and practices concerned with communication with the spirit world. A practitioner of shamanism is known as a shaman, pronounced /ˈʃɑːmən/, /ˈʃeɪmən/, ([ˈʃəmənːˈʃə-]) noun (pl. -man(s)). There are many variations of shamanism throughout the world, but several common beliefs are shared by all forms of shamanism. Shamans are intermediaries between the human and spirit worlds. According to believers, they can treat illness and are capable of entering super-natural realms to obtain answers to the problems of their community.

Etymology

The term “shaman” is loan from Tungusic word šaman, the term for such a practitioner, which also gained currency in wider Turko-Mongol and Tungusic cultures in ancient Siberia. The word’s etymology is uncertain. It is sometimes connected to a Tungus root ša- “to know” . Other scholars assert that the word comes directly from the Manchu language, and would therefore be “the only commonly used English word that is a loan from this language.”

Function

Shamans perform a variety of functions depending upon their respective cultures: healing; leading a sacrifice; preserving the tradition by storytelling and songs; fortune-telling; acting as a psychopomp (literal meaning, “guide of souls”). In some cultures, a shaman may fulfill several functions in one person.

The necromancer in Greek mythology might be considered a shaman as the necromancer could rally spirits and raise the dead to utilize them as slaves, soldiers and tools for divination.

The functions of a shaman may include either guiding to their proper abode the souls of the dead (which may be guided either one-at-a-time or in a cumulative group, depending on culture), and/or curing (healing) of ailments. The ailments may be either purely physical afflictions—such as disease, which may be cured by flattering, threatening, or wrestling the disease-spirit (sometimes trying all these, sequentially), and which may be completed by displaying some supposedly extracted token of the disease-spirit (displaying this, even if “fraudulent”, is supposed to impress the disease-spirit that it has been, or is in the process of being, defeated, so that it will retreat and stay out of the patient’s body) —, or else mental (including psychosomatic) afflictions—such as persistent terror (on account of some frightening experience), which may be likewise cured by similar methods. Usually in most languages a different term other than the one translated “shaman” is applied to a religious official leading sacrificial rites (“priest”), or to a raconteur (“sage”) of traditional lore; there may be more of an overlap in functions (with that of a shaman), however, in the case of an interpreter of omens or of dreams.

To quote Eliade: “A first definition of this complex phenomenon, and perhaps the least hazardous, will be: shamanism = technique of ecstasy.”

Shamanism

Animism

Soul

Animism

Animism (from Latin anima (soul, life) is a philosophical, religious or spiritual idea that souls or spirits exist not only in humans but also in other animals, plants, rocks, natural phenomena such as thunder, geographic features such as mountains or rivers, or other entities of the natural environment, a proposition also known as hylozoism in philosophy. Animism may further attribute souls to abstract concepts such as words, true names or metaphors in mythology. Religions which emphasize animism are mostly folk religions, such as the various forms of Shamanism, but also Shinto and certain currents of Hinduism emphasize the concept.

Throughout European history, philosophers such as Plato, Aristotle, Thomas Aquinas, among others, contemplated the possibility that souls exist in animals, plants and people.

Belief in non-human souls

It is generally accepted that “animism” refers to the belief that non-human entities, such as animals and plants, as well as inanimate (spiritless) objects such as rocks, can have souls. Often these entities must be placated by offerings in order to gain favours, or even worshipped.

Animism in this sense contrasts with polytheism (the worship of various gods), in that animistic worship is of minor, local deities, whereas polytheism is the worship of major deities.

Belief in souls

Sir E. B. Tylor used the term “animism” to mean simply “a belief in souls” . He did not restrict the term “animism” to religions that attribute souls to non-human entities. With such a definition, virtually all religions can be considered animistic, including Christianity and Islam.

Tylor invented this definition as part of a proposed theory of religion in his 1871 book Primitive Culture. According to Tylor, all religion rests on, or stems from, a belief in gods or supernatural beings, which in turn stems from a belief in souls.

Souls as the ‘form’ of things

This is the Aristotelian version of Animism, it does not include worship and souls are not immortal or able to be separated from the physical being. Hylomorphism states that beings have both matter and form, with form being the defining characteristic. Aristotle ran into trouble with form as beings tend to have several competing defining characteristics, so to stick to his one defining characteristic rule he proposed the conglomeration of characteristics under the concept of soul.

Soul

The soul, in many religions, spiritual traditions, and philosophies, is the spiri-tual or immaterial part of a living being, often regarded as eternal. It is usually thought to consist of a human’s consciousness and personality, and can be synonymous with the spirit, mind or self. In theology, the soul is often believed to live on after the person’s physical death, and some religions posit that

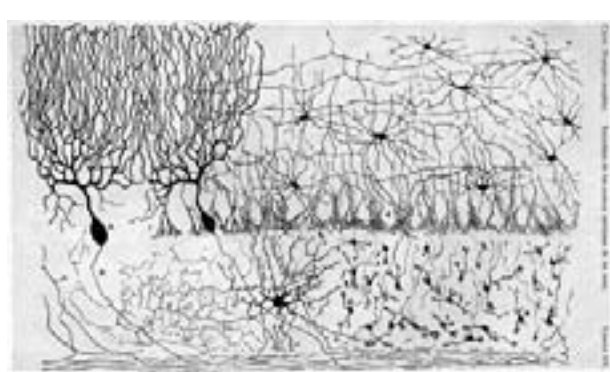
God creates souls. In some cultures, non-human living things, and sometimes inani-mate objects are said to have souls, a belief known as animism.

The terms soul and spirit are often used interchange-ably, although the former may be viewed as a more worldly and less transcendent aspect of a person than the latter. The words soul and psyche can also be treated synony-mously, although psyche has relatively more physical connotations, whereas soul is connected more closely to metaphysics and religion.

Etymology

The Modern English soul continue Old English sáwol, sáwel, first attested in the 8th century (in Beowulf v. 2820 and in the Vespasian Psalter 77.50), cognate to other Germanic terms for the same idea, including Gothic saiwala, Old High German sēula, sēla, Old Saxon sēola, Old Low Franconian sēla, sila, Old Norse sála. The further etymology of the Germanic word is uncertain. A common suggestion is a connection with the word sea, and from this evidence alone, it has been speculated that the early Germanic peoples believed that the spirits of deceased rested at the bot-tom of the sea or similar. A more recent suggestion connects it with a root for “binding”, Germanic *sail-ian (OE sēlian, OHG seilen), related to the notion of being “bound” in death, and the practice of ritually binding or restraining the corpse of the deceased in the grave to prevent his or her return as a ghost.

The word is in any case clearly an adaptation by early missionaries to the Germanic peoples, in particular Ulfilas, apostle to the Goths (4th century) of a native Germanic concept, coined as a translation of Greek ψυχή psychē “life, spirit, consciousness.”

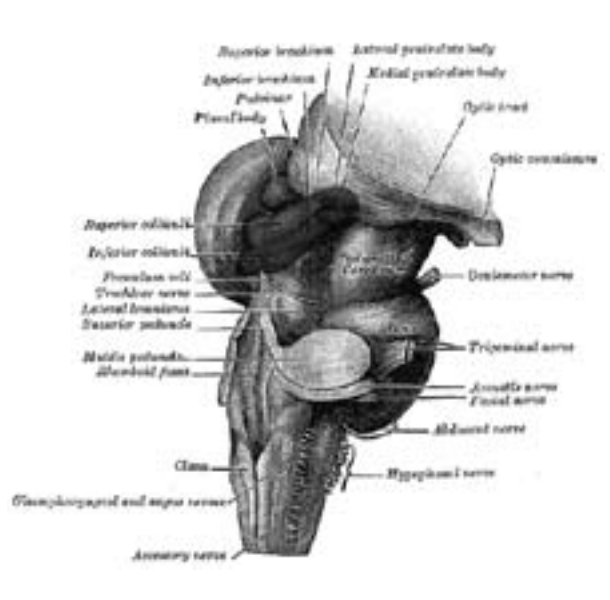


A detailed illustration of a human brain, showing various anatomical structures and their connections.

The Greek word is derived from a verb “to cool, to blow” and hence refers to the vital breath, the animating principle in humans and other animals, as opposed to σῶμα (soma) meaning “body” . It could refer to a ghost or spirit of the dead in Homer, and to a more philosophical notion of an immortal and immaterial essence left over at death since Pindar. Latin anima figured as a translation of ψυχή since Terence. It occurs juxtaposed to σῶμα e.g. in Matthew 10:28:

– καὶ μὴ φοβηθεῖσθε ἀπὸ τῶν ἀποκτεννόντων τὸ σῶμα, τὴν δὲ ψυχὴν μὴ θε δὲ μάλλον τὸν δυνάμενον καὶ ψυχὴν καὶ σῶμα ἀπολῆσαι ἐν γένει. Vulgate: et nolite timere eos qui occidunt corpus animam autem non possunt occidere sed potius eum timete qui potest et animam et corpus perdere in gehennam. Authorized King James Version (KJV) “And fear not them which kill the body, but are not able to

kill the soul: but rather fear Him which is able to destroy both soul and body in hell.” In the Septuagint (LXX), ψυχή translates Hebrew נֶפֶשׁ nephesh, meaning “life, vital breath” , in English variously translated as “soul, self, life, crea-ture, person, appetite, mind, living being, desire, emotion, passion” ; e.g. in Genesis 1:20: καὶ εἶπεν ὁ θεός ἑξαγαγέτω τὰ ὕδατα ἐρπετά ψυχῶν ζώσων. Vulgate Creavitque Deus cete



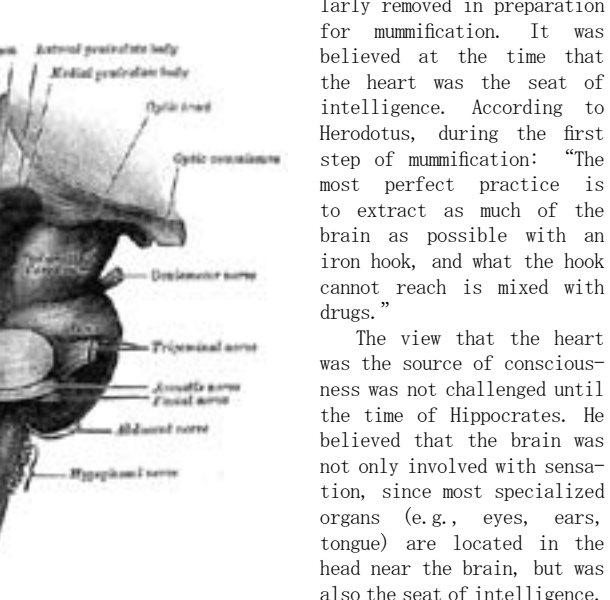
grandia, et omnem animam viventem atque motabilem.KJV “And God created great whales, and every living creature that moveth.”

Science

The belief among neurosci-entists and biologists is that the mind, or conscious-ness, is the operation of the brain. They often fuse the terms mind and brain together as “mind/brain” or bodymind. Science and medicine seek naturalistic accounts of the observable natural world. This stance is known as methodologi-cal naturalism. Much of the scientific study relating to the soul has been involved in investigating the soul as

Neuroscience

to use the word “soul” to emphasize their belief that the human mind has powers beyond or at least qualita-tively different from what artificial software can do. Roger Penrose expounds this position in The Emperor’s New Mind. He posits that the mind is in fact not like a computer as generally under-stood, but rather a quantum computer, that can do things impossible on a classical computer, such as decide the halting problem (although quantum computers in actual-



ity cannot do any more than a regular Turing machine, including deciding the halt-ing problem, they can in theory solve problems that would require billions of years for linear algorithms on the fastest computers in the world in as little as one unit of quantum time). Some have located the soul in this possible difference between the mind and a clas-sical computer.

Neuroscience

Neuroscience is the scien-tific study of the nervous system. Such studies span the structure, function, evolutionary history, development, genetics, bio-chemistry, physiology, pharmacology, informatics, computational neuroscience and pathology of the nervous system.

The International Brain Research Organization was founded in 1960, the European Brain and Behaviour Society in 1968, and the Society for Neuroscience in 1969, but the study of the brain dates at least to ancient Egypt. Traditionally, neuroscience has been seen as a branch of the biological sciences. Recently, however, there has been a surge of interest from many allied disci-plines, including cognitive and neuro-psychology, com-puter science, statistics, physics, philosophy, and medicine. The scope of neu-roscience has now broadened to include any systematic, scientific, experimental or theoretical investigation of the central and peripheral nervous system of biologi-cal organisms. The empirical methodologies employed by neuroscientists have been enormously expanded, from biochemical and genetic analyses of the dynamics of individual nerve cells and their molecular constituents to imaging of perceptual and motor tasks in the brain. Recent theoretical advances in neuroscience have been aided by the use of computa-tional modeling.

History

Evidence of trepanation, the surgical practice of either drilling or scraping a hole into the skull with the aim of curing headaches or

mental disorders or reliev-ing cranial pressure, being performed on patients dates back to Neolithic times and has been found in vari-ous cultures throughout the world. Manuscripts dating back to 5000BC indicated that the Egyptians had some knowledge about symptoms of brain damage.

Early views on the func-tion of the brain regarded it to be a “cranial stuff-ing” of sorts. In Egypt, from the late Middle Kingdom onwards, the brain was regu-larly removed in preparation for mummification. It was believed at the time that the heart was the seat of intelligence. According to Herodotus, during the first step of mummification: “The most perfect practice is to extract as much of the brain as possible with an iron hook, and what the hook cannot reach is mixed with drugs.”

The view that the heart was the source of conscious-ness was not challenged until the time of Hippocrates. He believed that the brain was not only involved with sensa-tion, since most specialized organs (e.g., eyes, ears, tongue) are located in the head near the brain, but was also the seat of intelligence. Aristotle, however, believed that the heart was the cen-ter of intelligence and that the brain served to cool the blood. This view was gener-ally accepted until the Roman physician Galen, a follower of Hippocrates and physician to Roman gladiators, observed that his patients lost their mental faculties when they had sustained damage to their brains.

In al-Andalus, Abulcasis, the father of modern sur-gery, developed material and technical designs which are still used in neurosur-gery. Averroes suggested the existence of Parkinson’s disease and attributed pho-toreceptor properties to the retina. Avenzoar described meningitis, intracranial thrombophlebitis, medi-astinal tumours and made contributions to modern neu-ropharmacology. Maimonides wrote about neuropsychiat-ric disorders and described rabies and belladonna intoxication. Elsewhere in medieval Europe, Vesalius (1514–1564) and René Descartes (1596–1650) also made several contributions to neuroscience.

Studies of the brain became more sophisticated after the invention of the microscope and the develop-ment of a staining procedure by Camillo Golgi during the late 1890s that used a silver chromate salt to reveal the intricate structures of sin-gle neurons. His technique was used by Santiago Ramón y Cajal and led to the forma-tion of the neuron doctrine, the hypothesis that the func-tional unit of the brain is the neuron. Golgi and Ramón y Cajal shared the Nobel Prize in Physiology or Medicine in 1906 for their extensive observations, descriptions and categorizations of neu-rons throughout the brain. The hypotheses of the neu-ron doctrine were supported by experiments following Galvani’s pioneering work in the electrical excitabil-ity of muscles and neurons. In the late 19th century, DuBois-Reymond, Müller, and von Helmholtz showed neurons were electrically excit-able and that their activity predictably affected the electrical state of adjacent neurons.

In parallel with this research, work with brain-damaged patients by Paul Broca suggested that certain regions of the brain were responsible for certain functions. At the time Broca’s findings were seen as a confirmation of Franz Joseph Gall’s theory that language was localized and certain psychological functions were localized in the cerebral cortex. The localization of function hypothesis was supported by observations of epileptic patients conducted by John Hughlings Jackson, who correctly deduced the organization of motor cortex by watching the progression of seizures through the body. Wernicke further developed the theory of the specialization of specific brain structures in language comprehension and production. Modern research still uses the Brodmann cytoarchitectonic (referring to study of cell structure) anatomical definitions from this era in continuing to show that distinct areas of the cortex are activated in the execution of specific tasks.

Santiago Ramón y Cajal

Santiago Ramón y Cajal (1 May 1852 - 17 October 1934) was a Spanish histologist, physician, pathologist and Nobel laureate. His pioneering investigations of the microscopic structure of the brain were so original and influential that he is considered by many to be the greatest neuroscientist of all time. His skills as an artist allowed him to make hundreds of drawings still used for educational purposes today.

Biography

The son of Justo Ramón and Antonia Cajal, Ramón y Cajal was born of Aragonese parents in Petilla de Aragón in Navarre, Spain. As a child he was transferred between many different schools because of his poor behaviour and anti-authoritarian attitude. An extreme example of his precociousness and rebelliousness is his imprisonment at the age of eleven for destroying the town gate with a home-made cannon. He was an avid painter, artist, and gymnast. He worked for a time as a shoemaker and barber, and was well known for his pugnacious attitude.

Ramón y Cajal attended the medical school of Zaragoza, Aragon, from which he graduated in 1873. After a competitive examination, he served as a medical officer in the Spanish Army. He took part in an expedition to Cuba in 1874–75, where he contracted malaria and tuberculosis. After returning to Spain he married Silveria Fañanás García in 1879, with whom he had four daughters and three sons. He was appointed as a professor of the Universidad de Valencia in 1881, and in 1883 he received his Doctor of Medicine degree in Madrid. He later held professorships in both Barcelona and Madrid. He was Director of the Zaragoza Museum (1879), Director of the National Institute of Hygiene (1899), and founder of the Laboratorio de Investigaciones Biológicas (1922) (later renamed to the Instituto Cajal, or Cajal Institute). He died in Madrid in 1934.

Superior Colliculus

The optic tectum or simply tectum is a paired structure that forms a major component of the vertebrate midbrain.

In mammals this structure is more commonly called the superior colliculus (Latin, higher hill), but even in mammals, the adjective tectal is commonly used. The



tectum is a layered structure, with a number of layers that varies by species. The superficial layers are sensory-related, and receive input from the eyes as well as other sensory systems. The deep layers are motor-related, capable of activating eye movements as well as other responses. There are also intermediate layers, with multi-sensory cells and motor properties.

The general function of the tectal system is to direct behavioral responses toward specific points in egocentric (“body-centered”) space. Each layer of the tectum contains a topographic map of the surrounding world in retinotopic coordinates, and activation of neurons at a particular point in the map evokes a response directed toward the corresponding point in space. In primates, the tectum (“superior colliculus”) has been studied mainly with respect to its role in directing eye movements. Visual input from the retina, or “command” input from the cerebral cortex, create a “bump” of activity in the tectal map, which if strong enough induces a saccadic eye movement. Even in primates, however, the tectum is also involved in generating spatially directed head turns, arm-reaching movements, and shifts in attention that do not involve any overt movements. In other species, the tectum is involved in a wide range of responses, including whole-body turns in walking rats, swimming fishes, or flying birds; tongue-strikes toward prey in frogs; fang-strikes in snakes; etc.

In some non-mammal species, including fish and birds, the tectum is one of the largest components of the brain. In mammals, and especially primates, the massive expansion of the cerebral cortex reduces the tectum (“superior colliculus”) to a much smaller fraction of the whole brain. Even there, though, it remains functionally very important as the primary integrating center for eye movements.

Note on terminology: the use by the literature of different terms for mammals and non-mammals, for what is really the same structure, creates problems for an article that attempts to encompass the full range of vertebrate species. There does not seem to be any way to handle this without

causing either confusion or annoyance to some readers. The approach taken in this article is to follow the literature by using the term “superior colliculus”

when discussing mammals, and “optic tectum” when discussing either specific non-mammalian species or vertebrates in general.

Eye Movement

Eye movement is the voluntary or involuntary movement of the eyes, helping in acquiring, fixating and tracking visual stimuli. In addition, rapid eye movement occurs during REM sleep.

Eyes are the visual organs that have the retina, a specialized type of brain tissue containing photoreceptors and interneurons. These specialised cells convert light into electrochemical signals that travel along the optic nerve fibers to the brain.

Primates and many other invertebrates use two types of voluntary eye movement to track objects of interest: smooth pursuit and saccades. These movements appear to be initiated by a small cortical region in the brain’s frontal lobe. This is corroborated by removal of the frontal lobe. In this case, the reflexes (such as reflex shifting the eyes to a moving light) are intact, though the voluntary control is obliterated.

Eye movements are typically classified as either ductions, versions, or vergences. A duction is an eye movement involving only one eye; a version is an eye movement involving both eyes in which each eye moves in the same direction; a vergence is an eye movement involving both eyes in which each eye moves in opposite directions.

Rapid Eye Movement

Rapid eye movement (REM) sleep is a normal stage of sleep characterised by the rapid movement of the eyes. REM sleep is classified into two categories: tonic and phasic. It was identified and defined by Kleitman and Aserinsky in the early 1950s.

Criteria for REM sleep includes not only rapid eye movement, but also low muscle tone and a rapid, low voltage EEG - these features are easily discernible in a polysomnogram, the sleep study typically done for patients with suspected sleep disorders.

REM sleep in adult humans typically occupies 20-25% of total sleep, about 90-120 minutes of a night’s sleep. During a normal night of

sleep, humans usually experience about four or five periods of REM sleep; they are quite short at the beginning of the night and longer toward the end. Many animals and some people tend to wake, or experience a period of very light sleep, for a short time immediately after a bout of REM. The relative amount of REM sleep varies considerably with age. A newborn baby spends more than 80% of total sleep time in REM. During REM, the activity of the brain’s neurons is quite similar to that during waking hours; for this reason, the sleep stage may be called paradoxical sleep. This means that there are no dominating brain waves during REM sleep.

REM sleep is physiologically different from the other phases of sleep, which are collectively referred to as non-REM sleep (NREM). Vividly recalled dreams mostly occur during REM sleep.

Dream

Dreams are a series of images, ideas, emotions, and sensations occurring involuntarily in the mind during certain stages of sleep. The content and purpose of dreams are not fully understood, though they have been a topic of speculation and interest throughout recorded history. The scientific study of dreams is known as oneirology.

Cultural history

Dreams have a long history, both as a subject of conjecture and as a source of inspiration. Throughout history, people have sought meaning in dreams or divination through dreams. They have been described physiologically as a response to neural processes during



sleep, psychologically as reflections of the subconscious, and spiritually as messages from gods or predictions of the future. Many cultures had practiced dream incubation, with the intention of cultivating dreams that were prophetic or contained messages from the divine.

Judaism has a traditional ceremony called “hatavat halom” - literally meaning making the dream a good one. Through this rite disturbing dreams can be transformed to give a positive interpretation by a rabbi or a rabbinic court.

Dream interpretation

Dreams were historically used for healing (as in the asclepieions found in the ancient Greek temples of Asclepius) as well as for guidance or divine inspiration. Some Native American tribes used vision quests as a rite of passage, fasting and praying until an anticipated guiding dream was received, to be shared with the rest of the tribe upon their return.

During the late 19th and early 20th centuries, both Sigmund Freud and Carl Jung identified dreams as an interaction between the unconscious and the conscious. They also assert together that the unconscious is the dominant force of the dream, and in dreams it conveys its own mental activity to the perceptive faculty. While Freud felt that there was an active censorship against the unconscious even during sleep, Jung argued that the dream’s bizarre quality is an efficient language, comparable to poetry and uniquely capable of revealing the underlying meaning.

Fritz Perls presented his theory of dreams as part of the holistic nature of Gestalt therapy. Dreams are seen as projections of parts of the self that have been ignored, rejected, or suppressed. Jung argued that one could consider every person in the dream to represent an aspect of the dreamer, which he called the subjective approach to dreams. Perls expanded this point of view to say that even inanimate objects in the dream may represent aspects of the dreamer. The dreamer may therefore be asked to imagine being an object in the dream and to describe it, in order to bring into awareness the characteristics of the object that correspond with the dreamer’s personality.

Daydream

A daydream is a visionary fantasy experienced while awake, especially one of happy, pleasant thoughts, hopes or ambitions. There are so many different types of daydreaming that there is still no consensus definition amongst psychologists. While

History

Daydreaming was long held in disrepute in society and was associated with laziness. In the late 1800s, Toni Nelson argued that some daydreams with grandiose fantasies are self-gratifying attempts at “wish fulfillment.” In the 1950s, some educational psychologists warned parents not to let their children daydream, for fear that the children may be sucked into “neurosis and even psychosis.”

In the late 1960s, psychologist Jerome L. Singer of Yale University and psychologist John S. Antrobus of the City College of New York created a daydream questionnaire. The questionnaire, called the Imaginal Processes Inventory (IPI), has been used to investigate daydreams. Psychologists Leonard Giambra and George Huba used the IPI and found that daydreamers’ imaginary images vary in three ways: how vivid or enjoyable the daydreams are, how many guilt- or fear-filled daydreams they have, and how “deeply” into the daydream people go.

Recent research

Eric Klinger’s research in the 1980s showed that most daydreams are about ordinary, everyday events and help to remind us of mundane tasks. Klinger’s research also showed that over 3/4 of workers in ‘boring jobs,’ such as lifeguards and truck drivers, use vivid daydreams to “ease the boredom” of their routine tasks. Klinger found that less than five percent of the workers’ daydreams involved explicitly sexual thoughts and that violent daydreams were also uncommon.

Israeli high school students who scored high on the Daydreaming Scale of the IPI had more empathy than students who scored low. Some psychologists, such as Los Angeles’ Joseph E. Shorr, use the mental imagery created during their clients’ daydreaming to help gain insight into their mental state and make diagnoses.

Other recent research has also shown that daydreaming, much like nighttime dreaming, is a time when the brain consolidates learning. Daydreaming may also help people to sort through problems and achieve success. Research with fMRI shows that brain areas associated with complex problem-solving become activated during daydreaming episodes.

Therapist Dan Jones looked at patterns in how people achieved success from Entrepreneurs like Richard Branson & Peter Jones to Geniuses like Albert Einstein & Leonardo Da Vinci. Jones also looked at the thinking styles of successful creative people like Beethoven & Walt Disney. What he found was that they all had one thing in common. They all spent time daydreaming about their area of success.

Sports psychologists have used this knowledge for years without making the connection to daydreaming. They would have sports people visualise success. Studies have shown that those that use visualisation outperform those that use practice alone.

Nowadays it is understood that visualisation or guided imagery is the same state of mind as daydreaming

Interspecies Communication

Interspecies communication is dialogue between different species of animals, plants, fungi or bacteria. It occurs as sign-mediated interactions whereas the signals which serve as signs in most cases are chemical molecules.

Interspecies communication research in the sciences and the arts has produced results, giving hope that perhaps the next “alien species” with which we communicate might be our house pets or perhaps zoo animals.

Works such as Augmented Fish Reality 2004 by Ken Rinaldo is one example of an emerging art genre as fish were able to affect their environment in communicating with each other, their robots and humans in the space. Eduardo Kac also a bio-artist created a work titled Essay Concerning Human Understanding , which was a bi-directional, interspecies sonic installation in which he set up a two-way dialogue between a Philodendron plant and bird.

Recent research with Kanzi a bonobo at the University of Georgia represents a successful experiment where (1) the bonobo learned symbols and is successfully communicating with its trainers Jared Taglialatela, Sue Savage-Rumbaugh and Lauren Baker. Their work is contributing to a now larger series of research studies that language is an evolutionary trait that evolved in our non-human primates.

Mutualism

Cooperative interspecies communication implies the sharing and understanding of information from two or more species that work towards the benefit of both species (mutualism). Most research has found cooperative communication in prey animals whose alarm calls not only alert conspecifics but also heterospecifics. So far, most work has been found in primates. Redfronted lemur and sifakas have reciprocal recognition of one another’s alarm calls. The same has been found in West African Diana monkey and Campbell’s monkeys. When one species elicits an alarm signal specific to a certain predator, the other species react in the same pattern as the species that called. For example, leopards hunt on both species by capitalizing the elements of stealth and surprise. If the monkeys detect the leopard before it attacks (usually resulting in mobbing), the leopard will typically not attack. Therefore, when a leopard alarm call is given both species respond by positioning near the leopard signaling that it has been found out. It also seems that the monkeys are able to distinguish a leopard alarm call from, for example, a raptor alarm call. When a raptor alarm call is given, the monkeys respond by moving towards the forest floor and away from aerial attack. Therefore, it is not simply that the monkeys act upon hearing the alarm calls but rather they are able to actually extract particular information from a call. Increased vigilance obviously has its benefits since more eyes watching mean earlier detection of predators and lower risk of being eaten. Responses to hetero-specific alarm calls are not confined to simian species but have also been found in the Sciuridae species:

yellow-bellied marmot and the golden-mantled ground squirrel.

Whether heterospecific understanding is a learned behavior or not is also of interest. Ramakrishnan and Coss (2000) found that age and interspecies experience were important factors in the ability for bonnet macaques to recognize heterospecific calls. Macaques who were younger and exposed longer to other species’ alarm calls were more likely to correctly respond to heterospecific alarm calls. A key component of this early learning was the reinforcement of a predatory threat.



That is, when an alarm call was given a corresponding threat had to be presented in order to make the association. Therefore, interspecies communication may not be an innate ability but rather a sort of imprinting that may have to be coupled with an intense emotion (fear) early in life. In fact, most interspecies communications reported typically involve an older animal taking care of a younger animal of a different species. For example, Owen and Mzee, the odd couple of an orphaned baby hippopotamus and a 130-year old Aldabran tortoise, display a relationship rarely seen in the animal world. Dr. Kahumbu of the sanctuary that holds the two believes that the two actually vocalize to one another in neither a stereotypical tortoise nor a hippopotamus fashion. Interestingly, Owen also does not respond to hippopotamus calls. It is likely that when Owen was first introduced to Mzee he was still young enough where imprinting could occur.

Parasitic communication and eavesdropping

Unlike cooperative communication, parasitic communication involves an unequal sharing of information (parasitism). In terms of alarm calls, this means that the warnings are not bi-directional. However, it would be faulty to say that the eavesdroppers are not giving any information in return. It may be that the other species has simply not been able to decipher the eavesdroppers’ calls. Much of the research done on this type of communication has been found in bird species, including the nuthatch and the great tit. In 2007, Templeton and Greene found that nuthatches are able to discriminate between subtle differences in chickadee alarm calls, which broadcast the location and size of a predator. Since chickadees and nuthatches typically occupy the same habitat, mobbing predators together acts as a deterrent that benefits both species. The team also found that nuthatches screen chickadee alarm calls in order to determine whether it is cost-efficient to mob a

particular predator. This is because not all predators pose the same risk to nuthatches as to chickadees. Templeton and Greene speculate that screening may be most important in the winter when energy demands are the highest.

Work by Gorissen, Gorissen, and Eens (2006) has focused on blue tit song matching (or, “song imitation”) by great tits. Blue and great tits compete for resources such as food and nesting cavities and their coexistence has important fitness consequences for both species. These fitness costs might promote interspecific aggression because resources

need to be defended against heterospecifics as well. So, the use of efficient vocal strategies such as matching might prove to be effective in interspecific communication. Hence, heterospecific matching could be a way of phrasing a threat in the language of the heterospecific intruder. It could equally be well argued that these imitations of blue tit sounds have no function at all and are merely the result of learning mistakes in the sensitive period of great tits because blue and great tits form mixed foraging flocks together. While the authors agree with the first hypothesis, it is plausible that the latter also being true given the data on age and experience in primates.

In addition to birds, eavesdropping has been found in tungara frogs and their sympatric heterospecifics. The scientists posit that mixed-species choruses may reduce their risk of predation without increasing mate competition.

Predator-prey communication

Much of the communication between predators and prey can be defined as signaling. In some animals, the best way to avoid being preyed upon is an advertisement of danger or unpalatability, or aposematism. Given the effectiveness of this, it is no surprise that many animals employ styles of mimicry to ward off predators. Some predators also use aggressive mimicry as a hunting technique. For example, Photuris fireflies mimic female Photinus fireflies by scent and glow patterns in order to lure interested male Photinus fireflies, which they then kill and eat. Lophiiformes, or anglerfish, are also famous for their use of escas as bait for small unsuspecting fish.

Recently, two interesting examples of predator-prey signaling were found in caterpillars and ground squirrels. When physically disturbed, Lepidoptera larvae produce a clicking noise with their mandibles followed by an unpalatable oral secretion. Scientists believe this to be “acoustic aposematism” which has

only been previously found in a controlled study with bats and tiger moths. While the defense mechanisms of ground squirrels to predatory rattlesnakes have been well studied (i.e. tail flagging), only recently have scientists discovered that these squirrels also employ a type of infrared heat signaling. By using robotic models of squirrels, the researchers found that when infrared radiation was added to tail flagging, rattlesnakes shifted from predatory to defensive behavior and were less likely to attack than when no radiation component was added.

Human-Animal Communication

Human-animal communication is easily observed in everyday life. The interactions between pets and their owners, for example, reflect a form of spoken, while not necessarily verbal, dialogue. A dog being scolded does not need to understand every word of its admonishment, but is able to grasp the message by interpreting cues such as the owner’s stance, tone of voice, and body language. This communication is two-way, as owners can learn to discern the subtle differences between barks and meows ... one hardly has to be a professional animal trainer to tell the difference between the bark of an angry dog defending its home and the happy bark of the same animal while playing. Communication (often nonverbal) is also significant in equestrian activities such as dressage.



Talking Animal

A talking animal or speaking animal refers to any form of animal which can speak a human language. Many species or groups of animals have developed a formal language, even through vocal communication between its members, or interspecies, with an understanding of what they are communicating. As well, studies in animal cognition have been arguably successful in teaching some animals a formalised language, such as sign language with Koko the gorilla. For these reasons, this phenomenon is widely discussed and investigated, while skeptics consider the results to be a form of mimicry and the observer-expectancy effect, not true communication.

A very similar perspective of study is talking animals in fiction.

On imitation and understanding

The term may have a nearly literal meaning, by referring to animals which can imitate human speech, though not necessarily possessing an understanding of what they may be mimicking. The most common example of this would be parrots, many of which repeat many things nonsensically through exposure. It is an anthropomorphism to call this human speech, as it has no semantic grounding.

Clever Hans was a horse that was claimed to have been able to perform arithmetic and other intellectual tasks. After formal investigation in 1907, psychologist Oskar Pfungst demonstrated

that the horse was not actually performing these mental tasks, but was watching the reaction of his human observers. The horse was responding directly to involuntary cues in the body language of the human trainer, who had the faculties to solve each problem, with the trainer unaware that he was providing such cues.

Human Speechome Project

The Human Speechome Project is being conducted at the Massachusetts Institute of Technology’s Media Laboratory by the Cognitive Machines Group, headed by Associate Professor Deb Roy. It is an effort to observe and model the language acquisition of a single child unobtrusively at his English-speaking home in great detail over the first three years of his life. The resultant data is being used to create computational models which could yield further insight into language acquisition.

Methodology

A digital network consisting of eleven video cameras, fourteen microphones, and an array of data capture hardware has been installed in the home of the subject, giving as complete, 24-hour coverage of the child’s experiences as possible. The motion-activated cameras are ceiling-mounted, wide-angle, unobtrusive units providing overhead views of all primary living areas. Sensitive boundary layer microphones are located in the ceilings near the cameras.

Video image resolution is sufficient to capture gestures and head orientation of people and identity of mid-sized objects anywhere in a room, but insufficient to resolve direction of eye gaze and similar subtle details. Audio is sampled at greater than CD quality, yielding recordings of speech that are easily transcribed. A cluster of ten computers and audio samplers with a capacity of five terabytes is located in the basement of the house to capture the data. Data from the cluster is moved manually to the MIT campus as necessary for storage in a one-million-gigabyte (one-petabyte) storage facility.

Privacy Issues

To provide control of the observation system to the occupants of the house, eight touch-activated displays have been wall-mounted throughout the house. These allow for stopping and starting video and or audio recording, and also provide an “oops” capability wherein the occupants can erase any number of minutes of recording permanently from the system. Motorized “privacy shutters” move to cover the cameras when video recording is turned off, providing natural feedback of the state of the system.

Data mining

Data mining is the process of extracting patterns from data. As more data are gathered, with the amount of data doubling every three years, data mining is becoming an increasingly important tool to transform these data into information. It is commonly used in a wide range of profiling practices, such as marketing, surveillance, fraud detection and scientific discovery.

While data mining can be used to uncover patterns in

data samples, it is important to be aware that the use of non-representative samples of data may produce results that are not indicative of the domain. Similarly, data mining will not find patterns that may be present in the domain, if those patterns are not present in the sample being “mined”. There is a tendency for insufficiently knowledgeable “consumers” of the results to attribute “magical abilities” to data mining, treating the technique as a sort of all-seeing crystal ball. Like any other tool, it only functions in conjunction with the appropriate raw material: in this case, indicative and representative data that the user must first collect. Further, the discovery of a particular pattern in a particular set of data does not necessarily mean that pattern is representative of the whole population from which that data was drawn. Hence, an important part of the process is the verification and validation of patterns on other samples of data.

The term data mining has also been used in a related but negative sense, to mean the deliberate searching for apparent but not necessarily representative patterns in large numbers of data. To avoid confusion with the other sense, the terms data dredging and data snooping are often used. Note, however, that dredging and snooping can be (and sometimes are) used as exploratory tools when developing and clarifying hypotheses.

Police-enforced ANPR in the UK

The UK has an extensive automatic number plate recognition (ANPR) CCTV network. Police and security services use it to track UK vehicle movements in real time. The resulting data are stored for 5 years in the National ANPR Data Centre to be analyzed for intelligence and to be used as evidence.

Criticism

Speaking on September 14, 2008, Simon Davies, the director of Privacy International stated that the database would give police “extraordinary powers of surveillance” and claimed that “this would never be allowed in any other democratic country.”

Nor are the dangers of ANPR merely theoretical. John Carr, and his daughter, Linda Carr, found their car tagged by the Police in reaction to their participation in peaceful and law-abiding protests against the arms industry. To this day, Sussex Police refuse to confirm or deny whether a tag exists on their car. They do not have a criminal record. Catt commented “That our participation in peaceful protest outside an arms factory led to our arbitrary stop-check for terrorist activities many miles away by another force is a very disturbing development of the ‘police state.’”

The Register has noted that “in theory a system could be organised in such a way that records of law-abiding drivers weren’t generated at all, but that hasn’t been the way things have panned out.” In the United States, the misuse of ANPR has led to car confiscations for ‘crimes’ such as “frequenting a bawdy place.” Richard Diamond commented that “Now it’s a Constitutional nightmare, mocking fundamental

and cherished legal protections: the right to be presumed innocent, the right to a trial by jury, the right not to have excessive fines imposed, the right not to be searched or have your property seized without reason or warrant, and the right to due process.”

ANPR does, of course, also have the potential to be a lucrative source of income for the Police, a fact not lost on Ronnie Flanagan who in an official report instructed other forces to “ensure they are taking an entrepreneurial approach to policing in ethical income generation and in creating and exploiting business opportunities,” effectively encouraging a change in the Police’s role, from disinterested and essentially reactive upholders of the law, to modern-day bounty hunters.

As Michel Foucault, Paul Virilio and others have noted, information is power. The UK Government is able to track almost all automated and many non-automated journeys within and outwith the UK. Individual freedom of movement is not protected as the Government possess the right of detention without charge for up to thirty days. There are no effective restrictions on the Governments right to track. In essence, critics say, the UK has become a giant open prison.

Michel Foucault

Michel Foucault, born Paul-Michel Foucault (15 October 1926 - 25 June 1984), was a French philosopher, sociologist and historian. He held a chair at the Collège de France with the title “History of Systems of Thought,” and also taught at the University of California, Berkeley.

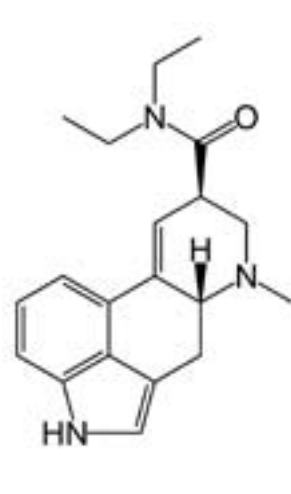
Foucault is best known for his critical studies of social institutions, most notably psychiatry, medicine, the human sciences, and the prison system, as well as for his work on the history of human sexuality. His work on power, and the relationships among power, knowledge, and discourse has been widely discussed. In the 1960s Foucault was associated with Structuralism, a movement from which he distanced himself. Foucault also rejected the post-structuralist and postmodernist labels to which he was often later attributed, preferring to classify his thought as a critical history of modernity rooted in Kant. Foucault is particularly influenced by the work of Nietzsche; his “genealogy of knowledge” is a direct allusion to Nietzsche’s genealogy of morals. In a late interview he definitively stated: “I am a Nietzschean.”

Later life

In the late 1970s, political activism in France tailed off with the disillusionment of many left wing intellectuals. A number of young Maoists abandoned their beliefs to become the so-called New Philosophers, often citing Foucault as their major influence, a status about which Foucault had mixed feelings. Foucault in this period embarked on a six-volume project The History of Sexuality, which he never completed. Its first volume was published in French as La Volonté de Savoir (1976), then in English as The History of Sexuality: An Introduction (1978). The second and third volumes did not appear for

another eight years, and they surprised readers by their subject matter (classical Greek and Latin texts), approach and style, particularly Foucault’s focus on the subject, a concept that some mistakenly believed he had previously neglected.

Foucault began to spend more time in the United States, at the University at Buffalo (where he had lectured on his first ever visit to the United States



in 1970) and especially at UC Berkeley. In 1975 he took LSD at Zabriskie Point in Death Valley National Park, later calling it the best experience of his life.

In 1979 Foucault made two tours of Iran, undertaking extensive interviews with political protagonists in support of the new interim government established soon after the Iranian Revolution. His many essays on Iran, published in the Italian newspaper Corriere della Sera, only appeared in French in 1994 and then in English in 2005. These essays caused some controversy, with some commentators arguing that Foucault was insufficiently critical of the new regime.

In the philosopher’s later years, interpreters of Foucault’s work attempted to engage with the problems presented by the fact that the late Foucault seemed in tension with the philosopher’s earlier work. When this issue was raised in a 1982 interview, Foucault remarked “When people say, ‘Well, you thought this a few years ago and now you say something else,’ my answer is… [laughs] ‘Well, do you think I have worked hard all those years to say the same thing and not to be changed?’ ” He refused to identify himself as a philosopher, historian, structuralist, or Marxist, maintaining that “The main interest in life and work is to become someone else that you were not in the beginning.” In a similar vein, he preferred not to claim that he was presenting a coherent and timeless block of knowledge; he rather desired his books “to be a kind of tool-box which others can rummage through to find a tool which they can use however they wish in their own area… I don’t write for an audience, I write for users, not readers.”

Foucault died of an AIDS-related illness in Paris on 25 June, 1984. He was the first high-profile French personality who was reported to have AIDS. Little was known about the disease at the time and there has been some controversy since. In the front-page article of Le Monde announcing his death, there was no mention of AIDS, although it was implied that he died from a massive infection. Prior to his death, Foucault had destroyed most of his manuscripts, and in

his will had prohibited the publication of what he might have overlooked.

Lysergic Acid Diethylamide

Lysergic acid diethylamide, LSD-25, LSD, commonly known as acid, is a semisynthetic psychedelic drug of the ergoline family. It is well known for its psychological effects which can include closed and open eye visuals, a sense of time distortion and profound cognitive shifts, as well as



for its key role in 1960’s counterculture. It is used mainly as an entheogen, a tool to supplement various practices for transcendence, including in meditation, psychonautics, art projects, and (formerly legal) psychedelic therapy, and as a recreational drug. Formally, LSD is classified as a hallucinogen of the psychedelic type.

LSD was first synthesized by Albert Hofmann in 1938 from ergot, a grain fungus that typically grows on rye. The short form LSD comes from its early code name LSD-25, which is an abbreviation for the German “Lysergsäure-diethylamid” followed by a sequential number.

LSD is sensitive to oxygen, ultraviolet light, and chlorine, especially in solution, though its potency may last for years if it is stored away from light and moisture at low temperature. In pure form it is a colourless, odourless, and mildly bitter solid.

LSD is typically delivered orally, usually on a substrate such as absorbent blotter paper, a sugar cube, or gelatin. In its liquid form, it can be administered by intramuscular or intravenous injection. The threshold dosage level needed to cause a psychoactive effect on humans is between 20 and 30 µg (micrograms).

Introduced by Sandoz Laboratories as a drug with various psychiatric uses in 1947, LSD quickly became a therapeutic agent that appeared to show great promise. However, the emerging recreational use of the drug in Western society during the mid-twentieth century led to a political firestorm that resulted in the banning of the substance. A number of organizations—including the Beckley Foundation, MAPS, Heffter Research Institute and the Albert Hofmann Foundation—exist to fund, encourage and coordinate research into its medicinal uses.

Psychological effects

LSD’s psychological effects (colloquially called a “trip”) vary greatly from person to person, depending on factors such as previous experiences, state of mind and environment, as well as dose strength. They also vary from one trip to another, and even as time passes during a single trip. An LSD trip can have long-term psychoemotional effects; some

users cite the LSD experience as causing significant changes in their personality and life perspective. Widely different effects emerge based on what has been called set and setting; the “set” being the general mindset of the user, and the “setting” being the physical and social environment in which the drug’s effects are experienced.

Some psychological effects may include an experience of radiant colors, objects and surfaces appearing to ripple or “breathe,” colored patterns behind the eyes, a sense of time distorting (time seems to be stretching, repeating itself, changing speed or stopping), crawling geometric patterns overlaying walls and other objects, morphing objects, a sense that one’s thoughts are spiraling into themselves, loss of a sense of identity or the ego (known as “ego death”), and other powerful psychophysical reactions. Many users experience a dissolution between themselves and the “outside world”. This unitive quality may play a role in the spiritual and religious aspects of LSD. The drug sometimes leads to disintegration or restructuring of the user’s historical personality and creates a mental state that some users report allows them to have more choice regarding the nature of their own personality.

If the user is in a hostile or otherwise unsettling environment, or is not mentally prepared for the powerful distortions in perception and thought that the drug causes, effects are more likely to be unpleasant than if he or she is in a comfortable environment and has a relaxed, balanced and open mindset.



Ego death

Ego death is an experience that purportedly reveals the illusory aspect of the ego, sometimes undergone by psychonauts, mystics, shamans, monks, psychologists, and others interested in exploring the depths of the mind.

The practice of ego death as a deliberately sought “mystical experience” in some ways overlaps, but is nevertheless distinct from, traditional teachings concerning enlightenment/“Nirvana” (in Buddhism) or “Moksha” (in Hinduism), which might perhaps be better understood as transcendence of the notion that one even has any actual, non-illusory “ego” with which to experience “death” in the first place. Sometimes the ego death is triggered without the subject’s desire. This can be a very traumatic and psychologically damaging event for some, and should be approached with caution.

Methods of inducing of the experience

The most direct means of accomplishing the mystical experience of ego death is through ingestion

of psychedelic drugs such as LSD, DMT, psilocybin and mescaline. Many other methods, practices, or experiences may also induce this state, including prayer, sacred ritual, sleep deprivation, fasting, meditation practice, or through the use of an isolation tank. Less frequently, it might also come about spontaneously or “of its own accord” (as a symptom of certain mental illnesses, or in response to severe trauma).

There are a variety of schools of thought about the aim, practice, and interpretation of the ego death experience.

It should also be noted, within the context of this system, that ego death is not actual death itself, but rather a temporary state of mind which can be stabilised and reverted. This can be done either by thought-source control for any who have achieved the state, as well as by de-intoxication for those who have reached the state using psychedelics.

However, there are, again, at least as many points of view about the nature of ego death as there are mystics, psychonauts, etc. who have had the experience. (Some, for example, may even go so far as to agree with the poet Dylan Thomas who said, “after the first death, there is no other.”) It can also be argued that experiencing ego death is not possible because an ego is a functional necessity of experience and hence experiencing does not occur after ego death. Unless one’s contemplation (while not ceasing to exist) is focused and or completely absorbed into an infinite object. Meditation on a blank or white-out state of consciousness would also have the same effect.

Dylan Thomas

Dylan Marlais Thomas (27 October 1914 - 9 November 1953) was a Welsh poet who wrote exclusively in English. In addition to poetry, he wrote short stories and scripts for film and radio, which he often performed himself. His public readings, particularly in America, won him great acclaim; his sonorous voice with a subtle Welsh lilt became almost as famous as his works. His best-known works include the “play for voices” Under Milk Wood and the celebrated villanelle for his dying father, Do not go gentle into that good night. Appreciative critics have also noted the superb craftsmanship and compression of poems such as In my craft or sullen art and the rhapsodic lyricism of Fern Hill.

Cross-cultural tributes

- The cover of the Beatles album *Sgt. Pepper’s Lonely Hearts Club Band* includes a photograph of Dylan Thomas.
- John Cale set a number of Thomas’s poems to music: There was a saviour, Do not go gentle into that good night, On a Wedding Anniversary and Lie still, sleep becalmed, recording them in his 1989 album Words for the Dying and (except for the first one) in his 1992 solo live album *Fragments of a Rainy Season*.
- In the 2002 film *Solaris*, Chris Kelvin (George Clooney) reads the first stanza of *And Death Shall Have no Dominion*.
- The American folk-singer Bob Dylan, whose real name is Robert Zimmerman, allegedly took his name from Dylan Thomas.

Bob Dylan

Bob Dylan (born Robert Allen Zimmerman on May 24, 1941)

is an American singer-songwriter, musician, painter, poet and latter-day disc jockey who has been a major figure in popular music for five decades. Much of his most celebrated work dates from the 1960s when he was, at first, an informal chronicler and then an apparently reluctant figurehead of social unrest. A number of his songs, such as “Blowin’ in the Wind” and “The Times They Are a-Changin’”, became anthems for both the civil rights and the anti-war movements.

Dylan’s early lyrics incorporated political, social and philosophical, as well as literary, influences. They defied existing pop music conventions and appealed hugely to the then burgeoning counterculture. While expanding and personalizing genres, he has explored many traditions of American song, from folk, blues and country to gospel, rock and roll and rockabilly to English, Scottish and Irish folk music, and even jazz and swing.

Dylan performs with guitar, piano and harmonica. Backed by a changing line-up of musicians, he has toured steadily since the late 1980s on what has been dubbed the Never Ending Tour. His accomplishments as a recording artist and performer have been central to his career, but his greatest contribution is generally considered to be his songwriting.

He has received numerous awards over the years including Grammy, Golden Globe and Academy Awards; he has been inducted into the Rock and Roll Hall of Fame, Nashville Songwriters Hall of Fame and Songwriters Hall of Fame. In 2008 a Bob Dylan Pathway was opened in the singer’s honor in his birthplace of Duluth, Minnesota. The Pulitzer Prize jury in 2008 awarded him a special citation for what they called his profound impact on popular music and American culture, “marked by lyrical compositions of extraordinary poetic power.”

His most recent album Together Through Life, his 33rd, was released on 28 April 2009. It reached number-one spot on both the Billboard 200 and the UK album charts in its first week of release.

Never Ending Tour

The Never Ending Tour commenced on June 7, 1988, and Dylan has played roughly 100 dates a year for the entirety of the 1990s and the 2000s—a heavier schedule than most performers who started out in the 1960s. By the end of 2008, Dylan and his band had played more than 2100 shows, anchored by long-time bassist Tony Garnier and filled out with talented sidemen. To the dismay of some of his audience, Dylan’s performances remain unpredictable as he alters his arrangements and changes his vocal approach night after night. Critical opinion about Dylan’s shows remains divided. Critics such as Richard Williams and Andy Gill have argued that Dylan has found a successful way to present his rich legacy of material. Others have criticised his vocal style as a “one-dimensional growl with which he chews up, mangles and spits out the greatest lyrics ever written so that they are effectively unrecognisable”, and his lack of interest in bonding with his audience.



Bellevue Hospital Center

Bellevue Hospital Center, founded in 1736 and most often referenced just as “Bellevue”, is the oldest public hospital in the United States. It is best known outside New York City from many literary, film, and television mentions as “Bellevue,” most always in reference to its psychiatric facilities. It is located in New York City and has been the site of countless milestones in the history of medicine. From the first ambulance service and the first maternity ward, to the development of the Polio vaccine, to the Nobel Prize winning work of Courmand and Richards in developing the world’s first cardiopulmonary catheterization laboratory, Bellevue Hospital has been the training ground for many of America’s leaders in medicine. Since 1968, it has been affiliated with the NYU School of Medicine. It is owned by the New York City Health and Hospitals Corporation and is open to patients of all backgrounds, irrespective of ability to pay. Lynda D. Curtis became its Executive Director in 2005.

- Bellevue is well known for its psychiatric facilities and as a triage center during disasters.
- Bellevue has seen many literary figures come through its doors, including the Beat poet Gregory Corso, and was portrayed in a number of motion pictures, including *The Lost Weekend* and *The Sleeping City*.
- Bellevue recently opened a new ambulatory care building dedicated to serving over 300,000 outpatients a year.
- Bellevue serves as a tertiary referral center for cardiac catheterization, catheter-based treatment of heart rhythm disorders, cardiovascular surgery, neurosurgery, physical rehabilitation, and Hansen’s disease (leprosy). The leader of *The Westies* One Lung Curran visited the tuberculosis ward every week for a regular check up from the 1920s to 1950’s.
- Bellevue recently opened burn units for pediatric (children) and adult burn patients.
- Bellevue also serves as a teaching hospital for the nation’s most prestigious dermatology training institute at New York University.

As the flagship facility of New York City’s Health and Hospitals Corporation, Bellevue handles nearly 500,000 outpatient clinic visits, 100,000 emergency patients, and some 26,000 inpatients each year. More than 80 percent of Bellevue’s patients come from the city’s medically

underserved populations. Today, the hospital occupies a 25-story patient care facility, with a state of the art ICU, digital radiology communication and a new modern outpatient facility. The hospital has an attending physician staff of 1,800 and a house staff of more than 1000.

Vaccination

Vaccination is the administration of antigenic material (the vaccine) to produce immunity to a disease. Vaccines can prevent or ameliorate the effects of infection by a pathogen. Vaccination is generally considered to be the most effective and cost-effective method of preventing infectious diseases. The material administrated can either be live but weakened forms of pathogens (bacteria or viruses), killed or inactivated forms of these pathogens, or purified material such as proteins. Smallpox was the first disease people tried to prevent by purposely inoculating themselves with other



types of infections; smallpox inoculation was started in China or India before 200 BC. In 1718, Lady Mary Wortley Montague reported that the Turks had a habit of deliberately inoculating themselves with fluid taken from mild cases of smallpox, and that she had inoculated her own children. Before 1796 when British physician Edward Jenner tested the possibility of using the cowpox vaccine as an immunisation for smallpox in humans for the first time, at least six people had done the same several years earlier: a person whose identity is unknown, England, (about 1771), Mrs. Sevel, Germany (about 1772), Mr. Jensen, Germany (about 1770), Benjamin Jesty, England, in 1774, Mrs. Rendall, England (about 1782) and Peter Plett, Germany, in 1791.

The word vaccination was first used by Edward Jenner in 1796. Louis Pasteur furthered the concept through his pioneering work in microbiology. Vaccination (Latin: vacca-cow) is so named because the first vaccine was derived from a virus affecting cows—the relatively benign cowpox virus—which provides a degree of immunity to smallpox, a contagious and deadly disease. In common speech, ‘vaccination’ and ‘immunization’ generally have the same colloquial meaning. This distinguishes it from inoculation which uses unweakened live pathogens, although in common usage either is used to refer to an immunization. The word “vaccination” was originally used specifically to describe the injection of smallpox vaccine.

Vaccination efforts have been met with some controversy since their inception, on ethical, political, medical safety, religious, and other grounds. In rare cases, vaccinations can injure people and they may receive compensation for those injuries. Early success and compulsion brought widespread acceptance and mass vaccination campaigns were undertaken which are credited with greatly reducing the incidence of many diseases in numerous geographic regions.

Types of vaccinations

All vaccinations work by presenting a foreign antigen to the immune system in order to evoke an immune response, but there are several ways to do this. The four main types that are currently in clinical use are as follows:

1. An inactivated vaccine consists of virus particles which are grown in culture and then killed using a method such as heat or formaldehyde. The virus particles are destroyed and cannot replicate, but the virus capsid proteins are intact enough to be recognized and remembered by the immune system and evoke a response. When manufactured correctly, the vaccine is not infectious, but improper inactivation can result in intact and infectious particles. Since the properly produced vaccine does not reproduce, booster shots are required periodically to reinforce the immune response.
2. In an attenuated vaccine, live virus particles with very low virulence are administered. They will reproduce, but very slowly. Since they do reproduce and continue to present antigen beyond the initial vaccination, boosters are required less often. These vaccines are produced by passaging virus in cell cultures, in animals, or at

suboptimal temperatures, allowing selection of less virulent strains, or by mutagenesis or targeted deletions in genes required for virulence. There is a small risk of reversion to virulence, this risk is smaller in vaccines with deletions. Attenuated vaccines also cannot be used by immunocompromised individuals.

3. Virus-like particle vaccines consist of viral protein(s) derived from the structural proteins of a virus. These protein can self-assemble into particles that resemble the virus from which they were derived but lack viral nucleic acid, meaning that they are not infectious. Because of their highly repetitive, multivalent structure, virus-like particles are typically more immunogenic than subunit vaccines (described below). The human papillomavirus and Hepatitis B virus vaccines are two virus-like particle based vaccines currently in use clinically.

4. A subunit vaccine presents an antigen to the immune system without introducing viral particles, whole or otherwise. One method of production involves isolation of a specific protein from a virus or bacteria (such as a bacterial toxin) and administering this by itself. A weakness of this technique is that isolated proteins may have a different three-dimensional structure than the protein in its normal context, and will induce antibodies that may not recognize the infectious organism. In addition, subunit vaccines often elicit weaker antibody responses than the other classes of vaccines.

A number of other vaccine strategies are under experimental investigation. These include DNA vaccination and recombinant viral vectors.

Ayurveda

Ayurveda (the ‘science of life’) is a system of traditional medicine native to India, and practiced in other parts of the world as a form of alternative medicine. In Sanskrit, the word Ayurveda consists of the words āyus, meaning ‘life’, and veda, meaning ‘related to knowledge’ or ‘science’. Evolving throughout its history, Ayurveda remains an influential system of medicine in South Asia. The earliest literature of Ayurveda appeared during the Vedic period in India. The Sushruta Samhita and the Charaka Samhita were influential works on traditional medicine during this era. Ayurvedic practitioners also claim to have identified a number of medicinal preparations and surgical procedures for curing various ailments and diseases.

As per Indian heritage and science, “Ayurveda” is a Upa Veda or annexure of four main vedas (Knowledge Systems). The famous treatises of Ayurveda are “Charaka Samhita” by Sage “Charakan”, which details the prevention and treatment of disease, and “Sushruta Samhita” of Sage “Sushruta”, which deals with Ayurvedic surgical procedures. In the Ayurvedic system, the prevention of all types of disease has a prominent place in treatment, including restructuring a patient’s lifestyle to align with the course of nature and the four seasons to guarantee complete wellness.

Ayurveda is considered to be a form of complementary and alternative medicine (CAM) within the western world, where several of its methods, such as the use of herbs, massage, and Yoga as exercise or alternative medicine, are applied on their own as a form of CAM treatment. However, such alternative therapy

approaches are not unique to Ayurveda because they are also available under the systems of Unani Medicine, Greek Medicine, and Islamic Medicine.

Sanskrit

Sanskrit is a historical Indo-Aryan language, one of the liturgical languages of Hinduism and Buddhism, and one of the 22 official languages of India.

Classical Sanskrit is the standard register as laid out in the grammar of Pāṇini, around the 4th century BCE. Its position in the cultures of South and Southeast Asia is akin to that of Latin and Greek in Europe and it has significantly influenced most modern languages of Nepal and India.

The pre-Classical form of Sanskrit is known as Vedic Sanskrit, with the language of the Rigveda being the oldest and most archaic stage preserved, its oldest core dating back to as early



as 1500 BCE. This qualifies Rigvedic Sanskrit as one of the oldest attestation of any Indo-Iranian language, and one of the earliest attested members of the Indo-European language family, the family which includes English and most European languages.

The corpus of Sanskrit literature encompasses a rich tradition of poetry and drama as well as scientific, technical, philosophical and Hindu religious texts. Today, Sanskrit continues to be widely used as a ceremonial language in Hindu religious



rituals in the forms of hymns and mantras. Spoken Sanskrit is still in use in a few traditional institutions in India, and there are many attempts at revival.

History

Sanskrit is a member of

the Indo-Iranian sub-family of the Indo-European family of languages. Its closest ancient relatives are the Iranian languages Old Persian and Avestan. Within the wider Indo-European language family, Sanskrit shares characteristic sound changes with the Satem languages (particularly the Slavic and Baltic languages), and also with Greek.

In order to explain the common features shared by Sanskrit and other Indo-European languages, many scholars have proposed migration hypotheses asserting that the original speakers of what became Sanskrit arrived in what is now India and Pakistan from the north-west some time during the early second millennium BCE. Evidence for such a theory includes the close relationship of the Indo-Iranian tongues with the Baltic and Slavic languages, vocabulary exchange with the non-Indo-European Finno-Ugric languages, and the nature of the attested Indo-European words for flora and fauna.

The earliest attested Sanskrit texts are Hindu texts of the Rigveda, which may be located in the Greater Punjab region and adjacent Afghanistan, and dated to the mid-to-late second millennium BCE. No written records from such an early period survive. However, scholars are confident that the oral transmission of the texts is reliable: they were ceremonial literature whose correct pronunciation was considered crucial to its religious efficacy.

The oldest surviving Sanskrit grammar is Pāṇini’s Aṣṭadhyāyī (“Eight-Chapter Grammar”). It is essentially a prescriptive grammar, i.e., an authority that defines (rather than describes) correct Sanskrit, although it contains descriptive parts, mostly to account for some Vedic forms the use of which had become rare in Pāṇini’s time.

The term “Sanskrit” was not thought of as a specific language set apart from other languages, but rather as a particularly refined or perfected manner of speaking. Knowledge of Sanskrit was a marker of social class and educational attainment in ancient India and the language was taught mainly to members of the higher castes, through close analysis of Sanskrit grammarians such as Pāṇini. Sanskrit, as the learned language of Ancient India, thus existed alongside the Prakrits (vernaculars), which evolved into the Middle Indic dia-

lects, and eventually into the contemporary modern Indo-Aryan languages.

Mantra

A mantra is a sound, syllable, word, or group of words that are considered capable of “creating

transformation” (cf. spiri- tual transformation). Their use and type varies according to the school and philosophy associated with the mantra.

Mantras can be inter- preted to be effective as vibration, or more simply as sound, which may include verbal repetition, in the form of chanting, or inter- nal mental repetition. For this reason great emphasis is put on correct pronuncia- tion (resulting in an early development of a science of phonetics in India). Mantras can be used to divert the mind from basic instinctual desires or material inclina- tions, by focusing the mind on a spiritual idea, such as “I am a manifestation of divine consciousness” .

Mantras originated in the Vedic tradition of India, later becoming an essential part of the Hindu tradition and a customary practice within Buddhism, Sikhism and Jainism. The use of mantras is now widespread throughout various spiritual movements which are based on, or off- shoots of, the practices in the earlier Eastern tradi- tions and religions.

Attention

Attention is the cognitive process of selectively con- centrating on one aspect of the environment while ignor- ing other things. Attention has also been referred to as the allocation of processing resources.

Examples include listen- ing carefully to what someone is saying while ignoring other conversations in a room (the cocktail party effect) or listening to a cell phone conversation while driving a car. Attention is one of the most intensely studied topics within psychology and cognitive neuroscience.

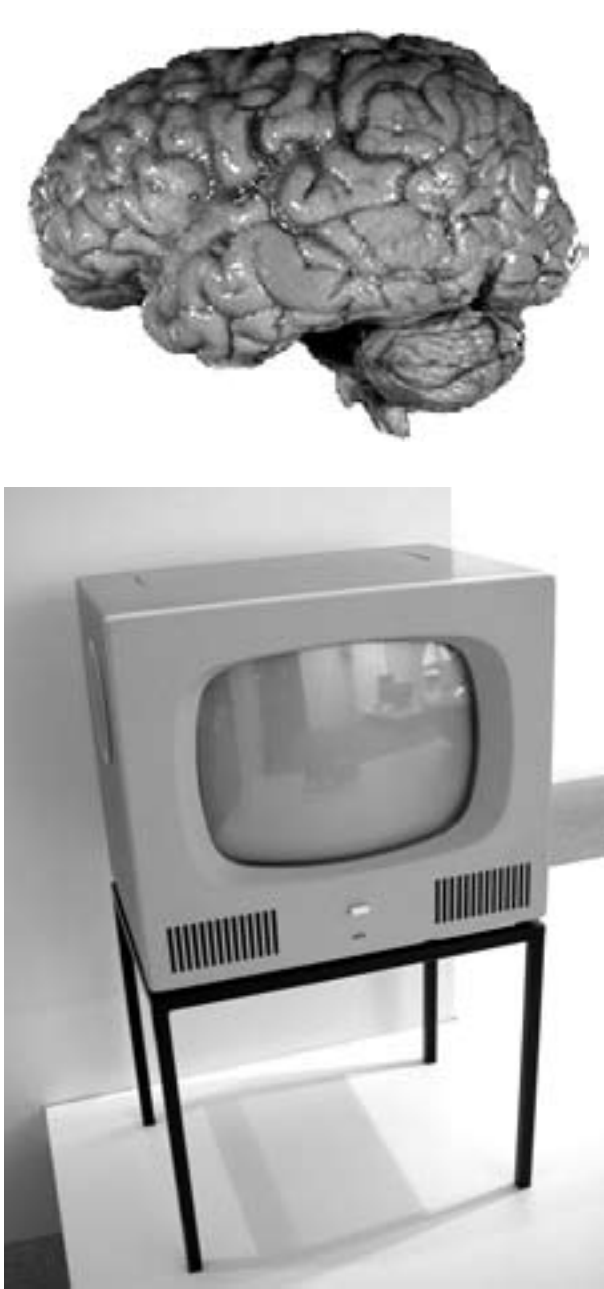
William James, in his textbook Principles of Psychology, remarked:

“ Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of conscious- ness are of its essence. It implies withdrawal from some things in order to deal effectively with oth- ers, and is a condition which has a real opposite in the confused, dazed, scatterbrained state which in French is called *distraktion*, and *Zerstreuung* in German.”

Cocktail party effect

The cocktail party effect describes the ability to focus one’s listening attention on a single talker among a mixture of conversa- tions and background noises, ignoring other conversa- tions. This effect reveals one of the surprising abili- ties of our auditory system, which enables us to talk in a noisy place.

The cocktail party effect can occur both when we are paying attention to one of the sounds around us and when it is invoked by a stimulus which grabs our attention suddenly. For example, when we are talk- ing with our friend in a crowded party, we still can listen and understand what our friend says even if the place is very noisy, and can simultaneously ignore what another nearby person is saying. Then if someone over the other side of the party room calls out our name sud- denly, we also notice that sound and respond to it imme- diately. The hearing reaches a noise suppression from 9 to 15 dB, i.e., the acous- tic source, on which humans



concentrate, seems to be three times louder than the ambient noise. A microphone recording in comparison will show the big difference.

The effect is an auditory version of the figure-ground phenomenon. Here, the figure is the sound one pays atten- tion to, while the ground is any other sound (“the cock- tail party”).

Experiments and theoretical approaches

The effect was first described (and named) by Colin Cherry in 1953. Much of the early work in this area can be traced to prob- lems faced by air traffic controllers in the early 1950s. At that time, con- trollers received messages from pilots over loudspeak- ers in the control tower. Hearing the intermixed voices of many pilots over a single loudspeaker made the controller’s task very difficult.

Cherry (1953) conducted perception experiments in which subjects were asked to listen to two different messages from a single loud- speaker at the same time and try to separate them. His work reveals that our abil- ity to separate sounds from background noise is based on the characteristics of the sounds, such as the gender of the speaker, the direc- tion from which the sound is coming, the pitch, or the speaking speed.

Stimulation

Stimulation is the action of various agents (stimuli) on muscles, nerves, or a sensory end organ, by which activity is evoked; especially, the nervous impulse produced by various agents on nerves, or a sensory end organ, by which the part connected with the nerve is thrown into a state of activity.

The word is also often used metaphorically. For

example, an interesting or fun activity can be described as “stimulating,” regard- less of its physical effects on nerves.

It is also used in simula- tion technology to describe a synthetically-produced signal that triggers (stimu- lates) real equipment, see below.

Overview

Stimulation in general refers to how organisms perceive incoming stimuli. As such it is part of the stimulus-response mecha- nism. Simple organisms broadly react in three ways to stimulation: too little stimulation causes them to stagnate, too much to die from stress or inabil- ity to adapt, and a medium amount causes them to adapt and grow as they overcome it. Similation is a germ and plants get the gern no effect or effect are noted with psychological stress with people. Thus, stimula- tion may be described as how external events provoke a response by an individual in the attempt to cope.

Use in Simulators and Simulation Technology Stimulation describes a type of simulation whereby arti- ficially-generated signals are fed to real equipment in order to Stimulate it to pro- duce the result required for training, maintenance or for R&D. The real equipment can be radar, sonics, instruments and so on. In some cases the Stimulation equipment can be carried in the real platform or carriage vehicle (that is the Ship, AFV or Aircraft) and be used for so-called `embedded training’ during its operation, by the gener- ation of simulated scenarios which can be dealt with in a realistic manner by use of the normal controls and displays. In the overall definition of simulation, the alternative method is called

emulation’ which is the sim- ulation of equipment by entirely artificial means by physical and software model- ling it responds like like like.

Over-stimulation

Psychologically, it is possible to become habituated to a degree of stimulation, and then find it uncomfort- able to have significantly more or less. Thus one can become used to an intense life, or television, and suffer withdrawal when they are removed, from lack of stimulation, and it is pos- sible to also be unhappy and stressed due to additional abnormal stimulation.

It is hypothesized and commonly believed by some that psychological habitu- ation to a high level of stimulation (“over-stim- ulation”) can lead to psychological problems. For example, some food addi- tives can result in children becoming prone to over- stimulation, and ADHD is, theoretically, a condition in which over-stimulation is a part. It is also hypoth- esized that long term over stimulation can result even- tually in a phenomenon called “adrenal exhaustion” over time, but this is not medi- cally accepted or proven at this time.

What is sure is that ongo- ing, long term stimulation, can for some individuals prove harmful, and a more relaxed and less stimulated life may be beneficial. See also: sensory overload and burnout.

Television

Television (TV) is a widely used telecommunication medium for transmitting and receiving moving images, either monochromatic (“black and white”) or color, usually accompanied by sound. “Television” may also refer specifically to a television set, television programming or television transmission. The word is



derived from mixed Latin and Greek roots, meaning “far sight” : Greek tele (τῆλε), far, and Latin visio, sight (from video, vis- to see, or to view in the first person).

Commercially available since the late 1930s, the television set has become a common communications receiver in homes, busi- nesses and institutions, particularly as a source of entertainment and news. Since the 1970s the avail- ability of video cassettes, laserdiscs, DVDs and now Blu-ray discs, have resulted in the television set fre- quently being used for viewing recorded as well as broadcast material.

Although other forms such as closed-circuit tele- vision are in use, the most common usage of the medium is for broadcast television, which was modeled on the existing radio broadcast- ing systems developed in the 1920s, and uses high-powered radio-frequency transmitters to broadcast the television signal to individual TV receivers.

Broadcast TV is typi- cally disseminated via radio transmissions on designated channels in the 54-890 mega- hertz frequency band. Signals are now often transmitted with stereo and/or surround sound in many countries. Until the 2000s broadcast TV programs were generally recorded and transmitted as an analog signal, but in recent years public and com- mercial broadcasters have been progressively intro- ducing digital television broadcasting technology.

A standard television set comprises multiple internal electronic circuits, includ- ing those for receiving and decoding broadcast signals. A visual display device which lacks a tuner is prop- erly called a monitor, rather than a television. A televi- sion system may use different technical standards such as digital television (DTV) and high-definition television (HDTV). Television systems are also used for surveil- lance, industrial process control, and guiding of weapons, in places where direct observation is dif- ficult or dangerous.

Amateur television (HAM TV or ATV) is also used for experimentation, pleasure and public service events by amateur radio operators. HAM TV stations were on the air in many cities before com- mercial TV stations came on the air.

Videotape

Videotape is a means of recording images and sound on to magnetic tape as opposed to movie film.

Early formats

The electronics division of entertainer Bing Crosby’s production company, Bing Crosby Enterprises (BCE), gave the world’s first dem- onstration of a videotape recording in Los Angeles on November 11, 1951. Developed by John T. Mullin and Wayne R. Johnson since 1950, the device gave what were described as “blurred and indistinct” images, using a modified Ampex 200 tape recorder and standard quar- ter-inch (0.6 cm) audio tape moving at 360 inches (9.1 m) per second. A year later, an improved version, using one- inch (2.6 cm) magnetic tape, was shown to the press, who reportedly expressed amaze- ment at the quality of the images, although they had a “persistent grainy qual- ity that looked like a worn motion picture” . Overall, the picture quality was still considered inferior to the best kinescope record- ings on film.Bing Crosby Enterprises hoped to have a commercial version avail- able in 1954, but none came forth. BCE demonstrated a color model in February 1955, using a longitudinal record- ing on half-inch (1.3 cm) tape, essentially similar to what RCA had demonstrated in 1953 (see below). CBS, RCA’s competitor, was about to order BCE machines when Ampex introduced the super- ior Quadruplex system (see below).

RCA demonstrated the mag- netic tape recording of both black-and-white and color programs at its Princeton laboratories on December 1, 1953. The high-speed longi- tudinal tape system, called Simplex, in development since 1951, could record and play back only a few minutes of a program. The color system used half-inch (1.3 cm) tape to record five tracks – one each for red, blue, green, synchronization, and audio. The black-and-white system used quarter-inch (0.6 cm) tape with two tracks, one for



picture and one for sound. Both systems ran at 360 inches (9.1 m) per second. RCA-owned NBC first used it on the The Jonathan Winters Show on October 23, 1956, when a pre-recorded song sequence by Dorothy Collins in color was included in the otherwise live program.

The BBC experimented from 1952 to 1958 with a high-speed linear videotape system called VERA, but this was ultimately unfeasible.

Faces of Death

Faces of Death (1978), also released under the title The Original Faces of Death, is a mondo film, lasting roughly 105 minutes, which guides viewers through explicit scenes depicting a variety of ways to die and violent acts. It is often billed as Banned in 40 Countries, with that number varying with the years. The film has, in fact, been banned (at least temporarily) in New Zealand, Australia, Norway and Finland. The film was written and directed by John Alan Schwartz (credited as “Conan le Cilaire” for directing and “Alan Black” for writing). Schwartz was also the second unit director, credited this time as “Johnny Getyerkokov”. He also appears in one of the segments in this film, as the leader of the alleged flesh eating cult in San Francisco area, and puts in cameo appearances in several other films in this series. This film stars Michael Carr as the narrator, and ‘creative consultant’ called “Dr. Francis B. Gröss”. John Alan Schwartz has gone on record as saying this film’s budget was \$450,000 and there are estimates that it has grossed more than \$35 million worldwide in theatrical releases, not including rentals. It was ranked #50 on Entertainment Weekly’s “Top 50 Cult Films of All-Time” in 2000. In 2008 the makers of the Faces Of Death re-released the original Faces Of Death on DVD accompanied by a commentary with the real Conan Le Cilaire and an extensive and revealing interview with the film’s editor Glenn Turner AKA James Roy. Glenn explains how they used numerous film techniques and movie tricks to make the fake footage appear real.

Although several of the “human death” scenes are obvious fakes (with Allan A. Apone, make-up and special effects artists for the film saying that about 40% of it is fake), some of the footage is genuine. Famous scenes of death from the media are included, such as stock footage of a napalm bombing in Vietnam, various newsreel footage, and war-time footage of Hitler. Also featured are the actual on-camera deaths of a variety of animals, including seals being clubbed to death and animals being killed on the slaughterhouse line.

A number of Faces of Death sequels were made, each with a lower production quality than the last. Faces of Death I - IV and Faces of Death: Fact or Fiction? (a “documentary” on the making of the series) were written and at least partially directed by John Alan Schwartz. Faces of Death 5 and 6 were made up entirely of highlights from the first four films, with no new footage at all, and released in some countries where the original films were banned. The first three starred Carr as “Dr. Gröss,” although The Worst of Faces of Death (released between installments III and IV and consisting of highlights from the first three installments) instead featured Schwartz’s brother, James Schwartz, as “Dr. Louis Flellis.” Flellis explains that he accidentally killed “Dr. Gröss” while operating on him the prior week. However, in Faces of Death IV, Flellis explains the absence of Dr. Gröss by stating that he had taken his own life, having been

driven insane as a result of witnessing so much death.

Some of the actors and special makeup/effects crew have reportedly come forward to try to obtain credit for their work on this film. Most of these people were not in any union at the time of filming. This is the reasoning for the brief credits which helped make the film seem more realistic.

This film was spoofed on LateNight with Conan O’ Brien where various Muppets were shown either dead or in the process of dying.

Faces of Death 2000 recapped the “best” scenes from I through IV and a few shots of the previously deceased. However, a few of the alleged “police surveillance video” captures that depict actual murders or deaths, are obvious fakes. The gangs and victims in the videos are seen in the end credits performing a rap video, with the same backdrops and same actors. The rappers at the end credits of this film are the horrorcore group Insane Poetry. The music video is for “How Ya Gonna Reason With A Psycho”, from the album Grim Reality.

Dark Sky Films released Faces Of Death on Blu-Ray disc on October 7, 2008. A brand new high definition transfer was created from extremely rare vault material and the disc also has a 5.1 digital soundtrack. A DVD version was also released.



San Francisco

San Francisco is the fourth most populous city in California and the 12th most populous city in the United States, with a 2008 estimated population of 808,976. It is the second most densely populated major city in the U.S. and is the financial, cultural, and transportation center of the larger San Francisco Bay Area, a region of more than seven million people. The city is located at the northern end of the San Francisco Peninsula, with the Pacific Ocean to the west and San Francisco Bay to the north and east, and Daly City and Brisbane to the south.

In 1776, the Spanish established a fort at the Golden Gate and a mission named for Francis of Assisi. The California Gold Rush in 1848 propelled the city into a period of rapid growth, transforming it into the largest city on the West Coast at the time. After being devastated by the 1906 earthquake and fire, San Francisco was quickly rebuilt, hosting the Panama-Pacific International Exposition nine years later. During World War II, San Francisco was the send-off point for many soldiers to the Pacific Theater. After the war, the confluence of returning servicemen, massive immigration, liberalizing attitudes, and other factors gave rise to the Summer of Love and the gay

rights movement, cementing San Francisco as a liberal bastion in the United States.

Today, San Francisco is a popular international tourist destination renowned for its chilly summer fog, steep rolling hills, eclectic mix of Victorian and modern architecture and its famous landmarks, including the Golden Gate Bridge, the cable cars, and Chinatown.

Media

The San Francisco Chronicle, in which Herb Caen famously published his daily musings, is Northern California’s most widely circulated newspaper. The San Francisco Examiner, once the cornerstone of William Randolph Hearst’s media empire and the home of Ambrose Bierce, declined in circulation over the years and now takes the form of a free daily tabloid. Sing Tao Daily claims to be the largest of several Chinese language dailies that serve the Bay Area. Alternative weekly newspapers include the San Francisco Bay Guardian and SF Weekly. San Francisco Magazine and 7x7 are major glossy magazines about San Francisco. The national newsmagazine Mother Jones is also based in San Francisco.

The San Francisco Bay Area is the sixth-largest TV market and the fourth-largest radio market in the U.S. The city’s oldest radio station, KCBS (AM), began as an experimental station in San Jose in 1909. KALW was the city’s first FM radio station when it signed on the air in 1941. All major U.S. television networks have affiliates serving the region, with most of them based in the city.

Public broadcasting outlets include both a television station and a radio station, both broadcasting under the call letters KQED from a facility near the Potrero Hill neighborhood. KQED-FM is the most-listened-to National Public Radio affiliate in the country. San Francisco-based CNET and Salon.com pioneered the use of the Internet as a media outlet.



BBC

The British Broadcasting Corporation, usually referred to by its abbreviation the “BBC”, is the world’s oldest and largest broadcaster. The BBC is funded by an annual television licence fee, which is charged to all United Kingdom households owning equipment capable of receiving or recording television broadcasts; the level of the fee is set by the UK Government under a multi-year agreement with the Corporation. It operates under a Royal Charter granted by the British monarch.

Greg Dyke

Gregory Dyke (born 20 May 1947) is a journalist and broadcaster. He was Director-General of the BBC from January 2000 until 29 January 2004 when he resigned following heavy criticism of the BBC’s news reporting process in the Hutton Inquiry.

Working in television

After university, Dyke moved into journalism and was also Public Relations spokesperson for the Wandsworth Council for Community Relations. He was married to

a Probation Officer, Christine Taylor although the relationship broke down before he ventured into the world of Television. Some time later he formed a relationship with another Probation officer, Sue Howes with whom he has been ever since. The couple have two children. He worked first for London Weekend Television (LWT) before taking a job at TV-am in 1983. He was instrumental in reviving the breakfast show’s fortunes by introducing Roland Rat, a hand puppet, to live up the show. Following TV-am, Dyke became Director of Programmes for TVS, and later returned to LWT, making a fortune when Granada bought out the firm. Stints at Pearson PLC and five followed.

Roland Rat

Roland Rat (also Roland Rat Superstar) is a British television puppet character. He was created, operated and voiced by David Claridge, who had previously been behind the Mooncat puppet in the Children’s ITV television programme Get Up and Go! and would later operate and voice “Brian the Dinosaur” on Parallel 9. Claridge, whose hands appear in Tears for Fears’ video for the song “Change,” named Roland after the group’s co-founder Roland Orzabal.

Roland lived beneath King’s Cross railway station. He had an infant brother called Reggie, and a girlfriend: Glenis the Guinea Pig. His colleagues included dour Welsh technical whizz Errol the Hamster, and over-enthusiastic self-appointed “number one ratfan” Kevin the Gerbil. Claridge actually voiced all three main characters: Roland Rat, Errol the Hamster and Kevin The Gerbil; and they often appeared on screen together. Roland Rat’s car ‘the Ratmobile’ was a bright pink 1957 Ford Anglia.

Roland Rat was introduced to ailing breakfast television network TV-am by Greg Dyke and was generally regarded as its saviour, being described as “the only rat to join a sinking ship”. After a couple of months on TV-am, Roland took the audience from 100,000 to 1.8 million. One notable highlight during this period was the visit of the late Austrian racing driver Roland Ratzenberger who appeared on the show in a motor race against the Ratmobile ending with Ratzenberger’s car being sabotaged by his near-namesake. Between 1983 and 1985, Roland had three UK chart hit singles including “Rat Rapping” and an album The Cassette



Of The Album. A follow-up LP, Living Legend subsequently appeared but flopped, despite having three tracks produced by Stock Aitken Waterman. Kevin the Gerbil also had a top 50 single.

Arguably Roland Rat’s golden age, was his Christmas show Roland Rat’s Winter

Wonderland in 1984. TV-AM sold Roland Rat advent calendars, with Roland opening each door with the viewers at 7.20am every day. The final show had Roland and his chums in the snow. The following year at Easter, Roland Rat hosted the show Roland Rat in Kowloon, Hong Kong.



In 1985 he transferred to the BBC where he had a number of shows through the late 1980s, most notably Roland Rat the Series, a chat show supposedly set in Roland’s sewer home, now converted into a high-tech media centre called the Ratcave. In a similar manner to The Muppet Show and its sequels, the show would intersperse the chat show segments with a storyline involving some sort of situation “behind the scenes”. He also appeared in two spoof drama series, Tales of the Rodent Sherlock Holmes, in which he played Holmes with Kevin as Dr Watson, and Ratman, a Batman spoof with Kevin as his sidekick, “Pink Bucket Man”. During Christmas 1985, British Telecom operated a free “ratphone” number on 0800 800 800.

In the late 1990s he reemerged on Channel 5, in LA Rat, which featured Roland and his friends touring Los Angeles. Roland made another brief return in early 2003 as a guest presenter of CiTV.

In December 2007 Roland Rat appeared on a puppet special of the Weakest Link hosted by Anne Robinson which was originally broadcast on Friday 28 December 2007 at 18:00GMT on BBC One. Roland reached the final round with Soo from The Sooty Show which went to sudden death after initially drawing with four points each. Roland ultimately lost out to Soo’s superior wisdom in the tense final standoff.

Roland appeared in the third episode of the second series of Ashes to Ashes. This appearance was anachronistic, as the show is set in 1982 whereas Roland didn’t debut until the fol-



lowing year.

In 2008, Roland released a christmas single, “Ding Dong Ding Dong (Christmas Down The Drain)” featuring Kevin, Errol and Regie, available for download.

The video game

In 1985 Ocean Software



produced a game called Roland’s Rat Race for the ZX Spectrum and Commodore 64. The player had to guide Roland through the sewers of London and collect nine pieces of a door which, when complete, would allow him to rescue his companions in time for an appearance on TV-am.

Commodore 64

The Commodore 64 is an 8-bit home computer released by Commodore International in January, 1982, at a price of \$595. Preceded by the Commodore VIC-20 and Commodore MAX Machine, the C64 features 64 kilobytes (65,536 bytes) of memory with sound and graphics performance that were superior to IBM-compatible computers of that time. It is commonly known as the C64 or C=64 and occasionally referred to as CBM 64 (Commodore Business Machines Model number 64), or VIC-64. It has also been affectionately nicknamed the “breadbox” and “bull-nose” due to the shape and colour of the first version of its casing.

During the Commodore 64’s lifetime, sales totalled 17 million units, making it the best-selling single personal computer model of all time. For a substantial period of time (1983-1986), the Commodore 64 dominated the market with between 30% and 40% share and 2 million units sold per year, outselling the IBM PC clones, Apple computers, and Atari computers. Sam Tramiel, a former Atari president said in a 1989 interview “When I was at Commodore we were building 400,000 C64s a month for a couple of years.”

Part of its success was because it was sold in retail stores instead of electronics stores, and these machines can be directly plugged into an existing home television without any modifications. Commodore produced many of its parts in-house to control supplies and cost. It is sometimes compared to the Ford Model-T for bringing a new technology to middle-class households via creative mass-production.

Approximately 10,000 commercial software titles were made for the Commodore 64 including development tools, office applications, and games. The machine is also credited with popularizing the computer demo scene. The Commodore 64 is still used today by some computer hobbyists.

Since 28 March 2008, Commodore 64 games have been available to buy through Nintendo’s Virtual Console

service in Europe; the first games available were Uridium and International Karate. Later, on February 23, 2009, the Commodore 64 section was launched in North America with the first three titles, International Karate, The Last Ninja and Pitstop II.



Ford Model T

The Ford Model T (colloquially known as the Tin Lizzie and Flivver) is an automobile that was produced by Henry Ford’s Ford Motor Company from 1908 through 1927. The Model T set 1908 as the historic year that the automobile came into popular usage. It is generally regarded as the first affordable automobile, the car that “put America on wheels”; some of this was because of Ford’s innovations, including assembly line production instead of individual hand crafting, as well as the concept of paying the workers a wage proportionate to the cost of the car, so that they would provide a ready made market. The first production Model T was built on September 27, 1908, at the Piquette Plant in Detroit, Michigan.

There were several cars produced or prototyped by Henry Ford from the founding of the company in 1903 until the Model T came along. Although he started with the Model A, there were not 19 production models (A through T); some were only prototypes. The production model immediately before the Model T was the Ford Model S, an upgraded version of the company’s largest success to that point, the Model N. The follow-up was the Ford Model A and not the Model U. Company publicity said this was because the new car was such a departure from the old that Henry wanted to start all over again with the letter A. As it happens, the first Plymouth car (1928), built by competitor Chrysler Corporation, was named the Model U.

The Ford Model T was named the world’s most influential car of the twentieth century in an international poll.

Engine and means of starting
The Model T had a front mounted, 177 in3 (2.9 L) four-cylinder en bloc motor (that is, all four in one block, as common now, rather than in individual castings, as common then) producing 20.2 hp (15 kW) for a top speed of 40–45 mph (64-72 km/h). The small four cylinder engine was known for its L heads. According to Ford Motor, the Model T had fuel economy on the order of 13 to 21 mpg (5 to 9 kilometres per litre or 11.1 to 18.7 litres per 100 km). The engine was capable of running on gasoline, kerosene or ethanol, though the decreasing cost of gasoline and the later

introduction of Prohibition in the United States made ethanol an impractical fuel.

A flywheel magneto (broadly equivalent to a modern alternator) produced low voltage alternating current to power a trembler coil,

which created a high voltage current. This ignition pulse was passed to the timer (analogous to a distributor in a modern vehicle) and redistributed to the firing cylinder. Ignition timing was adjusted manually by using the spark advance lever mounted on the steering column which rotated the timer. A battery could be used for starting current: at hand-cranking speed, the magneto did not always produce sufficient current (but was initially available on early cars). A certain amount of skill and experience was required to find the optimal timing for any speed and load. When electric headlights were introduced in 1915, the magneto was upgraded to supply power for the lights and horn. In keeping with the goal of ultimate reliability and simplicity, the trembler coil and magneto ignition system was retained even after the car became equipped with a generator and battery for



electric starting and lighting. Most cars sold after 1919 were equipped with electric starting, which was engaged by a small round button on the floor in front of the driver’s seat.

Before starting a Model T with the hand crank, the spark had to be manually retarded or the engine might “kick back”. The crank handle was cupped in the palm, rather than grabbed with the thumb under the top of the handle, so that if the engine did kick back, the rapid reverse motion of the crank would throw the hand away from the handle, rather than violently twisting the wrist or breaking the thumb. Most Model T Fords had the choke operated by a wire emerging from the bottom of the radiator where it could be operated with the left hand. This was used to prime the engine while cranking the engine slowly then starting the engine with the

The Autobiography of Malcolm X

left hand with a rapid pull of the crank handle.

The car’s 10 gallon (38 litre) fuel tank was mounted to the frame beneath the front seat; one variant had the carburetor (a Holley Model G) modified to run on ethyl alcohol, to be made at home by the self-reliant farmer. Because fuel relied on gravity to flow forward from the fuel tank to the carburetor, a Model T could not climb a steep hill when the fuel level was low. The immediate solution was often to drive up steep hills in reverse. In 1926, the fuel tank was moved forward to under the cowl on most models.

Early on the engine blocks were to be produced by the Lakeside Foundry on St. Jean in Detroit. Ford cancelled the deal before many engine blocks were produced.

While the first few hundred Model Ts had a water pump, its use was abandoned early in production. Ford opted for a cheaper and more reliable circulation system based on the thermo-syphon principle. Hot water, being less dense, would rise to the top of the engine and up into the top of the radiator,



descending to the bottom as it cooled, and back into the engine. This was the direction of water flow in most makes of cars even when they did have water pumps, until the introduction of crossflow radiator designs.

Prohibition in the United States

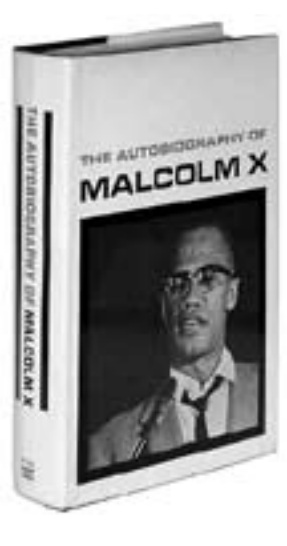
In the history of the United States, Prohibition, also known as The Noble Experiment, is the period from 1919 to 1933, during which the sale, manufacture, and transportation of alcohol for consumption were banned nationally as mandated in the Eighteenth Amendment to the United States Constitution.

Undersubstantialpressure from the temperance movement, the United States Senate proposed the Eighteenth Amendment on December 18, 1917. Having been approved by 36 states, the 18th Amendment was ratified on January 16, 1919 and effected on January 16, 1920. Some state legislatures had already enacted statewide prohibition prior to the ratification of the 18th Amendment.

The “Volstead Act”, the popular name for the National Prohibition Act, passed through Congress over President Woodrow Wilson’s veto on October 28, 1919 and established the legal definition of intoxicating liquor. Though the Volstead Act prohibited the sale of alcohol, it did little to enforce the law. The illegal production and distribution of liquor, or bootlegging, became rampant, and the national government did not have the means or desire to enforce every border, lake, river, and speakeasy in America. In fact, by 1925 in New York City alone there were anywhere from 30,000 to 100,000 speakeasy clubs.

Prohibition became

Russian Roulette



increasingly unpopular during the Great Depression, especially in large cities. On March 23, 1933, President Franklin Roosevelt signed into law an amendment to the Volstead Act known as the Cullen-Harrison Act, allowing the manufacture and sale of certain kinds of alcoholic beverages.

On December 5, 1933, the ratification of the Twenty-first Amendment repealed the Eighteenth Amendment.



Literature

- In F. Scott Fitzgerald’s book *The Great Gatsby*, Tom Buchanan suspects Jay Gatsby of making money by illegally selling alcohol.
- In the *Autobiography of Malcolm X*, he tells of his stint working for a moonshiner on Long Island.
- In Sinclair Lewis’s *Babbitt*, the title character prides himself as a progressive who supports Prohibition, but does not follow it and drinks moderately.
- D.J. MacHale’s novel *The Never War* refers to Maximillian Rose, a gangster, who made millions by selling alcohol during Prohibition.
- Many of Dashiell Hammett’s works (which occur between 1923–1934) contain casual references to the prohibition of alcohol. Hammett’s detectives often come up against men who are, or have connections to, bootleggers of some form or another, and there are very few (if any) characters in Hammett’s fiction that do not drink or purchase alcohol, in spite of Prohibition.
- Nelson Algren’s novel *A Walk on the Wild Side* is set during the period of prohibition and much of it is set in speakeasies.

The Autobiography of Malcolm X

The *Autobiography of Malcolm X* (ISBN 0-345-35068-5) was written by Alex Haley between 1964 and 1965, as told to him through conversations with Malcolm conducted shortly before Malcolm X’s death (and with an epilogue after it), and published in 1965. The book was named by Time magazine as one of the ten most important nonfiction books of the 20th century.

The screenplay for the 1992 Spike Lee film *Malcolm X* was adapted from The *Autobiography of Malcolm X*.

The book describes Malcolm X’s upbringing in Michigan, his maturation to adulthood in Boston and New York, his time in prison, his conversion to Islam, his ministry, his travels to Africa and to Mecca, and his

subsequent career and eventual assasination at the Audubon Ballroom near 166th Street and Broadway in New York City. The book contains a substantial amount of thought concerning African-American existence.

Haley stated in the documentary *Eyes on the Prize* that it was difficult to write the autobiography because Malcolm X was quite averse to talking about himself and preferred instead to talk about the Nation of Islam.

There are exaggerations and inaccuracies in the book, some of which were acknowledged by Haley. For example, Malcolm X describes an incident in which he pointed a revolver with a single bullet to his head in front of his criminal cohorts and repeatedly pulled the trigger in order to show them he was not afraid to die. In the epilogue, Haley writes that when Malcolm was proof-reading the manuscript he told Haley that he had palmed the bullet and staged the act in order to scare the others into obedience.

In 2005 historian Manning Marable claimed that, prior to writing the book with Malcolm X, Haley and another author had collaborated with the FBI to write an article that offered misleading criticisms of Malcolm and the Nation of Islam.

Russian roulette

Russian roulette (Russian: Русская рулетка *Russkaya ruletka*) is a potentially lethal game of chance in which participants place a single round in a revolver, spin the cylinder, place the muzzle against their head and pull the trigger. ‘Russian’ refers to the supposed country of origin of the game and roulette to the element of risk-taking and the spinning of the revolver’s cylinder being reminiscent of spinning a roulette wheel.

The form of the game can be as varied as the participants or their motives (displays of bravado, boredom, suicide etc.), but typically a single round is placed in a six-shot revolver resulting in a 1/6 (or approximately 16.67%) chance of the revolver discharging the round. Regardless of any player’s position in the shooting sequence, his initial odds are the same as for all other players. The revolver’s cylinder can either be spun again to reset the game conditions, or the trigger can be pulled again. Using revolvers with fewer chambers or increasing the number of rounds are variations that increase the risk of being killed in any given round of play.

History

Legends abound regarding the invention of Russian roulette. Most of these, predictably, are set in Russia or occur among Russian soldiers.

In one legend, 19th-century Russian prisoners were forced to play the game while the prison guards bet on the outcome. In another version, desperate and suicidal officers in the Russian army played the game to impress each other.

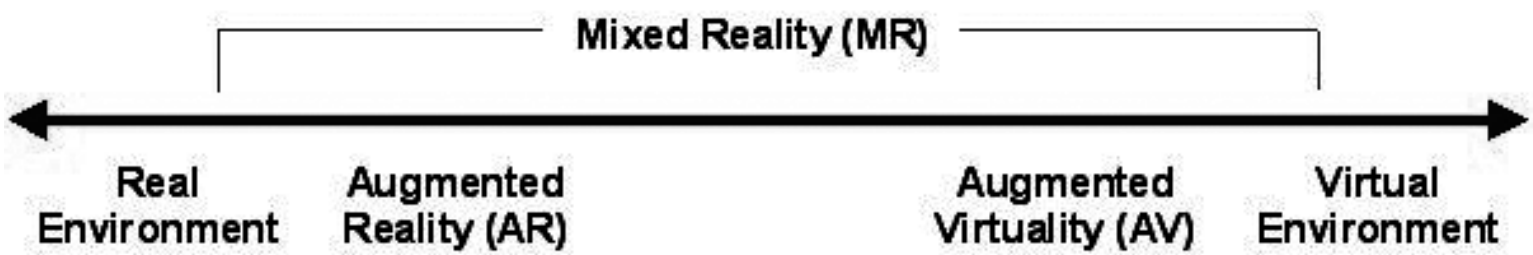
Whether Tsarist officers actually played Russian roulette is unclear. In a text on the Tsarist officer corps, John Bushnell, a Russian history expert at Northwestern University, cited two near-contemporary memoirs by Russian army veterans: The

Duel (1905) by Aleksandr Kuprin and From Double Eagle to Red Flag (1921) by Pyotr Krasnov. Both books tell of officers’ suicidal and outrageous behaviour, but Russian roulette is not mentioned in either text. The standard sidearm issued to Russian officers from 1895 to 1930 was the Nagant M1895 revolver. A double-action, seven chambered revolver, the Nagant’s cylinder spins clockwise until the hammer is cocked. While the cylinder does not swing out as in modern hand-ejector style double action revolvers, it can be spun around to randomize the result. It is possible that Russian officers shot six and kept the seventh cartridge live. Due to the deeply seated rounds unique to the Nagant’s cartridge and that the primers are concealed, it would be very difficult to tell from the outside where the live round was and which were spent; this would add to the uncertainty of the results.

Several teen deaths following the release of the film *The Deer Hunter* caused police and the media to blame the film’s depiction of Russian roulette, saying that it inspired the youth. Notable Russian roulette incidents.

Numerous incidents have been reported regarding Russian roulette. Many are teenagers, with some players as young as 14.

- British author Graham Greene claimed that in his youth he often played Russian Roulette as a means to provide “excitement and get away from the boredom.” But he later decided that “it was no more exciting than taking aspirin for a headache.”
- In his autobiography, Malcolm X says that during his burglary career he once played Russian roulette, pulling the trigger three times in a row to convince his partners in crime that he was not afraid to die. In the epilogue to the book, Alex Haley states that Malcolm X revealed to him that he palmed the round.
- On December 24, 1954 the American blues musician Johnny Ace killed himself in Texas after a gun he pointed at his own head discharged. Many sources, including the *Washington Post* attribute this to Russian roulette, though witnesses to the shooting have claimed it was actually an accident after Ace had been playing with his weapon.
- John Hinckley, Jr., the man who attempted to murder President Ronald Reagan in 1981, was known to play Russian roulette, alone, on two occasions. Hinckley also took a picture of himself in 1980 pointing a gun at his head.
- PBS claims that William Shockley, co-inventor of the transistor and winner of the Nobel Prize for Physics, had attempted suicide by playing a solo game of Russian roulette.
- On October 5, 2003, psychological illusionist Derren Brown played Russian roulette on British television Channel 4. The stunt was broadcast live with a slight delay allowing the program to cut to a black screen if anything had gone wrong. The stunt was condemned by some as being irresponsible, and a statement by the police that they had been informed of the arrangements in advance and were satisfied that “at no time was anyone at risk” made it clear that the incident was a hoax. However, it was proved on the prerecorded segment of the program that at point blank range even a blank cartridge is potentially lethal, and may cause concussion to the head, deafness or burns.



- Is it possible, even in principle, to tell whether we are in a simulated reality?
- Is there any difference between a simulated reality and a “real” one?
- How should we behave if we knew that we were living in a simulated reality?

Nested simulations

The existence of simulated reality is unprovable in any concrete sense: any “evidence” that is directly observed could be another simulation itself. In other words, there is an infinite regress problem with the argument. Even if we are a simulated reality, there is no way to be sure the beings running the simulation are not themselves a simulation, and the operators of that simulation are not a simulation, ad infinitum. Given the premises of the simulation argument, any reality, even one running a simulation, has no better or worse a chance of being a simulation than any other.

Software bugs

A computed simulation may have voids or other errors that manifest inside. A simple example of this, when the “hall of mirrors effect” occurs in the first person shooter Doom, the game attempts to display “nothing” and, obviously fails in its attempt to do so.

In fact, bugs could be very common. An interesting question is whether knowledge of bugs or loopholes in a sufficiently powerful simulation are instantly erased the minute they are observed since presumably all thoughts and experiences in a simulated world could be carefully monitored and altered. This would, however, require enormous processing capability in order to simultaneously monitor billions of people at once. Of course, if this is the case we would never be able to act on discovery of bugs. In fact, any simulation significantly determined to protect its existence could erase any proof that it was a simulation whenever it arose, provided it had the enormous capacity necessary to do so.

To take this argument to an even greater extreme, a sufficiently powerful simulation could make its inhabitants think that erasing proof of its existence is difficult. This would mean that the computer actually has an easy time of erasing glitches, but we all think that changing reality requires great power.

Cyberpunk

Cyberpunk is a science fiction genre noted for its focus on “high tech and low life”. The name is a portmanteau of cybernetics and punk and was originally coined by Bruce Bethke as the title of his short story “Cyberpunk”, published in 1983. It features advanced science, such as information technology and cybernetics, coupled with a degree of breakdown or radical change in the social order.

Cyberpunk plots often center on a conflict among hackers, artificial intelligences, and megacorporations, and tend to be set in a near-future Earth, rather than the far-future settings or galactic vistas found in novels such as Isaac Asimov’s Foundation or Frank Herbert’s Dune. The settings are usually post-industrial dystopias but tend to be

Augmented reality

Augmented reality (AR) is a term for a live direct or indirect view of a physical real-world environment whose elements are merged with-, or augmented by virtual computer-generated imagery – creating a mixed reality. The augmentation is conventionally in real-time and in semantic context with environmental elements, like for example sports scores on TV during a match. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally usable. Artificial information about the environment and the objects in it can be stored and retrieved as an information layer on top of the real world view. The term augmented reality is believed to have been coined in 1990 by Thomas Caudell, an employee of Boeing at the time.

Augmented reality research explores the application of computer-generated imagery in live-video streams as a way to expand the real-world. A typical example of augmented reality is a video of a car whose part names are displayed with graphical labels, overlaid onto the image in correct positions (as if hovering in mid-air). Advanced research includes use of head-mounted displays and virtual retinal displays for visualization purposes, and construction of controlled environments containing any number of sensors and actuators.

Augmented virtuality

Augmented virtuality (AV) (also referred to as Mixed reality) refers to the merging of real world objects into virtual worlds.

As an intermediate case in the Virtuality Continuum, it refers to predominantly virtual spaces, where physical elements, e.g. physical objects or people, are dynamically integrated into, and can interact with the virtual world in real-time. This integration is achieved with the use of various techniques. Often streaming video from physical spaces, e.g. via webcam, or using 3-dimensional digitalisation of physical objects.

Mixed reality

Mixed reality (MR) (encompassing both augmented reality and augmented virtuality) refers to the merging of real and virtual worlds to produce new environments and visualisations where physical and digital objects co-exist and interact in real time. A mix of reality, augmented reality, augmented virtuality and virtual reality.

Paul Milgram and Fumio

Kishino: Virtuality Continuum

In 1994 Paul Milgram and Fumio Kishino defined a mixed reality as “...anywhere between the extrema of the virtuality continuum,” where the Virtuality Continuum extends from the completely real through

to the completely virtual environment with augmented reality and augmented virtuality ranging between.

“The conventionally held view of a Virtual Reality (VR) environment is one in which the participant-observer is totally immersed in, and able to interact with, a completely synthetic world. Such a world may mimic the properties of some real-world environments, either existing or fictional; however, it can also exceed the bounds of physical reality



by creating a world in which the physical laws ordinarily governing space, time, mechanics, material properties, etc. no longer hold. What may be overlooked in this view, however, is that the VR label is also frequently used in association with a variety of other environments, to which total immersion and complete synthesis do not necessarily pertain, but which fall some where along a virtuality continuum. In this paper we focus on a particular subclass of VR related technologies that involve the merging of real and virtual worlds, which we refer to generically as Mixed Reality (MR).”

Virtual reality

Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world. Most current virtual reality environments are primarily visual experiences, displayed either on a computer screen or through special or stereoscopic displays, but some simulations include additional sensory information, such as sound through speakers or headphones. Some advanced, haptic systems now include tactile information, generally known as force feedback, in medical and gaming applications. Users can interact with a virtual environment or a virtual artifact (VA) either through the use of standard input devices such as a keyboard and mouse, or through multimodal devices such as a wired glove, the Polhemus boom arm, and omnidirectional treadmill. The simulated environment can be similar to the real world, for example, simulations for pilot or combat training, or it can differ significantly from reality, as in VR games. Virtual Reality is often used to describe a wide variety of applications, commonly associated with its immersive, highly visual, 3D environments. The development of CAD software, graphics hardware acceleration, head mounted displays, database gloves and miniaturization have helped

popularize the notion. In the book The Metaphysics of Virtual Reality, Michael Heim identifies seven different concepts of Virtual Reality: simulation, interaction, artificiality, immersion, telepresence, full-body immersion, and network communication. The definition still has a certain futuristic romanticism attached. People often identify VR with Head Mounted Displays and Data Suits.

Terminology and concepts

The term “artificial reality”, coined by Myron Krueger, has been in use since the 1970s, but the origin of the term “virtual reality” can be traced back to the French playwright, poet, actor and director Antonin Artaud. In his seminal book The Theatre and Its Double (1938), Artaud described theatre as “la réalité virtuelle”, a virtual reality “in which characters, objects, and images take on the phantasmagoric force of alchemy’s visionary internal dramas”. It has been used in The Judas Mandala, a 1982 science-fiction novel by Damien Broderick, where the context of use is somewhat different from that defined above. The earliest use cited by the Oxford English Dictionary is in a 1987 article titled “Virtual reality”, but the article is not about VR technology. The concept of virtual reality was popularized in mass media by movies such as Brainstorm



(filmed mostly in 1981) and The Lawnmower Man (plus others mentioned below). The VR research boom of the 1990s was accompanied by the non-fiction book Virtual Reality (1991) by Howard Rheingold. The book served to demystify the subject, making it more accessible to less technical researchers and enthusiasts, with an impact similar to that which his book The Virtual Community had on virtual community research lines closely related to VR. Multimedia: from Wagner to Virtual Reality, edited by Randall Packer and Ken Jordan and first published in 2001, explores the term and its history from an avant-garde perspective. Philosophical implications of the concept of VR are systematically discussed in the book Get Real: A Philosophical Adventure in Virtual Reality (1998) by Philip Zhai, wherein the idea of VR is pushed to its logical extreme and ultimate possibility. According to Zhai, virtual reality could be made to have an ontological status equal to that of actual reality.

Timeline

Morton Heilig wrote in the 1950s of an “Experience Theatre” that could encompass all the senses in an effective manner, thus drawing the viewer into the onscreen activity. He built a prototype of his vision dubbed the Sensorama in 1962, along with five short films to be displayed in it while engaging multiple senses (sight, sound, smell, and touch). Predating digital computing, the Sensorama was a mechanical device, which reportedly still functions today. In 1968, Ivan Sutherland, with the help of his student Bob Sproull, created what is widely considered to be the first virtual reality and augmented reality (AR) head mounted display (HMD) system. It was primitive both in terms of user interface and realism, and the HMD to be worn by the user was so heavy it had to be suspended from the ceiling, and the graphics comprising the virtual environment were simple wireframe model rooms. The formidable appearance of the device inspired its name, The Sword of Damocles. Also notable among the earlier hypermedia and virtual reality systems was the Aspen Movie Map, which was created at MIT in 1977. The program was a crude virtual simulation of Aspen, Colorado in which users could wander the streets in one of three modes: summer, winter, and polygons.

Omnidirectional treadmill

An omnidirectional treadmill, or ODT, is a device that allows a person to perform locomotive motion in any direction. The ability to move in any direction is how these treadmills differ from their basic counterparts (that permit only unidirectional locomotion). Omnidirectional treadmills are employed in immersive virtual environment implementations to allow unencumbered movement within the virtual space through user self-motion.

Advantages to pairing an ODT with an immersive virtual environment include:

- Natural navigational movement of the system user within the enclosure while still providing context cues which simulate physical traversal through the virtual terrain
- Reverting immersive navigation tasks from hand-based (mouse, joystick) to mentally hard-wired whole body (leg) based
- Enhancing immersion by providing a whole-body experience that begins at the soles of the feet and ends at the top of the head
- Facilitating whole-body haptic interaction

Cyberpunk

marked by extraordinary cultural ferment and the use of technology in ways never anticipated by its creators (“the street finds its own uses for things”). Much of the genre’ s atmosphere echoes film noir, and written works in the genre often use techniques from detective fiction.

“Classic cyberpunk characters were marginalized, alienated loners who lived on the edge of society in generally dystopic futures where daily life was impacted by rapid technological change, an ubiquitous datasphere of computerized information, and invasive modification of the human body.” – Lawrence Person

Setting

Cyberpunk writers tend to use elements from the hard-boiled detective novel, film noir, and postmodernist prose to describe the often nihilistic underground side of an electronic society. The genre’ s vision of a troubled future is often called the antithesis of the generally utopian visions of the future popular in the 1940s and 1950s. Gibson defined cyberpunk’ s antipathy towards utopian SF in his 1981 short story “The Gernsback Continuum” , which pokes fun at and, to a certain extent, condemns utopian science fiction.

In some cyberpunk writing, much of the action takes place online, in cyberspace, blurring the border between actual and virtual reality. A typical trope in such work is a direct connection between the human brain and computer systems. Cyberpunk depicts the world as a dark, sinister place with networked computers dominating every aspect of life. Giant, multinational corporations have for the most part replaced governments as centers of political, economic, and even military power.

Transhumanism

Transhumanism is an international intellectual and cultural movement supporting the use of science and technology to improve human mental and physical characteristics and capacities. The movement regards aspects of the human condition, such as disability, suffering, disease, aging, and involuntary death as unnecessary and undesirable. Transhumanists look to biotechnologies and other emerging technologies for these purposes. Dangers, as well as benefits, are also of concern to the transhumanist movement.

The term “transhumanism” is symbolized by H+ or h+ and is often used as a synonym for “human enhancement” . Although the first known use of the term dates from 1957, the contemporary meaning is a product of the 1980s when futurists in the United States began to organize what has since grown into the transhumanist movement. Transhumanist thinkers predict that human beings may eventually be able to transform themselves into beings with such greatly expanded abilities as to merit the label “posthuman” . Transhumanism is therefore sometimes referred to as “posthumanism” or a form of transformational activism influenced by posthumanist ideals.

The transhumanist vision of a transformed future humanity has attracted many supporters and detractors from a wide range of perspectives. Transhumanism

Transhumanism

has been described by one critic, Francis Fukuyama, as the world’ s most dangerous idea, while one proponent, Ronald Bailey, counters that it is the “movement that epitomizes the most daring, courageous, imaginative, and idealistic aspirations of humanity” .



Spirituality

Although some transhumanists report a strong sense of secular spirituality, they are for the most part atheists. A minority of transhumanists, however, follow liberal forms of Eastern philosophical traditions such as Buddhism and Yoga or have merged their transhumanist ideas with established Western religions such as liberal Christianity or Mormonism. Despite the prevailing secular attitude, some transhumanists pursue hopes traditionally espoused by religions, such as “immortality” , while several controversial new religious movements, originating in the late 20th century, have explicitly embraced transhumanist goals of transforming the human condition by applying technology to the alteration of the mind and body, such as Raëlism. However, most thinkers associated with the transhumanist movement focus on the practical goals of using technology to help achieve longer and healthier lives; while speculating that future understanding of neurotheology and the application of neurotechnology will enable humans to gain greater control of altered states of consciousness, which were commonly interpreted as “spiritual experiences” , and thus achieve more profound self-knowledge.

The majority of transhumanists are materialists who do not believe in a transcendent human soul. Transhumanist personhood theory also argues against the unique identification of moral actors and subjects with biological humans, judging as speciesist the exclusion of non-human and part-human animals, and sophisticated machines, from ethical consideration. Many believe in the compatibility of human minds with computer hardware, with the theoretical implication that human consciousness may someday be transferred to alternative media, a speculative technique commonly known as “mind uploading” . One extreme formulation of this idea may be found in Frank Tipler’ s proposal of the Omega point. Drawing upon ideas in digitalism, Tipler has advanced the notion that the collapse of the Universe billions of years hence could create the conditions for the perpetuation of humanity in a simulated reality within a megacomputer, and thus achieve a form of “posthuman godhood” . Tipler’ s thought was inspired by the writings of Pierre Teilhard de Chardin, a paleontologist and Jesuit theologian who

saw an evolutionary telos in the development of an encompassing noosphere, a global consciousness.

The idea of uploading personality to a non-biological substrate and the underlying assumptions are criticised by a wide range of scholars, scientists

and activists, sometimes with regard to transhumanism itself, sometimes with regard to thinkers such as Marvin Minsky or Hans Moravec who are often seen as its originators. Relating the underlying assumptions, for example, to the legacy of cybernetics, some have argued that this materialist hope engenders a spiritual monism, a variant of philosophical idealism. Viewed from a conservative Christian perspective, the idea of mind uploading is asserted to represent a denigration of the human body characteristic of gnostic belief.

The first dialogue between transhumanism and faith was the focus of an academic seminar held at the University of Toronto in 2004. Because it might serve a few of the same functions that people have traditionally sought in religion, religious and secular critics maintained that transhumanism is itself a religion or, at the very least, a pseudoreligion. Religious critics alone faulted the philosophy of transhumanism as offering no eternal truths nor a relationship with the divine. They commented that a philosophy bereft of these beliefs leaves humanity adrift in a foggy sea of postmodern cynicism and anomie. Transhumanists responded that such criticisms reflect a failure to look at the actual content of the transhumanist philosophy, which far from being cynical, is rooted in optimistic, idealistic attitudes that trace back to the Enlightenment. Following this dialogue, William Sims Bainbridge conducted a pilot study, published in the Journal of Evolution and Technology, suggesting that religious attitudes were negatively correlated with acceptance of transhumanist ideas, and indicating that individuals with highly religious worldviews tended to perceive transhumanism as being a direct, competitive (though ultimately futile) affront to their spiritual beliefs.

Materialism

The philosophy of materialism holds that the only thing that exists is matter; that all things are composed of material and all phenomena (including consciousness) are the result of material interactions. In other words, matter is the only substance. As a theory, materialism is a form of physicalism and belongs to the class of monist ontology. As such, it is different from ontological theories based on dualism

Materialism

or pluralism. For singular explanations of the phenomenal reality, materialism would be in contrast to idealism and to spiritualism.

Overview

The view is perhaps best understood in its opposition to the doctrines of immaterial substance applied to the mind historically, famously by René Descartes. However, by itself materialism says nothing about how material substance should be characterized. In practice it is frequently assimilated to one variety of physicalism or another.

Materialism is often associated with the methodological principle of reductionism, according to which the objects or phenomena individuated at one level of description, if they are genuine, must be explicable in terms of the objects or phenomena at some other level of description – typically, a more general level than the reduced one. Non-reductive materialism explicitly rejects this notion, however, taking the material constitution of all particulars to be consistent with the existence of real objects, properties, or phenomena not explicable in the terms canonically used for the basic material constituents. Jerry Fodor influentially argues this view, according to which empirical laws and explanations in “special sciences” like psychology or geology are invisible from the perspective of basic physics.

Modern philosophical materialists extend the definition of matter to include other scientifically observ-



able entities such as energy, forces, and the curvature of space. Materialism typically contrasts with dualism, phenomenalism, idealism, vitalism and dual-aspect monism. Its materiality can, in some ways, be linked to the concept of Determinism, as espoused by Enlightenment thinkers.

Materialism has been criticised by religious thinkers opposed to it, who regard it as a spiritually empty philosophy. Marxism uses materialism to refer to a “materialist conception of history” , which is not concerned with metaphysics but centers on the roughly empirical world of human activity (practice, including labor) and the institutions created, reproduced, or destroyed by that activity (see materialist conception of history).

Defining matter

The nature and definition of matter have been subject to much debate, as have other key concepts in science and philosophy. Is there a single kind of matter which everything is made of (hyle), or multiple kinds? Is matter a

continuous substance capable of expressing multiple forms (hylomorphism), or a number of discrete, unchanging constituents (atomism)? Does it have intrinsic properties (substance theory), or is it lacking them (prima materia)?

Without question science has made unexpected discoveries about matter. Some paraphrase departures from traditional or common-sense concepts of matter as “disproving the existence of matter” . However, most physical scientists take the view that the concept of matter has merely changed, rather than being eliminated.

One challenge to the traditional concept of matter as tangible “stuff” is the rise of field physics in the 19th century. However the conclusion that materialism is false may be premature. Relativity shows that matter and energy (including the spatially distributed energy of fields) are interchangeable. This enables the ontological view that energy is prima materia and matter is one of its forms. On the other hand, quantum field theory models fields as exchanges of particles – photons for electromagnetic fields and so on. On this view it could be said that fields are “really matter.”

All known solid, liquid, and gaseous substances are composed of protons, neutrons and electrons. All three are fermions or spin-half particles, whereas the particles that mediate fields in quantum field theory are bosons. Thus matter can be said to divide into a more tangible fermionic kind and a less tangible bosonic kind.

Post-Materialism

Post-Materialism

The concept of post-materialism is quite important in modern culture and should be considered in reference of three concepts of materialism, not coinciding. The first concept is the historical and dialectic materialism by Marx and Engels. The second concept concerns a non-religious or secular consumerist materialism that is typically exemplified as a result of extreme capitalism. The third concept of materialism regards the philosophical argument that matter is the only existing reality. The first two concepts are sociological and the third is philosophical.

The word postmaterialism then, in itself, says little or nothing if not related to the meaning of “materialism” to which it references its character. The framework of reference and what we mean with the word post-materialism (often written post-materialism) in general can be identified as: A) an ontological postmaterialism, B) an existentialistic post-materialism, C) an ethical postmaterialism and finally D) a political-sociological postmaterialism , which is also the best known.

Sociological postmaterialism

The sociological theory of Post-materialism assumes an ongoing transformation of individuals and society which liberates them gradually from the stress of basic acquisitive or materialistic needs. In the first place, the term “post-materialism” and the related concept of “the silent revolution” was made rather notorious in political and social sciences by Ronald Inglehart since the beginning of the seventies referring a new religious moral against the consumerism.

One of Inglehart’ s main assumptions is that individuals pursue various goals in hierarchical order. First, material needs like hunger or thirst have to be satisfied. If this is done, the focus will be gradually shifting to nonmaterial goods. Hence, according to Inglehart’ s interpretation of Maslow’ s hierarchy of human goals, cohorts which often experienced economic scarcities would ceteris paribus place strong priorities on economic needs or economic growth and safety needs such as a strong national defense and “law and order” (materialism). On the other hand, cohorts who have experienced high material affluence start to give high priority to values such as individual improvement, personal freedom, citizen input in government decisions, the ideal of a society based on humanism, and maintaining a clean and healthy environment.

This hypothesis would imply that a growing part of society becomes more post-materialist given long periods of material affluence. The post-material orientations acquired during socialisation should also be rather steadfast, because they are claimed to be a rather stable value-system value in contrast to more volatile political and social attitudes.

Special thanks to Eric Nylund for all his assistance.

Evangeline
Evangeline, A Tale of Acadie is a poem published in 1847 by the American poet Henry Wadsworth Longfellow. The poem follows an Acadian girl named Evangeline and her search for her lost love Gabriel, set during the time of the Great Upheaval. The work was written in dactylic hexameter reminiscent of Greek and Latin classics, though Longfellow was criticized for the meter. Longfellow got the idea for the poem from his friend Nathaniel Hawthorne and published Evangeline in 1847. It has remained one of his most enduring works.

Composition and publication history

Longfellow was introduced to the true story of the Acadians in Nova Scotia by Nathaniel Hawthorne. Hawthorne and Longfellow had attended Bowdoin College together, though they were not friends at the time. Years later, in 1837, Hawthorne contacted Longfellow for his opinion on his recently-published tales in the North American Review, which Longfellow praised as works of genius; the two became lifelong friends. Hawthorne was not interested in fictionalizing it so Longfellow turned it into a poem after months of studying the histories of Nova Scotian families. Longfellow, who had never visited the setting of the true story, relied heavily on Thomas Chandler Haliburton’s An Historical and Statistical Account of Nova Scotia and other books for further background information. Evangeline was published in book form on November 1, 1847, and by 1857 it had sold nearly 36,000 copies. During this time, Longfellow’s literary payment was at its peak; for Evangeline, he received “a net of twenty-five and sixteenths per cent” royalties, believed to be an all-time high for a poet. Longfellow said of his poem:

“I had the fever a long time burning in my own brain before I let my hero take it. ‘Evangeline’ is so easy for you to read, because it was so hard for me to write.”

Great Upheaval

The Great Upheaval, also known as the Great Expulsion, The Deportation, the Acadian Expulsion, and called by the deportees, Le Grand Dérangement, was the forced population transfer of the Acadian population from Nova Scotia and New Brunswick between 1755 and 1763, ordered by British governor Charles Lawrence and the Nova Scotia Council. It led to the deaths of thousands of Acadians. The policy was extremely controversial, both in Canada and England, where opponents of the British government strongly criticized it. As of the late 20th century it would probably be called an “ethnic cleansing.”

History

The Acadian removal occurred at the culmination of tensions between the French and the English that had existed in Acadia since the territory was ceded to the British by the Treaty of Utrecht of 1713. It was also related to increasing tensions in the 1750s between the two nations in Europe and North America. The British, nervous about the loyalties of French-speaking inhabitants of the newly created colony

of Nova Scotia, demanded that the Acadians swear an oath of loyalty to the British. The Acadians offered to swear their neutrality. In 1730, the British agreed and the Acadians became the “neutral French.” In 1749, Governor Cornwallis again asked the Acadians to take the oath. Although unsuccessful, he took no drastic action. The following governor, Peregrine Hopson, continued the conciliatory policy for the Acadians.

When Charles Lawrence took over the post following Hopson’s return to England, he took a stronger stance. When fighting between the French and the English broke out in the Ohio River valley in 1754, signalling the beginning of the French and Indian War (and Seven Years’ War in Europe), Lawrence concluded he needed the Acadians to accept the oath on British terms. Following the discovery of 300 Acadians at the French Fort Beauséjour when the English captured it in 1755, Lawrence made one last attempt to convince the Acadians to accept the oath. They again refused to accept Lawrence’s terms. The Lieutenant Governor decided to deport the Acadians to various locations throughout the thirteen British North American colonies, France, Louisiana, and Britain.

Their Mi’kmaq hosts, who never agreed to cede any of their land, were not so lucky as to be deported (except for some of mixed French descent, who were deported to Massachusetts as indentured servants). Instead, to dispossess them of their homeland, successive British governors issued proclamations offering bounties to colonial rangers for hunting, killing, and scalping Mi’kmaqs. Such proclamations were issued by Governors Paul Mascarene (and William Shirley of Massachusetts Bay) in 1744, by Edward Cornwallis in 1749, and by Charles Lawrence in

weeks before being moved to their destinations, leading to the deaths of hundreds. An estimated 2,700 deportees died before reaching their destination. An additional 10,000 are estimated to have died from displacement during the winter of 1755-1756. There were approximately 23,000 Acadians before the deportation according to provincial records, but based on British records, only an estimated 10,000 survived. Approximately 5,000 to 6,000 Acadians escaped to Quebec, hid among the Mi’kmaq, or were able to hide in the countryside and avoid deportation until the situation settled down.

Acadian Driftwood

“Acadian Driftwood” is a song by the The Band. It was the fourth track on the album Northern Lights–Southern Cross.

“Acadian Driftwood” is a partly fictional portrayal of an episode in the troubled history of Acadia, the Great Upheaval. Hailed as one of The Band’s finest songs, it describes the forcible displacement of the Acadian people after war between the French and the English over what is now Nova Scotia and New Brunswick, Prince Edward Island and part of Maine.

Robbie Robertson’s lyrics were influenced by Longfellow’s poem Evangeline, which describes the deportation of Acadians.

On The Band’s recording of the song, the lead vocal is traded on the verses between Richard Manuel, Levon Helm, and Rick Danko, with all three singers harmonizing on the choruses. Instrumentally, the recording is noted for its overdubbed fiddle playing by Byron Berline.

“Acadian Driftwood” was performed by The Band as part of their famous “Last Waltz” concert. The concert performance was omitted from the Martin Scorsese film of the concert and the original 1978 soundtrack, but was



1756. By the time a lasting peace was concluded between the Mi’kmaq and British in 1761, the Mi’kmaq had been greatly reduced in numbers, and most of their territory had been seized by the wave of British immigration that began in 1749. Those Mi’kmaq who managed to elude the British provided crucial support to many refugee Acadians who were relatives. Soon after the British began to claim Acadians and Mi’kmaqs as their subjects in 1713, the colonial authorities passed laws forbidding the groups to speak or intermarry, but they were not successful in keeping the populations separated.

Deportation

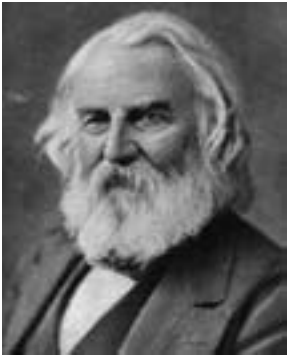
Approximately 7,000 Acadian were deported during 1755. The deportees were held on prison ships for several

included in the 2002 box set soundtrack.

This song is covered by The Roches on the 2007 multi-artist tribute album, Endless Highway: The Music of The Band. Richard Shindell also covers the song on his album South of Delia. Zachary Richard and Celine Dion also covered the song as a duet to be included on Zachary’s forthcoming album “Last Kiss” to be released on April 7 in Canada and April 21 in the USA.

Robertson took poetic license with the historical record. Deportations began not when “the war was over”, in 1763 after the Treaty of Paris, but in 1755 after the English victory in the Battle of Fort Beauséjour (in present-day New Brunswick). “What went down on the Plains of Abraham” was the Battle of Quebec in 1759—the

decisive battle of the war, but still years after the deportations.



Henry Wadsworth Longfellow

Henry Wadsworth Longfellow (February 27, 1807 - March 24, 1882) was an American educator and poet whose works include “Paul Revere’s Ride”, The Song of Hiawatha, and “Evangeline”. He was also the first American to translate Dante Alighieri’s The Divine Comedy and was one of the five members of the group known as the Fireside Poets.

Longfellow was born in Portland, Maine, then part of Massachusetts, and studied at Bowdoin College. After spending time in Europe he became a professor at Bowdoin and, later, at Harvard College. His first major poetry collections were Voices of the Night (1839) and Ballads and Other Poems (1841). Longfellow retired from teaching in 1854 to focus on his writing, living the remainder of his life in Cambridge, Massachusetts, in a former headquarters of George Washington. His first wife, Mary Potter, died in 1835 after a miscarriage. His second wife, Frances Appleton, died in 1861 after sustaining burns from her dress catching fire. After her death, Longfellow had difficulty writing poetry for a time and focused on his translation. He died in 1882.

Longfellow predominantly wrote lyric poems which are known for their musicality and which often presented stories of mythology and legend. He became the most popular American poet of his day and also had success overseas. He has been criticized, however, for imitating European styles and writing specifically for the masses.

Legacy

Longfellow was the most popular poet of his day and generally regarded as the most distinguished poet the country had produced. As a friend once wrote to him, “no other poet was so fully recognized in his lifetime”. Many of his works helped shape the American character and its legacy, particularly with the poem “Paul Revere’s Ride”. He was such an admired figure in the United States during his life that his 70th birthday in 1877 took on the air of a national holiday, with parades, speeches, and the reading of his poetry. He had become one of the first American celebrities and was also popular in Europe. It was reported that 10,000 copies of The Courtship of Miles Standish sold in London in a single day. Children adored him and, when the “spreading chestnut-tree” mentioned in the poem “The Village Blacksmith” was cut down, the children of Cambridge had the tree converted into an armchair which they presented to the poet. In 1884, Longfellow became the first non-British writer for whom a commemorative sculpted

bust was placed in Poet’s Corner of Westminster Abbey in London; he remains the only American poet represented with a bust.

Over the years, Longfellow’s personality has become part of his reputation. He has been presented as a gentle, placid, poetic soul: an image perpetuated by his brother Samuel Longfellow, who wrote an early biography which specifically emphasized these points. As James Russell Lowell said, Longfellow had an “absolute sweetness, simplicity, and modesty”. At Longfellow’s funeral, his friend Ralph Waldo Emerson called him “a sweet and beautiful soul”. In reality, Longfellow’s life was much more difficult than was assumed. He suffered from neuralgia, which caused him constant pain, and he also had poor eyesight. He wrote to friend Charles Sumner: “I do not believe anyone can be perfectly well, who has a brain and a heart”. He had difficulty coping with the death of his second wife. Longfellow was very quiet, reserved, and private; in later years, he was known for being unsocial and avoided leaving home.

Over time, Longfellow’s popularity rapidly declined, beginning shortly after his death and into the 20th century as academics began to appreciate poets like Walt Whitman, Edwin Arlington Robinson, and Robert Frost. In the 20th century, literary scholar Kermit Vanderbilt noted, “Increasingly rare is the scholar who braves ridicule to justify the art of Longfellow’s popular rhymings.” More recently, he was honored in March 2007 when the United States Postal Service made a stamp commemorating him. A number of schools are named after him in various states as well. Neil Diamond’s 1974 hit song, “Longfellow Serenade”, is a reference to the poet. He is a protagonist in Matthew Pearl’s murder mystery The Dante Club (2003).

Neuralgia

Neuralgia or neuropathic pain can be defined as non-nociceptive pain, or in other words, pain that is not related to activation of pain receptor cells in any part of the body. Neuralgia is pain produced by a change in neurological structure or function. Unlike nociceptive pain, neuralgia exists with no continuous nociceptive input. Neuralgia falls into two categories: central neuralgia and peripheral neuralgia. This unusual pain is thought to be linked to four possible mechanisms: ion gate malfunctions; the nerve becomes mechanically sensitive and creates an ectopic signal; cross signals between large and small fibers; and malfunction due to damage in the central processor.

Neuralgia was first recognized by Weir Mitchell, a surgeon in the American Civil War, who noticed hyperalgesia and chronic pain in patients who had nerve lesions in the extremities and also some cases where no lesion was observed. Mitchell termed the condition “causalgia” which has since become known as “Complex Regional Pain Syndrome Type 1 and Type 2” (CRPS). CRPS Type 1 describes the condition when no clear nerve injury is present, and Type 2 describes a case when nerve damage is clear.

Neuralgia is often difficult to diagnose, and most treatments show little or no effectiveness. Diagnosis typically involves locating the damaged nerve by identifying missing sensory or motor function. This may involve tests such as an EMG test or a nerve conduction test. Neuralgia is more difficult to treat than other types of pain because it does not respond well to normal pain medications. Special medications have become more specific to neuralgia and typically fall under the category of membrane stabilizing drugs or antidepressants such as Cymbalta. The antiepileptic medication (AED) Lyrica was developed specifically for neuralgia and other neuropathic pain as a successor to Neurontin (gabapentin).

Sleep deprivation and malnutrition have also been reported as byproducts of the pain. It is possible that there are other triggers or aggravating factors that patients need to learn to recognize to help manage their health. Bright lights, sounds, stress, and poor diet are examples of additional stimuli that can contribute to the condition. The pain can cause nausea, so beyond the obvious need to treat the pain, it is important to be sure to try to get adequate rest and nutrition.

Sleep Deprivation

Sleep deprivation, having too little sleep, can be either chronic or acute. Long-term sleep deprivation causes death in lab animals. A chronic sleep-restricted state can cause fatigue, daytime sleepiness, clumsiness and weight gain. Complete absence of sleep over long periods is impossible to achieve; brief microsleeps cannot be avoided.

Torture

Sleep deprivation can be used as a means of interrogation that some believe will constitute torture when used to excess. Under one interrogation technique, a subject might be kept awake for several days and when finally allowed to fall asleep, suddenly awakened and questioned. Menachem Begin, the Prime Minister of Israel from 1977–83, described his experience of sleep deprivation when a prisoner of the KGB in Russia as follows:

In the head of the interrogated prisoner, a haze begins to form. His spirit is wearied to death, his legs are unsteady, and he has one sole desire: to sleep... Anyone who has experienced this desire knows that not even hunger and thirst are comparable with it.

Longest period without sleep

Depending on how sleep is defined, there are several people who can claim the record for having gone the longest without sleep:

1. Thai Ngoc, born 1942, claimed in 2006 to have been awake for 33 years or 11,700 nights, according to Vietnamese news organization Thanh Nien. It was said that Ngoc acquired the ability to go without sleep after a bout of fever in 1973, but other reports indicate he stopped sleeping in 1976 with no known trigger. At the time of the Thanh Nien report, Ngoc suffered from no apparent ill effect (other than a minor decline in liver function), was mentally sound and could carry 100 kg of pig feed down a 4 km road, but another report indicates that he was healthy before the sleepless

Menachem Begin

episode but that now he was not feeling well because of the lack of sleep.

2. Randy Gardner holds the scientifically documented record for the longest period of time a human being has intentionally gone without sleep not using stimulants of any kind. Gardner stayed awake for 264 hours (eleven days), breaking the previous record of 260 hours held by Tom Rounds of Honolulu. Other sources claim Gardner’s record was broken two weeks later by another student, Jim Thomas of Fresno State College, who stayed awake for 266.5 hours; and state that the Guinness World Records record is 449 hours (18 days, 17 hours) by Maureen Weston, of Peterborough, Cambridgeshire in April, 1977, in a rocking-chair marathon.

3. A 3-year-old boy named Rhett Lamb of St. Petersburg Florida has a rare condition and has only slept for one to two hours per day in the past three years. He has a rare abnormality called an Arnold–Chiari malformation where brain tissue protrudes into the spinal canal. The skull puts pressure on the protruding part of the brain. It is not yet known if the brain malformation is directly related to his sleep deprivation.

Menachem Begin

Menachem Begin (16 August 1913 - 9 March 1992) became the sixth prime minister of the State of Israel. Before the independence, he was the leader of the Irgun, a revisionist breakaway from the larger mainstream Jewish paramilitary organization Haganah. He proclaimed a revolt, on February 1, 1944, against the British mandatory government, which was opposed by the Jewish Agency. He played a significant role in Jewish resistance against the British control in the waning years of the mandate, leading the more militant Zionists.

Begin was elected to the first Knesset, as head of first Herut, the party he founded, and was at first on the political fringe, embodying the opposition to the Mapai-led government and Israeli establishment. He remained in opposition in the eight consecutive elections (except for a national unity government around the Six-Day War), but became more acceptable to the political center. His 1977 electoral victory and premiership ended three decades of Labour Party political dominance.

Begin’s most significant achievement as prime minister was signing a peace treaty with Egypt in 1979, for which he and Anwar Sadat shared the Nobel Prize for Peace. In the wake of the Camp David Accords, the Israel Defense Forces withdrew from the Sinai Peninsula and returned the Egyptian territories captured in the Six-Day War. Later, Begin’s government promoted the construction of Israeli settlements in Judea and Samaria and the Gaza Strip. Begin authorized the bombing of the Osirak nuclear plant in Iraq and the invasion of Lebanon in 1982 to fight PLO strongholds there, igniting the 1982 Lebanon War. As Israeli military involvement in Lebanon deepened, and the Sabra and Shatila massacre carried out by the Christian militia shocked world public opinion, Begin grew increasingly isolated. As IDF forces remained mired in Lebanon and the economy suffered from hyperinflation, the public pressure on Begin mounted. Depressed by the death of his wife Aliza in November 1982, he gradually withdrew from public life,

until his resignation in October 1983.

Biography

Begin began studying law at the University of Warsaw where he learned the oratory and rhetoric skills that became his trademark as a politician, and viewed as Demagogy by his critics. He graduated in 1935, but never practiced law. In these same years he became a key dis-



ciple of Vladimir “Ze’ ev” Jabotinsky, the founder of the militant, nationalist Revisionist Zionism movement and its Betar youth wing. His rise within Betar was rapid: in the same year he graduated, at age 22, he shared the dais with his mentor during Betar’s World Congress in Krakow. In 1937 he was the active head of Betar in Czechoslovakia and Poland, leaving just prior to the 1939 invasion.

In September 1939, after Nazi Germany invaded Poland, Begin escaped to Wilno, then located in eastern Poland. The town was shortly to be occupied by the Soviet Union, but from 28 October 1939, it was the capital of the Republic of Lithuania. Wilno was a predominately Polish and Jewish town; an estimated 40 percent of the population was Jewish, with the YIVO institute was located there. On 15 June 1940 the Soviet Union invaded Lithuania, ushering in mass persecution of Poles and Jews. An estimated 120,000 people were arrested by the NKVD and deported to Siberia. Thousands were executed with or without trial.

On 20 September 1940 Begin was arrested by the NKVD and detained in the Lukiskės Prison. He was accused of being an “agent of British imperialism” and sentenced to eight years in the Soviet gulag camps. On 1 June 1941 he was sent to the Pechora labor camps in the northern part of European Russia, where he stayed until May 1942. Much later in life, Begin would record and reflect upon his experiences in the interrogations and life in the camp in his memoir “White Nights” .

In June 1941, just after Germany attacked the Soviet Union, and following his release under the Sikorski-Mayski Agreement, Begin joined the Polish Army of Anders. He was later sent with the army to Palestine via the Persian Corridor. Upon arrival in August 1942, he received a proposal to take over a position in the Irgun, as Betar’s Commissioner. He declined the invitation because he felt himself honour-bound to abide by his oath as a soldier and not to desert the Polish army, where he worked as an English translator. Begin was subsequently

Hannah Arendt

released from the Polish Army after the Irgun intervened unofficially on his behalf with senior Polish army officers. He then joined the Jewish national movement in the British Mandate of Palestine.

Begin’s father was among the 5,000 Brest Jews rounded up by the Nazis at the end of June 1941. Instead of being sent to a forced labor camp, they were shot or drowned in the river. His mother and older brother Herzl also died in the Holocaust.

Begin was married to Aliza Arnold. They had three children: Binyamin, Leah and Hassia.

Herut opposition

In August 1948, Begin and members of the Irgun High Command emerged from the underground and formed the right-wing political party Herut (“Freedom”) party. The move countered the weakening attraction for the earlier revisionist party, Hatzohar, founded by his late mentor Vladimir Jabotinsky. Revisionist ‘purists’ alleged nonetheless that Begin was out to steal Jabotinsky’s mantle and ran against him with the old party. The Herut party can be seen as the forerunner of today’s Likud.

In November 1948, Begin visited the US on a campaigning trip. During his visit, a letter signed by Albert Einstein, Sidney Hook, Hannah Arendt, and other prominent Americans and several rabbis was published which described Begin’s Herut party as closely akin in its organization, methods, political philosophy and social appeal to the Nazi and Fascist parties and accused his group (along with the smaller, militant, Stern Gang) of having inaugurated a reign of terror in the Palestine Jewish community.

Hannah Arendt

Hannah Arendt (October 14, 1906 - December 4, 1975) was an influential German-Jewish political theorist. She has often been described as a philosopher, although she refused that label on the



grounds that philosophy is concerned with “man in the singular.” She described herself instead as a political theorist because her work centers on the fact that “men, not Man, live on the earth and inhabit the world.”

Arendt’s work deals with the nature of power, and the subjects of politics, authority, and totalitarianism. Much of her work focuses on affirming a conception of freedom which is synonymous with collective political action among equals.

Biography

Hannah Arendt was born into a family of secular Jewish Germans in the city of Linden (now part of Hanover), and grew up in Königsberg and Berlin.

At the University of Marburg, she studied philosophy with Martin Heidegger, with whom she embarked on a long, stormy and romantic relationship for which she was later criticized because of Heidegger’s support for the Nazi party while he was rector of Freiburg University.

In the wake of one of their breakups, Arendt moved to Heidelberg, where she wrote her dissertation on the concept of love in the thought of Saint Augustine, under the existentialist philosopher-psychologist Karl Jaspers.

She married Günther Stern, later known as Günther Anders, in 1929 in Berlin (they divorced in 1937).

The dissertation was published the same year, but Arendt was prevented from habilitating, a prerequisite for teaching in German universities, because she was Jewish. She worked for some time researching anti-Semitism before being interrogated by the Gestapo, and thereupon fled Germany for Paris. Here she met and befriended the literary critic and Marxist philosopher Walter Benjamin, her first husband’s cousin. While in France, Arendt worked to support and aid Jewish refugees. She was imprisoned in Camp Gurs but was able to escape after a couple of weeks.

However, with the German military occupation of northern France during World War II, and the deportation of Jews to Nazi concentration camps, even by the Vichy collaborator regime in the unoccupied south, Arendt was forced to flee France. In 1940, she married the German poet and Marxist philosopher Heinrich Blücher, by then a former Communist Party member.

In 1941, Arendt escaped with her husband and her mother to the United States with the assistance of the American diplomat Hiram Bingham IV, who illegally issued visas to her and around 2500 other Jewish refugees, and an American, Varian Fry, who paid for her travels and helped in securing these visas. Arendt then became active in the German-Jewish community in New York. In 1941-1945, she wrote a column for the German-language Jewish newspaper, Aufbau. From 1944, she directed research for the Commission of European Jewish Cultural Reconstruction and traveled frequently to Germany in this capacity.

After World War II she returned to Germany and worked for Youth Aliyah. She became a close friend of Jaspers and his Jewish wife, developing a deep intellectual friendship with him and began corresponding with Mary McCarthy. In 1950, she became a naturalized citizen of the United States. Arendt served as a visiting scholar at the University

Bard College

of California, Berkeley, Princeton University and Northwestern University. She also served as a professor on the Committee on Social Thought at the University of Chicago, as well as at The New School in New York City, and served as a fellow on the faculty at Yale University and Wesleyan University in the Center for Advanced Studies (1962–1963). In 1959, she became the first woman appointed to a full professorship at Princeton.

She died at age 69 in 1975, and was buried at Bard College in Annandale-on-Hudson, New York, where her husband taught for many years.

Arendt was instrumental in the creation of Structured Liberal Education (SLE) at Stanford University. She wrote a letter to the then president of Stanford University to convince the university to enact Mark Mancall’s vision of a residually-based humanities program.

Bard College

Bard College, founded in 1860, is a small four-year liberal arts college located in Annandale-on-Hudson, New York.

History

The college was originally founded under the name St. Stephen’s, in association with the Episcopal church of New York City, and changed its name to Bard in 1934 in honor of its founder, John Bard. While the college remains affiliated with the church, it pursues a far more secular mission today. Between 1928 and 1944, Bard/St. Stephen’s operated as an undergraduate school of Columbia University. Bard/St. Stephen’s ties with Columbia were severed when Bard became a fully coeducational college.

By the 1930s, Bard had become atypical among US colleges in that it had begun to place a heavy academic emphasis on the performing and fine arts. During that time, a substantive examination period was introduced for students in their second year, as well as what the dean at the time called the “final demonstration.” These two periods would come to be known as Moderation and Senior Project, respectively.

During the 1940s, Bard provided a haven for intellectual refugees fleeing Europe. These included Hannah Arendt, the political theorist, Stefan Hirsch, the precisionist painter; Felix Hirsch, the political editor of the Berliner Tageblatt; the violinist Emil Hauser; the noted psychologist Werner Wolff; and the philosopher Heinrich Blücher.

In 1975, after serving as the youngest college president in history at Franconia College, Leon Botstein was elected president of Bard. He is generally credited with reviving the academic and cultural prestige of

Precisionism

the College, having overseen the acquisition of Bard College at Simon’s Rock, the construction of a Frank Gehry-designed performing arts center, and the creation of a large number of other associated academic institutions.

Precisionism

Precisionism, also known as Cubist Realism, was an artistic movement that emerged in the United States after World War I and was at its height during the inter-War period. The term itself was first coined in the early 1920s.

American movement

Influenced strongly by Cubism and Futurism, its main themes included industrialization and the modernization of the American landscape, which were depicted in precise, sharply defined, geometrical forms. The themes originated from the streamlined architecture and machinery of the early 1900s. Precision artists considered themselves strictly American and tried to avoid European artistic influences. There is a degree of reverence for the industrial age in the movement, but social commentary was not fundamental to the style. The degree of abstraction in the movement ranged considerably from Charles Demuth’s famous I Saw the Figure 5 in Gold from 1928; to Charles Sheeler’s work that sometimes verged on the photorealistic. In addition to his paintings Charles Sheeler also created photographs of factories and industrial buildings as did his friend the photographer Paul Strand.

Precisionists

Elsie Driggs, Charles Demuth, Edward Hopper, Charles Sheeler, and Georgia O’Keeffe were prominent Precisionists. George Ault, Ralston Crawford, Preston Dickinson, Louis Lozowick, Gerald Murphy, Niles Spencer, Joseph Stella, Stuart Davis, Peter Blume, Virginia Berresford, Henry Billings, John Storrs, and Miklos Suba, Francis Criss, and the photographer Paul Strand were other artists associated with the hard-edged style of Precisionism. The movement had no presence outside the United States, and although no manifesto was ever created, the artists themselves were a close group who were active throughout the 1920s and 1930s, and exhibited together. Georgia O’Keeffe, especially with paintings like New York Night, 1928–29, remained connected to Precisionist ideals until the 1960s, although her best-known works are not closely related to Precisionism, and it would be inaccurate to state that O’Keeffe was entirely aligned with Precisionism. Her husband, photographer Alfred Stieglitz, was a highly regarded mentor for the group.

Precisionist artists have also been referred to as “Cubist-Realists”, “Sterilists”, and “Immaculates.” Their art would have an influence on the magic realism and pop art movements.

Stress (biological)

Stress is a biological term which refers to the consequences of the failure of a human or animal to respond appropriately to emotional or physical threats to the organism, whether actual or imagined. It includes a state of alarm and adrenaline production, short-term resistance as a coping mechanism, and exhaustion. Common stress symptoms include irritability, muscular tension, inability to concentrate and a variety of physical reactions, such as headaches and elevated heart rate.

Origin and terminology

The term “stress” was first used by psychologists before the endocrinologist Hans Selye in the 1930s. He later broadened and popularized the concept to include the response of the body to any demand.

Stress in certain circumstances may be experienced positively. For example to meet challenges and achieve goals.

Signs of stress may be cognitive, emotional, physical or behavioral - poor judgment, a general negative outlook, excessive worrying, moodiness, irritability, agitation, inability to relax, feeling lonely or isolated, depressed, aches and pains, diarrhea or constipation, nausea, dizziness, chest pain, rapid heart-beat, eating too much or not enough, sleeping too much or not enough, withdrawing from others, procrastinating or neglecting responsibilities, using alcohol, cigarettes, or drugs to relax, and nervous habits (e.g. nail biting, pacing).

Neurochemistry and physiology

The neurochemistry of the stress response is now believed to be well understood, although much remains to be discovered about how the components of this system interact with one another, in the brain and throughout in the body. In response to a stressor, corticotropin-releasing hormone (CRH) and arginine-vasopressin (AVP) are secreted into the hypothyseal portal system and activate neurons of the paraventricular nuclei (PVN) of the hypothalamus

The locus ceruleus and other noradrenergic cell groups of the adrenal medulla and pons, collectively known as the LC/NE system, also become active and use brain epinephrine to execute autonomic and neuroendocrine responses, serving as a global alarm system.

The autonomic nervous system provides the rapid response to stress commonly known as the fight-or-flight response, engaging the sympathetic nervous system and withdrawing the parasympathetic nervous system, thereby enacting cardiovascular, respiratory, gastrointestinal, renal, and endocrine changes. The hypothalamic-pituitary-adrenal axis (HPA), a major part of the neuroendocrine system involving the interactions of the hypothalamus, the pituitary gland, and the adrenal glands, is also activated by release of CRH and AVP.

Stress can significantly affect many of the body’s immune systems, as can an individual’s perceptions of, and reactions to, stress. The term psychoneuroimmunology is used to describe the interactions between the

Stress (biological)

mental state, nervous and immune systems, as well as research on the interconnections of these systems.

Chronic stress has also been shown to impair developmental growth in children by lowering the pituitary gland’s production of growth hormone, as in children associated with a home environment involving serious marital discord, alcoholism, or child abuse.

Adrenal medulla

The adrenal medulla is part of the adrenal gland. It is located at the center of the gland, being surrounded by the adrenal cortex.

Basic

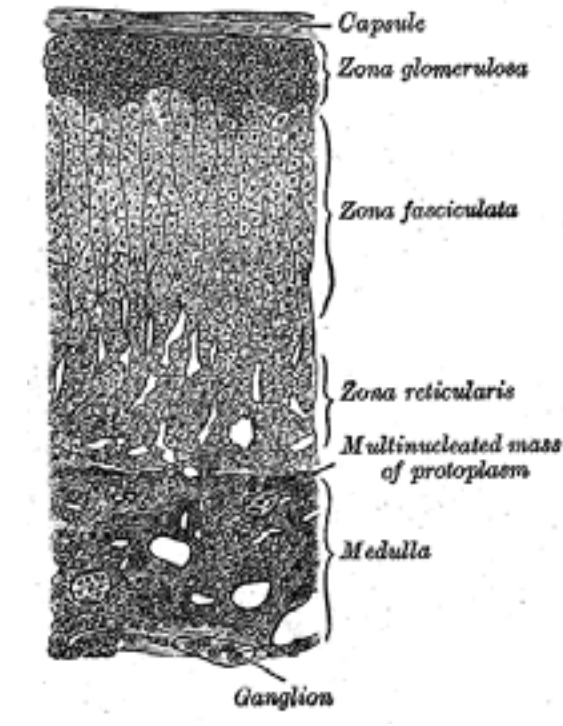
The adrenal medulla consists of irregularly shaped cells grouped around blood vessels. These cells are intimately connected with the sympathetic division of the autonomic nervous system.

Function

Composed mainly of hormone-producing chromaffin cells, the adrenal medulla is the principal site of the conversion of the amino acid tyrosine into the catecholamines adrenaline (epinephrine), noradrenaline (norepinephrine), and dopamine.

In response to stressors such as exercise or imminent danger, medullary cells release catecholamines into the blood in a 17:3 ratio of adrenaline to noradrenaline.

Notable effects of adrenaline and noradrenaline include increased heart rate and blood pressure, blood vessel constriction in the skin and gastrointestinal tract, blood vessel dilation in skeletal muscles, bronchiole dilation, and decreased metabolism, all of which are characteristic of the fight-or-flight response.



Origin

Medullary cells are derived from the embryonic neural crest and, as such, are simply modified neurons.

In particular, they are modified postganglionic cells of the sympathetic nervous system that have lost their axons and dendrites, receiving innervation from corresponding preganglionic fibers.

Moreover, as the synapses between pre- and postganglionic fibers are called ganglia, the adrenal medulla is actually a ganglion of the sympathetic nervous system.

Axon

An axon or nerve fiber is a long, slender projection of

Adrenal Medulla

a nerve cell, or neuron, that conducts electrical impulses away from the neuron’s cell body or soma.

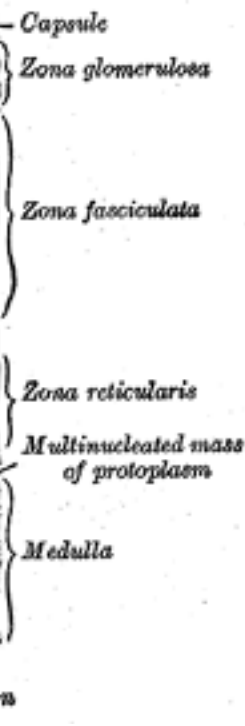
An axon is one of two types of protoplasmic protrusions that extrude from the cell body of a neuron, the other type being dendrites. Axons are distinguished from dendrites by several features, including shape (dendrites often taper while axons usually maintain a constant radius), length (dendrites are restricted to a small region around the cell body while axons can be much longer), and function (dendrites usually receive signals while axons usually transmit them). All of these rules have exceptions, however.

Some types of neurons have no axon—these are called amacrine cells, and transmit signals from their dendrites. No neuron ever has more than one axon; however in invertebrates such as insects the axon sometimes consists of several regions that function more or less independently of each other. Most axons branch, in some cases very profusely.

Axons make contact with other cells—usually other neurons but sometimes muscle or gland cells—at junctions called synapses. At a synapse, the membrane of the axon closely adjoins the membrane of the target cell, and special molecular structures serve to transmit electrical or electrochemical signals across the gap. Some synaptic junctions appear partway along an axon as it extends—these are called en passant (“in passing”) synapses.

Anatomy

Axons are in effect the primary transmission lines of the nervous system, and as bundles they help make up nerves. Individual axons are microscopic in diameter, but



may be up to several feet in length. The longest axons in the human body, for example, are those of the sciatic nerve, which run from the base of the spine to the big toe of each foot.

History

Some of the first intracellular recordings in a nervous system were made in the late 1930s by K. Cole and H. Curtis. Alan Hodgkin and Andrew Huxley also employed the squid giant axon (1939) and by 1952 they had obtained a full quantitative description of the ionic basis of the action potential, leading the formulation of the Hodgkin-Huxley Model. Hodgkin and Huxley were awarded jointly

Axon

Andrew Huxley

Aldous Huxley

Vegetarianism

Ahimsa

the Nobel Prize for this work in 1963. The formulas detailing axonal conductance were extended to vertebrates in the Frankenhaeuser-Huxley equations. Erlanger and Gasser earlier developed the classification system for peripheral nerve fibers, based on axonal conduction velocity, myelination, fiber size etc. Even recently our understanding of the biochemical basis for action potential propagation has advanced, and now includes many details about individual ion channels.

Andrew Huxley

Sir Andrew Fielding Huxley, OM, FRS (born 22 November 1917, Hampstead, London is an English physiologist and biophysicist, who won the 1963 Nobel Prize in Physiology or Medicine for his work with Alan Lloyd Hodgkin on the basis of nerve action potentials, the electrical impulses that enable the activity of an organism to be coordinated by a central nervous system. Hodgkin and Huxley shared the prize that year with John Carew Eccles, who was cited for research on synapses. Hodgkin and Huxley’s findings led the pair to hypothesize the existence of ion channels, which were isolated only decades later. Huxley was elected a Fellow of the Royal Society of London on 17 March 1955. He was knighted by Queen Elizabeth II on 12 November 1974. Sir Andrew was then appointed to the Order of Merit on 11 November 1983.

Family

Huxley is a youngest son of the writer and editor Leonard Huxley by his second wife Rosalind Bruce, and hence half-brother of the writer Aldous Huxley and fellow biologist Julian Huxley and grandson of the biologist T. H. Huxley. In 1947 he married Jocelyn Richenda Gammell Pease (1925–2003), the daughter of the geneticist Michael Pease and his wife Helen Bowen Wedgwood, the daughter of Josiah Wedgwood, and is thus affiliated with the Darwin-Wedgwood family.

Aldous Huxley

Aldous Leonard Huxley (26 July 1894 - 22 November 1963) was an English writer and one of the most prominent members of the famous Huxley family. He spent the later part of his life in the United States, living in Los Angeles from 1937 until his death in 1963. Best known for his novels including Brave New World and wide-ranging output of essays, he also published short stories, poetry, travel writing, and film stories and scripts.

Aldous Huxley was a humanist and pacifist, and he was latterly interested in spiritual subjects such as parapsychology and philosophical mysticism. He is also well known for advocating and taking psychedelics.

In 1937, Huxley moved to Hollywood, California with his wife Maria, son Matthew, and friend Gerald Heard. He lived in the U.S., mainly in southern California, until his death, but also for a time in Taos, New Mexico, where he wrote Ends and Means (published in 1937). In this work he examines the fact that although most people in modern civilization agree that they want a world of “liberty, peace, justice, and brotherly love”, they have not been able to agree

on how to achieve it. Heard introduced Huxley to Vedanta (Veda-Centric Hinduism), meditation, and vegetarianism through the principle of ahimsa. In 1938 Huxley befriended J. Krishnamurti, whose teachings he greatly admired. He also became a Vedantist in the circle of Hindu Swami Prabhavananda, and introduced Christopher Isherwood to this circle. Not long after, Huxley wrote his book on widely held spiritual values and ideas, The Perennial Philosophy, which discussed the teachings of renowned mystics of the world.

Quotations

On truth: “Great is truth, but still greater, from a practical point of view, is silence about truth. By simply not mentioning certain subjects... totalitarian propagandists have influenced opinion much more effectively than they could have by the most eloquent denunciations.”

On social organizations: “One of the many reasons for the bewildering and tragic character of human existence is the fact that social organization is at once necessary and fatal. Men are forever creating such organizations for their own convenience and forever finding themselves the victims of their home-made monsters.”

On heroin: “Who lives longer: the man who takes heroin for two years and dies, or the man who lives on roast beef, water, and potatoes till ninety-five? One passes his twenty-four months in eternity. All the years of the beef-eater are lived only in time.”

On religion: “You never see animals going through the absurd and often horrible fooleries of magic and religion... Dogs do not ritually urinate in the hope of persuading heaven to do the same and send down rain. Asses do not bray a liturgy to cloudless skies. Nor do cats attempt, by abstinence from cat’s meat, to wheedle the feline spirits into benevolence. Only man behaves with such gratuitous folly. It is the price he has to pay for being intelligent but not, as yet, quite intelligent enough.”

Vegetarianism

Vegetarianism is the practice of following a diet based on plant-based foods including fruits, vegetables, cereal grains, nuts, and seeds, with or without dairy products and eggs. Vegetarians do not eat meat or game, poultry, fish, crustacea and shellfish, and products of animal slaughter. Variants of the diet exclude eggs and/ or some products produced from animal labour such as dairy products and honey. The vegan diet is a form of vegetarianism which excludes all animal products from the diet, including dairy products, eggs, and honey. Most vegetarians consume dairy products, and many eat eggs. Lacto-vegetarianism includes dairy products but excludes eggs, ovo-vegetarianism includes eggs but not dairy, and lacto-ovo vegetarianism includes both eggs and dairy products. Vegetarianism may be adopted for any of a number of reasons, including ethics, health, environmental, religion, politics, culture, aesthetics, or economics.

History

The earliest records of vegetarianism as a concept and practice amongst a significant number of people come from ancient India and the ancient Greek civilisation in Southern Italy and in Greece in the 6th century BCE. In

both instances the diet was closely connected with the idea of nonviolence towards animals (called ahimsa in India) and was promoted by religious groups and philosophers. Following the Christianisation of the Roman Empire in late antiquity, vegetarianism practically disappeared from Europe. Several orders of monks in medieval Europe restricted or banned the consumption of meat for ascetic reasons, but none of them eschewed fish. Vegetarianism re-emerged somewhat in Europe during the Renaissance. It became a more widespread practice in the 19th and 20th centuries.

In 1847 the first Vegetarian Society was founded in England, Germany, the Netherlands and other countries followed. The International Vegetarian Union, a union of the national societies, was founded in 1908. In the Western world, the popularity of vegetarianism grew during the 20th century as a result of nutritional, ethical, and more recently, environmental and economic concerns. Today, Indian vegetarians, primarily lacto vegetarians, are estimated to make up more than 70% of the world’s vegetarians.

Ahimsa

Ahimsa is a Sanskrit term meaning to do no harm (literally: the avoidance of violence – himsa). It is an important tenet of the religions that originated in ancient India (Hinduism, Buddhism and especially Jainism). Ahimsa is a rule of conduct that bars the killing or injuring of living beings. It is closely connected with the notion that all kinds of violence entail negative karmic consequences. Though the origins of the concept of ahimsa are unknown, the earliest references to ahimsa are found in the texts of historical Vedic religion, dated to 8th century BCE. Here, ahimsa initially relates to “non-injury” without a moral connotation, but later to non-violence to animals and then, to all beings.

Ahimsa in Jainism emphasizes vegetarianism and bans hunting and ritual sacrifice. Jains go out of their way so as not to hurt even small insects and other minuscule animals and make considerable efforts not to injure plants in everyday life as far as possible. In accordance to this policy, eating of some foods, whose cultivation harms small insects and worms as well as agriculture itself, is to be abstained from. Violence in self-defense, criminal law, and war are accepted by Hindus and Jains. Though ahimsa is not used as a technical term in Buddhism unlike the other two religions, it condemns ritual sacrifice and violence, and moral codes emphasize the importance of not taking life.

Jainism

In Jainism, the understanding and implementation of ahimsa is more radical, scrupulous, and comprehensive than in any other religion. The Jain concept of ahimsa is characterized by several aspects. It does not make any exception for ritual sacrificers and professional warrior-hunters. Killing of animals for food is absolutely ruled out. Jains also make considerable efforts not to injure

Dharmacakra

plants in everyday life as far as possible. Though they admit that plants must be destroyed for the sake of food, they accept such violence only inasmuch as it is indispensable for human survival, and there are special instructions for preventing unnecessary violence against plants. Jains go out of their way so as not to hurt even small insects and other minuscule animals. For example, Jains often do not go out at night, when they are more likely to step upon an insect. In their view, injury caused by carelessness is like injury caused by deliberate action. Eating honey is strictly outlawed, as it would amount to violence against the bees. Some Jains abstain from farming because it inevitably entails unintentional killing or injuring of many small animals, such as worms and insects, but agriculture is not forbidden in general and there are Jain farmers. Additionally, because they consider harsh words to be a form of violence, they often keep a cloth to ritually cover their mouth, as a reminder not to allow violence in their speech.

Though, theoretically, all life forms are said to deserve full protection from all kinds of injury, Jains admit that this ideal cannot be completely implemented in practice. Hence, they recognize a hierarchy of life. Mobile beings are given higher protection than immobile ones. For the mobile beings, they distinguish between one-sensed, two-sensed, three-sensed, four-sensed and five-sensed ones; a one-sensed animal has touch as its only sensory modality. The more senses a being has, the more they care about its protection. Among the five-sensed beings, the rational ones (humans) are most strongly protected by Jain ahimsa.

Dharmacakra

The Dharmacakra (Sanskrit) or Dhammacakka (Pali), Tibetan chos kyi 'khor lo, Chinese fālún, “Wheel of Dharma” or “Wheel of Law” is a symbol that has represented dharma, the Buddha’ s teaching of the path to enlightenment, since the early period of Indian Buddhism. It is also sometimes translated as wheel of doctrine or wheel of law. A similar symbol is also in use in Jainism. It is one of the Ashtamangala Symbols.

History

The Dharmachakra symbol is represented as a chariot wheel (Sanskrit cakram) with eight or more spokes. It is one of the oldest known Buddhist symbols found in Indian art, appearing with the first surviving post-Harappan Indian iconography in the time of the Buddhist king Asoka. The Dharmacakra has been used by all Buddhist nations as a symbol ever since. In its simplest form, the Dharmacakra is recognized globally as a symbol for Buddhism.

The eight spokes represent the Noble Eightfold Path of Buddhism.

Other symbolism in the eight-spoked Dharmacakra in Buddhism:

- Its overall shape is that of a circle (cakra), representing the perfection of the dharma teaching
- The hub stands for discipline, which is the essential core of meditation practice

Meditation

- The rim, which holds the spokes, refers to mindfulness or samādhi which holds everything together
- The corresponding mudrā, or symbolic hand gesture, is known as the Dharmacakra Mudrā.

The Dharmacakra is one of the eight auspicious symbols of Tibetan Buddhism.

The dharma wheel can refer to the dissemination of the dharma teaching from country to country. In this sense the dharma wheel began rolling in India, carried on to Central Asia, and then arrived in South East Asia and East Asia.

In Jainism, the Dharmacakra is worshipped as a symbol of the dharma.

Meditation

Meditation is a mental discipline by which one attempts to get beyond the reflexive, “thinking” mind into a deeper state of relaxation or awareness. Meditation often involves turning attention to a single point of reference. It is a component of many religions, and has been practiced since antiquity. It is also practiced outside religious traditions. Different meditative disciplines encompass a wide range of spiritual or psychophysical practices that may emphasize different goals—from achievement of a higher state of consciousness, to greater focus, creativity or self-awareness, or simply a more relaxed and peaceful frame of mind.

The word meditation comes from the Indo-European root med-, meaning “to measure.” From the root med- are also derived the English words mete, medicine, modest, and moderate. It entered English as meditation through the Latin meditatio, which originally indicated any type of physical or intellectual exercise, then later evolved into the more specific meaning “contemplation.”

Eastern meditation techniques have been adapted and increasingly practiced in Western culture.

Practices based in spirituality and religion

Meditation has been defined as: “self regulation of attention, in the service of self-inquiry, in the here and now.” The various techniques of meditation can be classified according to their focus. Some focus on the field or background perception and experience, often referred to as “mindfulness” ; others focus on a preselected specific object, and are called “concentrative” meditation. There are also techniques that shift between the field and the object. In mindfulness meditation, the meditator sits comfortably and silently, centering attention by focusing awareness on an object or process (such as the breath; a sound, such as a mantra, koan or riddle-like question; a visualization; or an exercise). The meditator is usually encouraged to maintain an open focus: shifting freely from one perception to the next clear your mind of all that bothers you no thoughts that can distract you from reality or your personal being... No thought, image or sensation is considered an intrusion. The meditator, with a ‘no effort’ attitude, is asked to remain in the here and now. Using the focus as an ‘anchor’ brings the subject constantly back to the present, avoiding cognitive

analysis or fantasy regarding the contents of awareness, and increasing tolerance and relaxation of secondary thought processes.

Meditation can be practiced while walking or doing simple repetitive tasks. Walking meditation helps break down habitual automatic mental categories, “thus regaining the primary nature of perceptions and events, focusing attention on the process while disregarding its purpose or final outcome.” In a form of meditation using visualization, such as Chinese Qi Gong, the practitioner concentrates on flows of energy (Qi) in the body, starting in the abdomen and then circulating through the body, until dispersed.



In a Western context

“Meditation” in its modern sense refers to Yogic meditation that originated in India. In the late nineteenth century, Theosophists adopted the word “meditation” to refer to various spiritual practices drawn from Hinduism, Buddhism, Sikhism and other Indian religions. Thus the English word “meditation” does not exclusively translate to any single term or concept, and can be used to translate words such as the Sanskrit dhāraā, dhyana, samadhi and bhavana.

Meditation may be for a religious purpose, but even before being brought to the West it was used in secular contexts, such as the martial arts. Beginning with the Theosophists, though, meditation has been employed in the West by a number of religious and spiritual movements, such as Yoga, New Age and the New Thought movement, as well as limited use in Christianity.

Meditation techniques have also been used by Western theories of counseling and psychotherapy. Relaxation training works toward achieving mental and muscle relaxation to reduce daily stresses. Jacobson is credited with developing the initial progressive relaxation procedure. These techniques are used in conjunction with other behavioral techniques. Originally used with systematic desensitization, relaxation techniques are now used with other clinical problems. Meditation, hypnosis and biofeedback-induced relaxation are a few

of the techniques used with relaxation training. One of the eight essential phases of EMDR (developed by Shapiro), bringing adequate closure to the end of each session, also entails the use of relaxation techniques, including meditation. Multimodal therapy, a technically eclectic approach to behavioral therapy, also employs the use of meditation as a technique used in individual therapy.

From the point of view of psychology and physiology, meditation can induce an altered state of consciousness, and its goals in that context have been stated to achieving spiritual enlightenment, to the transformation of attitudes, and to better cardiovascular health.

Physical postures



Different spiritual traditions, and different teachers within those traditions, prescribe or suggest different physical postures for meditation. Sitting, supine, and standing postures are used. Most famous are the several cross-legged sitting postures, including the Lotus Position.

Spine

Many meditative traditions teach that the spine should be kept “straight,” that is, the meditator should not slouch. Some traditions suggest being barefoot, for comfort, for convenience, or for spiritual reasons.

Other traditions, such as those related to kundalini yoga, take a less formal approach. While the basic practice in these traditions is also to sit still quietly in a traditional posture, they emphasize the possibility of kriyas – spontaneous yogic postures, changes in breathing patterns or emotional states, or perhaps repetitive physical movements such as swaying, etc., which may naturally arise as the practitioner sits in meditation, and which should not be resisted but rather allowed to express themselves to enhance the natural flow of energy through the body. This is said to help purify the nadis and ultimately deepen one’s meditative practice.

Mudra/Hand

Various hand-gestures or mudras may be prescribed. These can carry theological meaning or according to Yogic philosophy can actually affect consciousness.

Stress (biological)

Eyes

In most meditative traditions, the eyes are closed. In some sects such as Zen, the eyes are half-closed, half open and looking slightly downward. In others such as Brahma Kumaris, the eyes are kept fully open.

Quiet is often desirable, and some people use repetitive activities such as deep breathing, humming or chanting to help induce a meditative state.

Focus and Gaze

Often such details are shared by more than one religion, even in cases where mutual influence seems unlikely. One example is “navel-gazing,” which is apparently attested within Eastern Orthodoxy as well as Chinese qigong practice. Another is the practice of focusing on the breath, found in Orthodox Christianity, Sufism, and numerous Indic traditions.

Health applications and clinical studies

A review of scientific studies identified relaxation, concentration, an altered state of awareness, a suspension of logical thought and the maintenance of a self-observing attitude as the behavioral components of meditation; it is accompanied by a host of biochemical and physical changes in the body that alter metabolism, heart rate, respiration, blood pressure and brain chemistry. Meditation has been used in clinical settings as a method of stress and pain reduction. Meditation has also been studied specifically for its effects on stress.

Stress (biological)

Common sources

Categories and examples of stressors include: sensory input such as pain, bright light, or environmental issues such as a lack of control over environmental circumstances, such as food, housing, health, freedom, or mobility.

Social issues can also cause stress, such as struggles with conspecific or difficult individuals and social defeat, or relationship conflict, deception, or break ups, and major events such as birth and deaths, marriage, and divorce.

Life experiences such as poverty, unemployment, depression, obsessive compulsive disorder, heavy drinking, or insufficient sleep can also cause stress. Students and workers may face stress from exams, project deadlines, and group projects.

History and usage

As a semi-psychological term referring to hardship or coercion, it dated from the 14th century. It is a form of the Middle English destresse, derived via Old French from the Latin stringere - to draw tight.

It had long been in use in physics to refer to the internal distribution of a force exerted on a material body, resulting in strain. In the 1920s and 1930s, the term was occasionally being used in psychological circles to refer to a mental strain or unwelcome happening, and by advocates of holistic medicine to refer to a harmful environmental agent that could cause illness. Walter Cannon used it in 1934 to refer to external factors that disrupted what he called “homeostasis”.

A new scientific usage developed out of Hans

Seyle’s reports of his laboratory experiments in the 1930s. Selye started to use the term to refer not just to the agent but to the state of the organism as it responded and adapted to the environment. His theories of a universal non-specific stress response attracted great interest and contention in academic physiology and he undertook extensive research programmes and publication efforts.

From the late 1960s, Selye’s concept started to be taken up by academic psychologists, who sought to quantify “life stress” by scoring “significant life events”, and a large amount of research was undertaken to examine links between stress and disease of all kinds. By the late 1970s stress had become the medical area of greatest concern to the general population, and more basic research was called for to better address the issue.

There was renewed laboratory research into the neuroendocrine, molecular and immunological bases of stress, conceived as a useful heuristic not necessarily tied to Selye’s original hypotheses. By the 1990s, “stress” had become an integral part of modern scientific understanding in all areas of physiology and human functioning, and one of the great metaphors of Western life. Focus grew on stress in certain settings, such as workplace stress. Stress management techniques were developed.

Its psychological uses are frequently metaphorical rather than literal, used as a catch-all for perceived difficulties in life. It also became a euphemism, a way of referring to problems and eliciting sympathy without being explicitly confessional, just “stressed out.”

It covers a huge range of phenomena from mild irritation to the kind of severe problems that might result in a real breakdown of health. In popular usage almost any event or situation between these extremes could be described as stressful.

The most extreme events and reactions may elicit the diagnosis of Posttraumatic stress disorder (PTSD), an anxiety disorder that can develop after exposure to one or more terrifying events that threatened or caused grave physical harm. PTSD is a severe and ongoing emotional reaction to an extreme psychological trauma; as such, it is often associated with soldiers, police officers, and other emergency personnel.

This stressor may involve viewing someone’s actual death, a threat to the patient’s or someone else’s life, serious physical injury, or threat to physical or psychological integrity, overwhelming usual psychological defenses coping. In some cases it can also be from profound psychological and emotional trauma, apart from any actual physical harm. Often, however, the two are combined.

Islamic calligraphy

Islamic calligraphy, colloquially known as Arabic calligraphy, is the art of artistic handwriting, or calligraphy, and by extension, of bookmaking. This art, associated with Islam, has most often employed the Arabic script, throughout many languages including Arabic. Calligraphy is especially revered among Islamic arts since it was the primary means for the preservation of the Qur'an. The work of calligraphers was collected and appreciated. Consideration of figurative art as idolatrous led to calligraphy and abstract figures becoming the main forms of artistic expression in Islamic cultures.

Arabic, Persian and Ottoman Turkish calligraphy is associated with geometric Islamic art (the Arabesque) on the walls and ceilings of mosques as well as on the page. Contemporary artists in the Islamic world draw on the heritage of calligraphy to use calligraphic inscriptions or abstractions in their work. It is usually very complex, however; it is well known over the world.

Role in Islamic culture

Calligraphy has arguably become the most venerated form of Islamic art because it provides a link between the languages of the Muslims with the religion of Islam. The holy book of Islam, the Qur'an, has played an important role in the development and evolution of the Arabic language, and by extension, calligraphy in the Arabic alphabet. Proverbs and complete passages from the Qur'an are still active sources for Islamic calligraphy. The Arabic alphabet



consists of 28 letters and 18 different forms of writing.

The Diwani script is a cursive style of Arabic calligraphy developed during the reign of the early Ottoman Turks (16th and early 17th centuries). It was invented by Housam Roumi and reached its height of popularity under Süleyman I the Magnificent (1520-66). As decorative as it was communicative, Diwani was distinguished by the complexity of the line within the letter and the close juxtaposition of the letters within the word. A variation of the Diwani, the Diwani Al Jali, is characterized by its abundance of diacritical and ornamental marks.

Finally, the most common script for everyday use is Ruq'ah (also known as Riqa). Simple and easy to write, its movements are small, without much amplitude. It is the one most commonly seen. It is considered a step up from Naskh script, which children are taught first. In later grades they are introduced to Ruq'ah.

In China, a calligraphic form called Sini has been

developed. This form has evident influences from Chinese calligraphy, using a horse-hair brush as opposed to the standard reed pen. A famous modern calligrapher in this tradition is Hajji Noor Deen Mi Guangjiang.

Instruments and media

The traditional instrument of the Arabic calligrapher is the qalam, a pen made of dried reed or bamboo; the ink is often in color, and chosen such that its intensity can vary greatly, so that the greater strokes of the compositions can be very dynamic in their effect.

A variety of media were employed for presenting calligraphy. Before the advent of paper, papyrus and parchment were used for writing. The advent of paper revolutionized calligraphy. While monasteries in Europe treasured a few dozen volumes, libraries in the Muslim world regularly contained hundreds and even thousands of volumes of books.

Qalam

A qalam is a type of pen made from a dried reed, used for Arabic calligraphy. The word derives from the Greek word *κάλαμος*, meaning reed. In modern Arabic, Persian, Turkish and Kurdish, the word simply means "pen" or "pencil", while in Hindi and Urdu, the word solely means "pen". It is also the name of a system of Arabic transliteration, suggested in 1985.

1985

1985 (MCMLXXXV) was a common year starting on Tuesday (link displays 1985 Gregorian calendar). The year 1985 was declared International Youth Year by the United Nations.

Events of 1985

Civil Aviation

It is the deadliest year for civil aviation. 1631 people died.

January

15 – Tancredo Neves is elected president of Brazil by the Congress, ending the 21-year military rule.

17 – British Telecom announces it is going to phase out its famous red telephone boxes.

20 – U.S. President Ronald Reagan is privately sworn in for a second term in office (publicly sworn in, January 21).

20 – Super Bowl XIX: The San Francisco 49ers defeat the Miami Dolphins 38–16 at Stanford Stadium in Palo Alto, California.

28 – In Hollywood, California, the charity single "We Are the World" is recorded by USA for Africa. Like the enormously successful Do They Know It's Christmas? that was recorded by Band Aid in Britain two months ago, the single raises money to combat the ongoing famine in Ethiopia. The American act consists of high profile performers including Michael Jackson, Lionel Ritchie, Tina Turner, Cyndi Lauper and Diana Ross.

We Are the World

"We Are the World" is a song and charity single

recorded by the supergroup USA for Africa. It was written by Michael Jackson and Lionel Richie, and co-produced by Quincy Jones and Michael Omartian for the 1985 album of the same name. The idea for the creation of a benefit single for African famine relief had initially come from activist Harry Belafonte, who, along with fundraiser Ken Kragen, was instrumental in bringing the vision to reality. Several musicians were contacted by the pair, before Jackson and Richie were assigned the task of writing the song. Following several months of working together, the duo completed the writing



of "We Are the World" one night before the anthem's first recording session, in early 1985. The last recording session for the song was held on January 28, 1985. The historic event brought together some of the biggest artists in the music industry at the time.

The anthem was released on March 7, 1985, as the only single from We Are the World. The single was a world-wide commercial success; it topped music charts throughout the world and became the fastest-selling American pop single in history. The first ever single to be certified multi-platinum, "We Are the World" received a 4x certification by the Recording Industry Association of America. The song was not a significant critical success, as it garnered mixed reviews from journalists, music critics and the public. Fans enjoyed hearing racially and musically diverse recording artists singing together on one track, and felt satisfied in buying "We Are the World", knowing that the money was going to charity. Other individuals were disappointed that the song did not challenge why famines occur in the first place, and felt that the lyrics were self-aggrandizing.

Honored numerous times—including three Grammy Awards, one American Music Award and a People's Choice Award—the song was promoted with a critically received music video, a home video, a special edition magazine, a simulcast, and several books, posters and shirts. The promotion and merchandise aided the success of "We Are the World", which was eventually named the biggest selling single of all time. To date, the anthem has sold over 20 million units and raised over \$63 million for humanitarian aid in Africa and the US. Performed live on numerous occasions, "We Are the World" demonstrated that diverse musicians could productively work together, and started a movement within pop music to create songs that address humane concerns.

Recording sessions

The first night of recording, January 22, 1985, had tight security on hand, as Richie, Jackson, Wonder and Jones started work on "We Are the World" at Kenny Rogers' Lion Share Recording Studio. The studio, on Beverly Boulevard in California, was filled

with musicians, technicians, video crews, retinues, assistants and organizers as the four musicians entered. To begin the night, a "vocal guide" of "We Are the World" was recorded by Richie and Jackson and duplicated on tape for each of the invited performers. The guide was recorded on the sixth take, as Quincy Jones felt that there was too much "thought" in the previous versions.

Following their work on the vocal guide, Jackson and Jones began thinking of alternatives for the line "There's a chance we're taking, we're taking our own lives": the pair were concerned that the latter part of the line would be considered a reference to suicide. As the group listened to a playback of the chorus, Richie declared that the last part of the line should be changed to "We're 'saving' our own lives", with which his fellow musicians agreed. Producer Jones also

suggested altering the former part of the line. "One thing we don't want to do, especially with this group, is look like we're patting ourselves on the back. So it's really, 'There's a choice we're making.' " At approximately 1:30 am, the four musicians ended the night by finishing a chorus of melodic vocalizations, including the sound "shalum sha-lin-gay". Jones told the group that they were not to add anything else to the tape. "If we get too good, someone's gonna start playing it on the radio", the producer announced.

Sheila E.

Sheila Escovedo (born December 12, 1957, in Oakland, California), known by her stage name Sheila E., is an American musician, perhaps best known for her work with Prince and Ringo Starr.



Biography

– Early life and Prince period
Sheila Escovedo is the daughter of percussionist Pete Escovedo, with whom she frequently performs. Sheila E's uncle is Alejandro

Escovedo, formerly with Delphine Neid's first-wave punk rock group The Nuns, Rank and File and The True Believers, followed by a solo career. The late Tito Puente was Escovedo's godfather. She is also niece to Javier Escovedo, founder of seminal San Diego punk act, The Zeros. Another uncle, Mario Escovedo, fronted long-running indie rockers, The Dragons. Escovedo is of Mexican, African American, and Creole heritage. Coke Escovedo who was in Santana and formed the band Azteca was also her uncle.

She made her recording debut with jazz bassist Alphonso Johnson on "Yesterday's Dream" in 1976. She is a drummer and percussionist and also plays violin and guitar. She had also played with George Duke, Lionel Richie, Marvin Gaye, Herbie Hancock, and Diana Ross by the time she was in her early twenties.

Prince met Sheila at a concert in the early 1980s,



when she was performing with her father. After the show, he met her and told her that he and his bassist "were just fighting about which one of us would be the first to be your husband". He also prophetically vowed that one day she would join his band. The two would eventually join forces during the Purple Rain recording sessions. She provided vocals on the B-side to "Let's Go Crazy", "Erotic City" in 1983/84. Though taken under Prince's wing, she proved to be a successful artist in her own right. In 1984 she scored hits with "The Glamorous Life" (#7 on the Hot 100, and regarded as something of an '80s classic), and "The Belle of St. Mark" (#34). She opened for the Purple Rain tour and there was a segment where she would have a man called up on stage and seated in a chair while she sang and teased him (similarly mirrored by Janet Jackson during the "Rope Burn" segment of her Velvet Rope Tour in 1998/99.) Around the same time, the collaborating duo began a brief romantic relationship, while Prince was still seeing Susannah Melvoin, twin sister of Revolution band member Wendy Melvoin.

In 1985 she released Romance 1600, scored another hit with the track "A Love Bizarre" (#11), and the non-album track "Hollyrock" made its way to live shows and into the film Krush Groove. She was also nominated for an American Music Award and a Grammy for "The Glamorous Life". Sheila recorded three albums during the '80s, The Glamorous Life, Romance 1600, and Sheila E. She appeared in four films, Krush Groove with Run-D.M.C., LL Cool J and Blair Underwood in 1985, Prince's concert film, Sign 'O' the Times in 1987, The Adventures of Ford Fairlane

and Chasing Papi in 2003.

During the Sign o' the Times, Black Album (material which is rumoured to have been intended as birthday party music for Sheila E.), and Lovesexy periods of Prince's career (including the Lovesexy World Tour), Sheila E. served as his drummer and musical director in his highly regarded backup band, dubbed the New Power Generation not long after her departure. During the Sign o' the Times era, she released the single "Koo Koo" from her 3rd album Sheila E., which had Sign o' the Times member Cat as a backup dancer in the accompanying video. Sheila also served as a writer and musician on many of Prince's records, as well as on the albums of his protégés such as Madhouse.

Japan

Japan (日本, Nihon or Nippon, officially 日本国 Nippon-koku or Nihon-koku) is an island country in East Asia. Located in the Pacific Ocean, it lies to the east of the Sea of Japan, People's Republic of China, North Korea, South Korea and Russia, stretching from the Sea of Okhotsk in the north to the East China Sea and Taiwan in the south. The characters which make up Japan's name mean "sun-origin", which is why Japan is sometimes identified as the "Land of the Rising Sun".

Japan is an archipelago of 6,852 islands. The four largest islands are Honshu, Hokkaido, Kyushu and Shikoku, together accounting for 97% of Japan's land area. Most of the islands are mountainous, many volcanic; for example, Japan's highest peak, Mount Fuji, is a volcano. Japan has the world's tenth-largest population, with about 128 million people. The Greater Tokyo Area, which includes the de facto capital city of Tokyo and several surrounding prefectures, is the largest metropolitan area in the world, with over 30 million residents.

Korea

Korea (Hanguk: 한국) is a civilization and formerly unified nation currently divided into two states. Located on the Korean Peninsula, it borders China to the northwest, Russia to the northeast, and is separated from Japan to the east by the Korea Strait.

Korea was united until 1948; at that time it was split into South Korea and North Korea. South Korea, officially the Republic of Korea, is a capitalistic, democratic developed country with memberships in the United Nations, WTO, OECD and G-20 major economies, and home to such global brands as Samsung, LG Electronics, and Hyundai. North Korea, officially the Democratic People's Republic of Korea, is a single-party communist state founded by Kim Il-sung and currently led by his son Kim Jong-il, who has maintained close relations with the People's Republic of China and Russia.

Archaeological and linguistic evidence suggest the origins of the Korean people were in Altaic language-speaking migrants from south-central Siberia, who populated ancient Korea in successive waves from the Neolithic age to the Bronze Age. The adoption of the Chinese writing system ("Hanja" in Korean) in the

Goguryeo

2nd century BC, and Buddhism in the 4th century AD, had profound effects on the Three Kingdoms of Korea. Baekje later passed on a modified version of these cultural advances to Japan.

Since the Goryeo Dynasty, Korea was ruled by a single government and maintained political and cultural independence until the 20th century, despite the Mongol invasions of the Goryeo Dynasty in the 13th century and Japanese invasions of the Joseon Dynasty in the 16th century. In 1377, Korea produced the Jikji, the world’ s oldest existing document printed with movable metal type. In the 15th century, the turtle ships were deployed, and King Sejong the Great promulgated the Korean alphabet Hangul.

During the latter part of the Joseon Dynasty, Korea’ s isolationist policy earned it the Western nickname the “Hermit Kingdom” . By the late 19th century, the country became the object of the colonial designs of Japan and Europe. In 1910, Korea was forcibly annexed by Japan and remained occupied until the end of World War II in August 1945.

In 1945, the Soviet Union and the United States agreed on the surrender and disarming of Japanese troops in Korea; the Soviet Union accepting the surrender of Japanese weaponry north of the 38th parallel and the United States taking the surrender south of it. This minor decision by allied armies soon became the basis for the division of Korea by the two superpowers, exacerbated by their inability to agree on the terms of Korean independence. The two Cold War rivals then established governments sympathetic to their own ideologies, leading to Korea’ s current division into two political entities: North Korea and South Korea.

Names of Korea

The name “Korea” derives from the Goryeo period of Korean history, which in turn referred to the ancient kingdom of Goguryeo. Merchants of the Middle East called it Cauli (from the Chinese pronunciation), which then came to be spelled Corea and Korea. Korea is now commonly used in English contexts by both North and South Korea. A K is often used in Germanic languages, while a C is preferred in Romance languages.

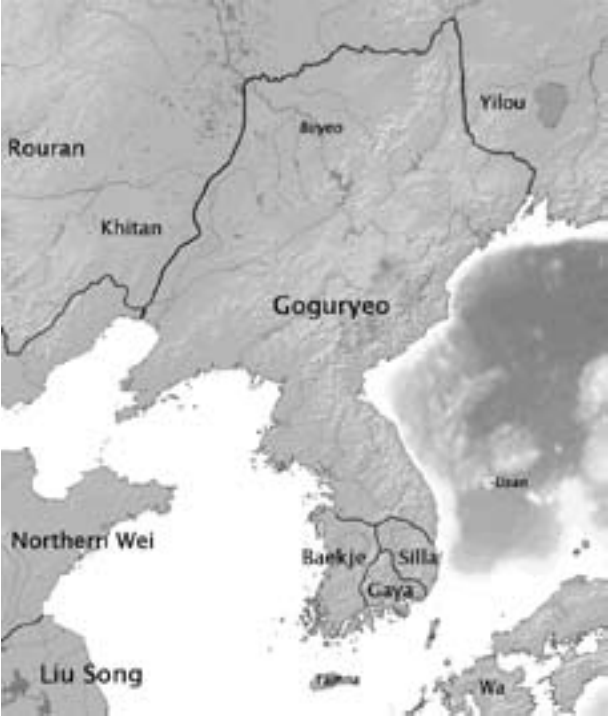
In the Korean language, Korea as a whole is referred to as Han-guk in South Korea, and Chosŏn in North Korea. The latter name, also Romanized Joseon, is from the Joseon Dynasty and the earlier Gojoseon. “The Land of the Morning Calm” is an English language nickname loosely derived from the hanja characters for Joseon.

Goguryeo

Goguryeo or Koguryŏ was an ancient Korean kingdom located in the northern and central parts of the Korean peninsula, southern Manchuria, and southern Russian Maritime province.

Along with Baekje and Silla, Goguryeo was one of the Three Kingdoms of Korea. Goguryeo was an active participant in the power struggle for control of the Korean peninsula as well as associated with the foreign affairs of peer polities in China and Japan.

Crossbow

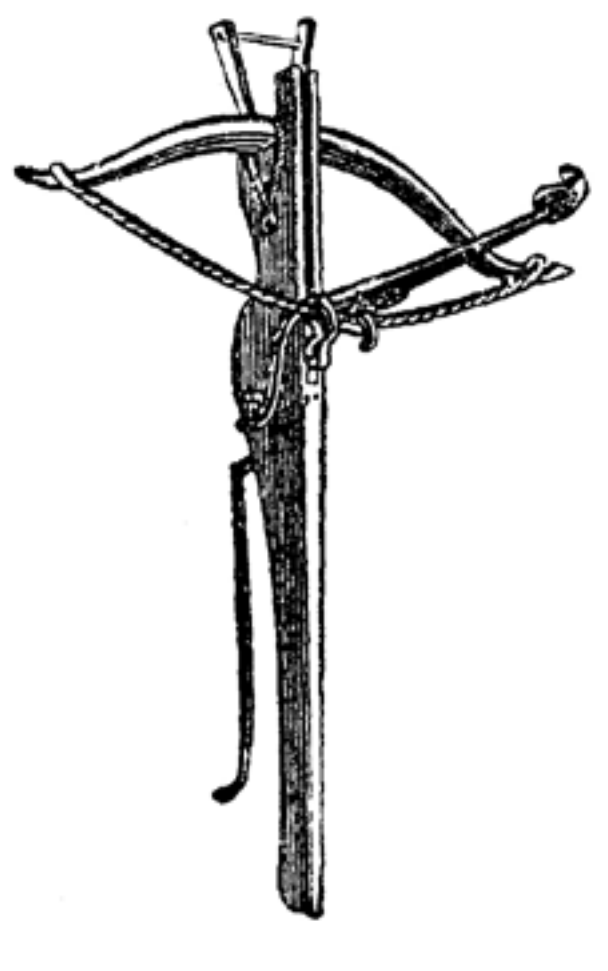


The Samguk Sagi, a 12th century CE Goryeo text, indicates that Goguryeo was founded in 37 BCE by Jumong, a prince from Buyeo, although there is archaeological and textual evidence that suggests Goguryeo culture was in existence since the 2nd century BCE around the fall of Gojoseon, an earlier kingdom that also occupied southern Manchuria and northern Korea.

Goguryeo was a major regional power in Northeast Asia until it was defeated by a Silla-Tang alliance in 668 CE. After its defeat, its

Design

A crossbow is a bow mounted on a stick (called a tiller or stock) with a mechanism in it which holds the drawn bow string. The earliest designs utilized a slot in the stock, down into which the cocked string was placed. To fire this design, a vertical rod is thrust up through a hole in the bottom of the notch, forcing the string out. This rod is usually attached perpendicular to a rear-facing firing lever called a trigger or ‘tickler’ . A later design utilized a rolling cylindri-



territory was divided among the Tang Dynasty, Unified Silla and Balhae.

The English word “Korea” derives from “Goryeo” , which comes from “Goguryeo” .

Crossbow

A crossbow is a weapon consisting of a bow mounted on a stock that shoots projectiles, often called bolts. The medieval crossbow was called by many names, most of which derived from the word ballista, a siege engine resembling a crossbow in mechanism and appearance.

Crossbows historically played a significant role in the warfare of Europe, the Mediterranean, and Asia. Today, they are used primarily for target shooting and hunting.

Taxus Baccata

made of iron or steel from medieval times onwards), was used to retain the force of the cocked string in the nut and then release the nut to spin and the string to shoot the bolt. Sophisticated bronze triggers with safety notches are known to have been used on crossbows from ancient China. Complicated iron triggers that could be released with little strength are known in Europe from the early 1400s. As a result crossbows could be kept cocked and ready to shoot for some time with little effort, allowing crossbowmen to aim better.

The bow (called the “prod” or “lath” on a crossbow) of early crossbows was made of a single piece of wood, usually ash or yew. Composite bows are made from layers of different material—often wood, horn and sinew—glued together and bound with animal tendon. These composite bows, made of several layers, are much stronger and more efficient in releasing energy than simple wooden bows. As steel became more widely available in Europe around the 14th century, steel prods came into use.

Taxus baccata

Taxus baccata is a conifer native to western, central and southern Europe, northwest Africa, northern Iran and southwest Asia. It is the tree originally known as yew, though with other related trees becoming known, it may be now known as the common yew, or European yew.

Description

It is a small- to medium-sized evergreen tree, growing 10-20 metres (33-66 ft) (exceptionally up to 28 m/92 ft) tall, with a trunk up to 2 metres (6 ft 7 in) (exceptionally 4 m/13 ft) diameter. The bark is thin, scaly brown, coming off in small flakes aligned with the stem. The leaves are lanceolate, flat, dark green, 1-4 centimetres (0.39-1.6 in) long and 2-3 millimetres (0.079-0.12 in) broad, arranged spirally on the stem, but with the leaf bases twisted to align the leaves in two flat rows either side of the stem, except on erect leading shoots where the spiral arrangement is more obvious. The leaves are highly poisonous.

The seed cones are highly modified, each cone containing a single seed 4-7 millimetres (0.16-0.28 in) long partly surrounded by a modified scale which develops into a soft, bright red berry-like structure called an aril, 8-15 millimetres (0.31-0.59 in) long and wide and open at the end. The arils are mature 6-9 months after pollination, and with

their droppings; maturation of the arils is spread over 2-3 months, increasing the chances of successful seed dispersal. The seed itself is extremely poisonous and bitter.

Waxwing

The waxwings form the genus Bombycilla of passerine birds. According to most authorities, this is the only genus placed in the family Bombycillidae.

Description

Waxwings are characterised by soft silky plumage.



(Bombycilla, the genus name, is Vieillot’ s attempt at Latin for “silktail” , translating the German name Seidenschwänze). They have unique red tips to some of the wing feathers where the shafts extend beyond the barbs; in the Bohemian and Cedar Waxwings, these tips look like sealing wax, and give the group its name (Holloway 2003). The legs are short and strong, and the wings are pointed. The male and female have the same plumage. All three species have mainly brown plumage, a black line through the eye and black under the chin, a square-ended tail with a red or yellow tip, and a pointed crest. The bill, eyes, and feet are dark. Calls are high-pitched, buzzing or trilling monosyllables (Sibley 2000, MacKinnon and Phillipps 2000).

Grapes

A grape is the non-climacteric fruit, botanically a true berry, that grows on the perennial and deciduous woody vines of the genus Vitis. Grapes can be eaten raw or used for making jam, juice, jelly, vinegar, wine, grape seed extracts, raisins, and grape seed oil. Grapes are also used in some kinds of confectionery.

History

Ancient Egyptian hieroglyphics show the cultivation of grapes. Scholars believe that ancient Greeks, Phoenicians and Romans also grew grapes both for eating and wine production. Later, the growing of grapes spread to Europe, North Africa, and eventually to the United States. Native grapes in North America grew along streams; however, the first cultivated grapes in California were grown by



the seed contained are eaten by thrushes, waxwings and other birds, which disperse the hard seeds undamaged in

Spanish Franciscan Friars looking to make a sacramental wine for the California Missions. The first table

Alzheimer’ s Disease

grape vineyard in California is credited to an early settler by the name of William Wolfskill in the Los Angeles area. As more settlers came to California, more and more varieties of European grapes were introduced, some for wine-making, others for raisins and some for eating fresh.

Alzheimer’ s disease

Alzheimer’ s disease (AD), also called Alzheimer disease, Senile Dementia of the Alzheimer Type (SDAT) or simply Alzheimer’ s, is the most common form of dementia. This incurable, degenerative, and terminal disease was first described by German psychiatrist and neuropathologist Alois Alzheimer in 1906 and was named after him. Generally it is diagnosed in people over 65 years of age, although the less-prevalent early-onset Alzheimer’ s can occur much earlier. An estimated 26.6 million people worldwide had Alzheimer’ s in 2006; this number may quadruple by 2050.

Although the course of Alzheimer’ s disease is unique for every individual, there are many common symptoms. The earliest observable symptoms are often mistakenly thought to be ‘age-related’ concerns, or manifestations of stress. In the early stages, the most commonly recognised symptom is memory loss, such as difficulty in remembering recently learned facts. When a doctor or physician has been notified, and AD is suspected, the diagnosis is usually confirmed with behavioural assessments and cognitive tests, often followed by a brain scan if available. As the disease advances, symptoms include confusion, irritability and aggression, mood swings, language breakdown, long-term memory loss, and the general withdrawal of the sufferer as their senses decline. Gradually, bodily functions are lost, ultimately leading to death. Individual prognosis is difficult to assess, as the duration of the disease varies. AD develops for an indeterminate period of time before becoming fully apparent, and it can progress undiagnosed for years. The mean life expectancy following diagnosis is approximately seven years. Fewer than three percent of individuals live more than fourteen years after diagnosis.

The cause and progression of Alzheimer’ s disease are not well understood. Research indicates that the disease is associated with plaques and tangles in the brain. Currently used treatments offer a small symptomatic benefit; no treatments to delay or halt the progression of the disease are as yet available. As of 2008, more than 500 clinical trials were investigating possible treatments for AD, but it is unknown if any of them will prove successful. Many measures have been suggested for the prevention of Alzheimer’ s disease, but there is a lack of adequate support indicating that the degenerative process can be slowed. Mental stimulation, exercise, and a balanced diet are suggested, as both a possible prevention and a sensible way of managing the disease.

Naji al-Ali

Naji Salim al-Ali (c. 1938 - 29 August 1987) was a Palestinian cartoonist, noted for the political criticism of Israel in his works. He drew over 40,000 cartoons, which often reflected Palestinian and Arab public opinion and were sharply critical commentaries on Palestinian and Arab politics and political leaders. He is perhaps best known as creator of the character Handala, pictured in his cartoons as a young witness of the satirized policy or event depicted, and who has since become an icon of Palestinian defiance. Naji al-Ali was shot in the face and mortally wounded in London by unknown persons on 22 July 1987, outside the offices of al-Qabas, a Kuwaiti newspaper for which he drew political caricatures. He died five weeks later in Charing Cross Hospital.

Early life

Naji al-Ali was born in 1938 or thereabouts in the northern Palestinian village of Al-Shajara, located between Tiberias and Nazareth, in what is now Israel. He went into exile in the south of Lebanon with his family in 1948 during the Palestinian exodus and lived in Ain al-Hilweh refugee camp near Sidon, where he attended the Union of Christian Churches school. After gaining his Certificat he worked in the orchards of Sidon, then moved to Tripoli where he attended the White Friars’ vocational school for two years.

Naji al-Ali then moved to Beirut, where he lived in a tent in Shatila refugee camp and worked in various industrial jobs. In 1957, after qualifying as a car mechanic, he travelled to Saudi Arabia, where he worked for two years.

Career as a cartoonist and journalist

In 1959 Naji al-Ali returned to Lebanon, and that year he joined the Arab Nationalist Movement (ANM), but was expelled four times within one year for lack of party discipline. Between 1960 and 1961, along with comrades from the ANM, he published a handwritten political journal Al-Sarkha (‘the cry’).

In 1960, he entered the Lebanon Academy of Arts, but was unable to continue his studies there as he was imprisoned for political reasons soon afterwards. After his release he moved to Tyre, where he worked as a drawing instructor in the Ja’ fariya College.

The writer and political activist Ghassan Kanafani saw some of Naji al-Ali’s cartoons on a visit to Ain al-Hilweh and printed the artist’s first published drawings along with an accompanying article in Al-Hurriya no. 88 on 25 September 1961.

In 1963 Naji al-Ali moved to Kuwait, hoping to save money to study art in Cairo or Rome. There he worked as an editor, cartoonist, designer and newspaper producer on the Arab nationalist Al-Tali’ a newspaper. From 1968 on he worked for Al-Siyasa. In the course of these years he returned to Lebanon several times. In 1974 he started working for the Lebanese newspaper Al-Safir, which permitted him to return to Lebanon for a longer period. During the Israeli invasion of Lebanon

in 1982, he was briefly detained by the occupying forces along with other residents of Ain al-Hilweh. In 1983 he once more moved to Kuwait to work for Al-Qabas and in 1985 moved to London where he worked for its international edition until his death.

In 1984 he was described by The Guardian as “the nearest thing there is to an Arab public opinion” .

Work, positions and awards

In his career as a political cartoonist, Naji al-Ali produced over 40,000 drawings. They generally deal with the situation of the Palestinian people, depicting suffering and resistance and harshly criticising the Palestinian leadership and the Arab regimes. Naji al-Ali was a fierce opponent of any settlement that would not vindicate the Palestinians’ right to all of historic Palestine, and many of his cartoons express this opposition. Unlike many political cartoonists, specific politicians do not appear in person in his work: as he stated, “... I have a class outlook, that is why my cartoons take this form. What is important is drawing situations and realities, not drawing presidents and leaders.”

Naji al-Ali published three books of his cartoons, in 1976, 1983 and 1985, and was preparing another at the time of his death.

In 1979, Naji al-Ali was elected president of the League of Arab Cartoonists. In 1979 and 1980, he received the first prize in the Arab cartoonists exhibitions held in Damascus. The International Federation of Newspaper Publishers awarded him the “Golden Pen of Freedom” posthumously in 1988.

Handala

Handala is the most famous of Naji al-Ali’s characters. He is depicted as a ten-year old boy, and appeared for the first time in Al-Siyasa in Kuwait in 1969. The figure turned his back to the viewer from the year 1973, and clasped his hands behind his back. The artist explained that the ten-year old represented his age when forced to leave Palestine and would not grow up until he could return to his homeland; his turned back and clasped hands symbolised the character’s rejection of “outside solutions”. Handala wears ragged clothes and is barefoot, symbolising his allegiance to the poor. In later cartoons, he sometimes appears throwing stones or writing graffiti.

Handala became the signature of Naji al-Ali’s cartoons and remains an iconic symbol of Palestinian identity and defiance; the artist remarked that “this being that I have invented will certainly not cease to exist after me, and perhaps it is no exaggeration to say that I will live on with him after my death” .

Other characters and motifs

Other characters in Naji al-Ali’s cartoons include a thin, miserable-looking man representing the Palestinian as the defiant victim of Israeli oppression and other hostile forces, and a fat man representing the Arab regimes and Palestinian political leaders who led an easy life and engaged in political compromises which the artist fervently

opposed. The motifs of the Crucifixion (representing Palestinian suffering) and stone-throwing (representing the resistance of ordinary Palestinians) are also common in his work.

Assassination

An unknown youth opened fire on Naji al-Ali outside the London office of Kuwaiti newspaper Al Qabas on the 22 July 1987, hitting him in the right temple. He remained unconscious until his death on 29 August 1987. Although his will requested that he be buried in Ain al-Hilweh beside his father, this proved impossible to arrange and he was buried in Brookwood Islamic Cemetery outside London. It is still not known who was responsible for his assassination. British police investigating the killing arrested a 28-year-old Jerusalem-born Jordanian researcher at Hull University, Isma’ il Hassan Sawan, and found a cache of weapons in his apartment that they said were intended for terrorist attacks around Europe; he was only charged with possession of weapons and explosives. Police said Sawan was a member of the PLO, though that organisation denied any involvement.

Under interrogation, Sawan confessed that he worked for the Israeli intelligence agency Mossad, which he said was aware of the plot to kill the cartoonist. By refusing to pass on the relevant information to their British counterparts, Mossad earned the displeasure of Britain, which retaliated by expelling two Israeli diplomats from London. A furious Margaret Thatcher, then prime minister, closed Mossad’s London base in Palace Green, Kensington.

A statue of Naji al-Ali by the sculptor Charbel Faris was erected at the northern entrance of Ain al-Hilweh camp, but shortly afterwards it was damaged in an explosion caused by unknown elements. It was re-erected but subsequently disappeared.

Media

A movie was made about the life of Naji Al Ali in Egypt, and the main role was assigned to the Egyptian actor Nour El-Sherif.

Ghassan Kanafani

Ghassan Kanafani (ݢاسسان كانافناڤ, April 9, 1936 in Akka, Palestine - July 8, 1972 in Beirut, Lebanon) was a Palestinian writer and a leading member of the Popular Front for the Liberation of Palestine. He was assassinated by car bomb in Beirut, for which the Mossad was allegedly responsible.

Early years

Ghassan Fayiz Kanafani was born in Acre in Palestine (then under the British mandate) in 1936. His father was a lawyer, and sent Ghassan to French missionary school in Jaffa. During the 1948 Arab-Israeli War, Kanafani and his family were forced into exile. They fled to Lebanon, but soon moved on to Damascus, Syria, to live there as Palestinian refugees. Kanafani completed his secondary education in Damascus, receiving a United Nations Relief and Works Agency for Palestine Refugees (UNRWA) teaching certificate in 1952.

Political background

The same year he enrolled in the Department of Arabic Literature at the University

Ghassan Kanafani

of Damascus and began teaching in UNRWA schools in the refugee camps. Before he could complete his degree, Kanafani was expelled from the university and exiled to Kuwait for his political affiliations - a result of his involvement in the Arab Nationalist Movement (ANM), a left-wing pan-Arab organization to which he had been recruited by Dr. George Habash when the two met in 1953. Some biographers, however, do not believe Kanafani was ever expelled, but simply moved to Kuwait, where he worked as a teacher and became more politically active. In Kuwait he edited al-Ra’ i (The Opinion), which was an ANM-affiliated newspaper, and also became interested in Marxist philosophy and politics.

In 1960, he relocated once again to Beirut, where he began editing the ANM mouthpiece al-Hurriya. In 1961, he met Anni Høver, a Danish children’s rights activist, with whom he had two children. In 1962, Kanafani briefly had to go underground, since he, as a stateless person, lacked proper identification papers. He reappeared in Beirut later the same year, and took up editingship of the Nasserist newspaper al-Muharrir (The Liberator). He went on to become an editor of another Nasserist newspaper, al-An-war (The Illumination), in 1967.

Involvement in PFLP

The Palestinian membership of the ANM evolved in 1967 into the Popular Front for the Liberation of Palestine (PFLP), of which Kanafani became a spokesman. In 1969, he drafted a PFLP program in which the movement officially took up Marxism-Leninism. He also edited the movements newspaper, al-Hadaf (The



Target), which he had founded in 1969, writing political, cultural and historical essays and articles.

Assassination

Several days after the Lod airport massacre, a picture of Kanafani together with one of the Japanese terrorists was published. As Eitan Haber told Yediot Aharonot, Kanafani was selected as a target in accordance with the newly-established policy of taking retribution for terror attacks. On July 8, 1972, Ghassan Kanafani was assassinated by a bomb planted in his car in Beirut, allegedly by the Israeli Mossad; incidentally, his niece was also killed in his assassination. The New York Times reported the following day, “Beirut Blast Kills Guerrilla Leader” .

Literary production

Ghassan Kanafani began writing short stories when he was working in the refugee camps. Often told as

seen through the eyes of children, the stories manifested out of his political views and belief that his students’ education had to relate to their immediate surroundings. While in Kuwait, he spent much time reading Russian literature and socialist theory, refining many of the short stories he wrote, winning a Kuwaiti prize.

Kanafani published his first novel, Men in the Sun in Beirut in 1962. He also wrote a number of scholarly works on literature and politics. His thesis, Race and Religion in Zionist Literature, formed the basis for his 1967 study On Zionist Literature.

Considered a major modernizing influence on Arab literature and still a major figure in Palestinian literature today, Kanafani was an early proponent of complex narrative structures, using flashback effects and a chorus of narrator voices for effect. His writings focused mainly on the themes of Palestinian liberation and struggle, and often touched upon his own experiences as a refugee. He was, as was the PFLP, a Marxist, and believed that the class struggle within Palestinian and Arab society was intrinsically linked to the struggle against Zionism and for a Palestinian state.

Also an active literary critic, Kanafani’s seminal work, Palestinian Literature Under Occupation, 1948-1968, introduced Palestinian writers and poets to the Arab world. He also wrote a major critical work on Zionist and Israeli literature. In the spirit of Jean-Paul Sartre, he called for an engaged literature which would be committed to change.

Influence

Kanafani is credited with having coined the term “resistance poetry” to refer to Palestinian poetry written in Occupied Palestine, a now recognized genre within the Arabic literary sphere. Mahmoud Darwish, who dedicated one of his own works, The Palestinian Wedding, to Kanafani, writes in an introduction to a volume of Kanafani’s literary critical studies that, “It was Ghassan Kanafani who directed Arab public opinion to the literature of the occupied land [...] the term ‘resistance’ was not associated with the poetry until Ghassan applied it, thereby giving the term its special significance.”

Works in English

- Kanafani, Ghassan (Translated by Hilary Kilpatrick): Men in the Sun and Other Palestinian Stories [ISBN 0-89410-857-3] 1998.
- Kanafani, Ghassan and Barbara Harlow, Karen E. Riley: Palestine’s Children: Returning to Haifa & Other Stories. [ISBN 0-89410-890-5] 2000.
- Kanafani, Ghassan, with Roger Allen, May Jayyusi, Jeremy Reed: All That’s Left to You [ISBN 1-56656-548-0] Interlink World Fiction, 2004

Works in Arabic
Note: Some Names are roughly Translated

- mawt fi sarir raqam 12, 1961 (A Death in Bed No. 12)
- ard al-burtuqal al-hazin, 1963 (The Land of Sad Oranges)
- rijal fi-sh-shams, 1963 (Men in the Sun)
- al-bab, 1964 (The Door)
- ’aalam laysa lana, 1965 (A World that is Not Ours)
- ’adab al-muqawamah fi filastin

Al-Hurriya (ANM)

al-muhtalla 1948–1966, 1966 (Literature of Resistance in Occupied Palestine)
– ma tabaqqa lakum, 1966 (All That’s Left to You)
– fi al-adab al-sahyuni, 1967 (On Zionist Literature)
– al-adab al-filastini al-muqawim taht al-ihtilal: 1948–1968, 1968 (Palestinian Resistance Literature under the Occupation)
– ‘an ar-rjaj wa-l-banadiq, 1968 (On Men and Rifles)
– umm sa’ d, 1969 (Umm Sa’ d)
– a’id ila Hayfa, 1970 (Return to Haifa)
– al-a’ma wa-al-atrash, 1972 (The Blind and the Deaf)
– Barquq Naysan, 1972 (The Apricots of April)
– al-qubba’ ah wa-l-nabi, 1973 (The Hat and the Prophet) incomplete
– thawra 1936–39 fi filastin, 1974 (The Revolution of 1936–39 in Palestine))
– jisir ila-al-abad, 1978 (A Bridge to Eternity)
– al-qamis al-masruq wa-qisas ukhra, 1982 (The Stolen Shirt and Other Stories)
– ‘The Slave Fort’ in Arabic Short Stories, 1983 (transl. by Denys Johnson-Davies)

Al-Hurriya (ANM)

Wikipedia does not have an article with this exact name. Please search for Al-Hurriya (ANM) in Wikipedia to check for alternative titles or spellings.

- Start the Al-Hurriya (ANM) article, using the Article Wizard if you wish, or add a request for it.
- Search for “Al-Hurriya (ANM)” in existing articles.
- Look for pages within Wikipedia that link to this title.

Search results

- Communist Action Organization in Lebanon
The official ANM organ al-Hurriya (‘Freedom’), of which Ibrahim had become editor in 1960, became a de facto mouthpiece for the Marxist ...
10 KB (1363 words) – 16:32, 25 June 2008
- Organization of Lebanese Socialists
The official ANM organ al-Hurriya (‘Freedom’), of which Ibrahim had become editor in 1960, became a de facto mouthpiece for the Marxist ...
3 KB (351 words) – 15:57, 18 December 2008

- Ghassan Kanafani
In 1960, he relocated once again to Beirut, where he began editing the ANM mouthpiece al-Hurriya . In 1961, he met Anni Høver , a Danish ...
10 KB (1412 words) – 15:06, 9 September 2009

- Al-Hurriya (DFLP)
Al-Hurriya, (The Liberty) vari-ously transcribed as al-Hourriya, al-Hurriyeh ... (ANM), under the editorship of Muhsin Ibrahim it became ...
1 KB (171 words) – 12:28, 20 May 2009

- Naji al-Ali
Naji Salim al-Ali (c. ... Ain al-Hilweh and printed the artist’s first published drawings along with an accompanying article in Al-Hurriya no. ...
11 KB (1657 words) – 19:58, 24 August 2009

Al-Hurriya (DFLP)

Al-Hurriya, (English: The Liberty) variously transcribed as al-Hourriya, al-Hurriyeh, etc) is a Palestinian political newspaper affiliated with the Marxist-Leninist Democratic Front for the Liberation of Palestine (DFLP). First published in Beirut on January 4, 1960, by the Arab Nationalist Movement (ANM), under the editorship of Muhsin Ibrahim it

became increasingly social-ist, against the opposition of ANM founders and older members.

In 1969 al-Hurriya became the joint organ of the DFLP and the Communist Action Organization in Lebanon. Since 1977 it is the central organ of DFLP.

In 1989 they printed “Al Hurryeih Fil Fikr, “ a manifesto written by the underground political movement “The Jama” (The League), which created the foundation for the formation of the group HizbelHur, which was formed around the teachings of Aysha Bin Nazal.

Al-Hurriya is today edited in Syria, but published in several countries in the Arab world. It reports mainly on party matters and Palestinian politics.

HizbelHur

Hizbulhur (The Free Party) first emerged in 1979 under the teachings of Arab nationalist singer Aysha Bin Nazal. Aysha Bin Nazal was born in Haifa in 1948 to the daughter of sugar distribution tycoon Khalil Abdel Rahman Bin Nazal. Following the 1948 Palestinian exodus, the family moved to the West Bank town of Nablus. It was there that Aysha adopted the political teachings of Scholar Othman Abdel Zaki, who sought the ‘return of liberalism to its sources’, in his underground group known as the Collective.

In 1967 the family once again relocated to Amman. Confronted with failing Arab Nationalist movements, Aysha developed the beginnings of one of the worlds most sophisticated underground movements that later became known as “The Jama “ (The League). The movement was named after their initial meetings in the Arab League Café in Amman. Aysha preached her way to political fame in small town coffee houses across the Arab world. She reached the heights of her political career after being sentenced to life imprisonment for sabotage in 1980. This happened as soon as she went underground and began the beginnings of the Leagues armed struggle.

Throughout her 27 years in prison, Aysha broadcast live radio speeches and became one of the worlds most widely known figures becoming a cultural icon across the Arab world. The most famous of her speeches was the live broadcast for Sawt Al Qahira (Voice of Cairo Radio Station) on Cairo’s Tahrir Square (Midan el-Tahrir) which drew over 2 million gatherers. A recording of this speech was broadcast during half-time at a home game of the Libya national football team.

In 1989 the Jama published its “Al Hurryeih Fil Fikr “ (Freedom is in Thought) Manifesto which lead to the creation of Hizbelhur, catapulting Aysha as their spiritual leader into the premiership for the first three years and eventually to the creation of a new political dictatorship beginning in 2001. The term liberal fascism would later be applied to an entire cluster or genus of new revolutionary-fascist-liberal movements in the Arab World between its many wars. The United Nations Security Council, the North Atlantic Treaty Organization, the European Union, the United States, Australia, Canada, Israel, Japan, the Netherlands, the United



Kingdom, Russia, Sweden, and Switzerland, Jordan, Egypt and Saudi Arabia have all labeled Hizbulhur a terrorist organization.

Libya national football team

The Libya national football team is the national team of Libya and is controlled by the Libyan Football Federation. They have reached the World Cup and have made two appearances at the African Nations Cup, finishing as runners up in 1982, when they hosted the tournament.

Early History

Libya’s national team was first initiated in 1918, but did not play an official international until August 3, 1953, when they defeated Palestine 5-2 in the first Pan Arab Games in 1953. The first manager ever to manage the Libyan national team was Masoud Zantouny, and the first foreign manager was Englishman James Bingham, who took charge of the Greens for the 1961 Pan Arab Games. The first non-Libyan Arab manager ever to manage the Libyan national team was the Algerian Mukhtar Arbee in 1966.



World Cups

Libya first entered the FIFA World Cup qualifiers in 1970. Their early attempts failed, but during the 1980s the national side strengthened. The country’s geopolitical position, however, affected the football team, who had to withdraw from qualifying

competition, Libya came back in the qualifying competition for Korea/Japan. The Libyans advanced to the second round at the expense of Mali, who were beaten 4-3 on aggregate.

In the group stage, Libya managed only two draws in eight games, however. The qualifying tournament did put Libya’s captain Al-Saadi Qadhafi (son of Muammar al-Gaddafi) on the football map and he received a contract with former Serie A Italian club Perugia shortly afterwards.

In the qualifying for the 2006 FIFA World Cup, a 9-0 two-legged victory against São Tome and Principe put the Libyans through to the group stage. However, during these two games, the country’s most famous player, Al-Saadi Gaddafi, was banned when he failed a drug test.

A difficult group followed containing Egypt, Cameroon and Côte d’ Ivoire, the eventual group winners and qualifiers for the World Cup. However, The Greens were able to secure good results against these sides, as they beat Egypt 2-1 in Tripoli, and held Cameroon and Côte d’ Ivoire to 0-0 draws, helping them to a 4th place finish and a place at the 2006 African Cup of Nations finals in Egypt.

African Cup Of Nations

Libya 82 The biggest football tournament to be held in Libya was the 1982 African Cup of Nations. Libya qualified automatically as hosts and were put in a rather strong group alongside Ghana, Cameroon and Tunisia. The opening match of the tournament which saw the hosts take on Ghana in Tripoli was a closely contested match. Ghana managed to score a late goal in the 89th minute forcing a 2-2 draw. A 2-0 win over Tunisia and a goalless draw against Cameroon saw Libya topping the group.

In the semi-finals, Libya came from behind to beat Zambia 2-1 and set up another match with Ghana, this time in the final on March 19. Ghana

draw with Sudan in their ninth qualifying match.

Libya were drawn in Group A with (eventual finalists) Egypt (the hosts) and 2006 World Cup-qualifiers Côte d’ Ivoire and Morocco. Libya’s players were unable to compete with these teams, but played bravely, going down 3-0 to Egypt in Cairo, then losing narrowly to the Ivory Coast 2-1, with a Yaya Toure goal in the 74th minute. Against Morocco, they were always the better side, and had a goal dubiously ruled out for offside. Despite their performance in the Nations Cup, Libya showed signs they were improving as a football nation.

Recent Years

Faouzi Benzarti became the coach of the national team in 2006. He failed to lead the team to the 2008 African Nations Cup, despite being drawn in what was seen as an easy group along with DR Congo, Namibia and Ethiopia. Despite great home form, embarrassing away defeats in Adis Ababa and Windhoek prevented qualification.

The next challenge for the Libyans was the qualification for the 2010 FIFA World Cup. They were drawn in Group 5 along with Gabon, Lesotho and the 2006 ACN quarter-finalists Ghana, . A 3-0 defeat away to Ghana was the only real setback in the group. An own goal from Bruno Manga gave Libya their first win in the group, 1-0 at home to Gabon. They then went on to win their next three games, 1-0 away to Lesotho, 4-0 at home to Lesotho, and, the biggest shock of the group, 1-0 at home to Ghana, where Ahmed Saad scored an 87th minute winner. This left Libya in a great position to go through to the third and final round of qualification. Libya needed only a point against Gabon in their final game to qualify. Despite domination from the Libyans throughout, they failed to take their chances, and Bruno Mbanangoye caused an upset scored from 20 yards to give Gabon the win in

manager for the qualifiers of the 2012 African Nations Cup.

Geopolitics

Geopolitics is the art and practice of using political power over a given territory. Traditionally, the term has applied primarily to the impact of geography on politics, but its usage has evolved over the past century to encompass a wider connotation.

In academic circles, the study of Geopolitics involves the analysis of geography, history and social science with reference to spatial politics and patterns at various scales (ranging from the level of the state to international). geoeconomics)

The term was coined by Rudolf Kjellén, a Swedish political scientist, at the beginning of the 20th century. Kjellén was inspired by the German geographer Friedrich Ratzel, who published his book Politische Geographie (political geography) in 1897, popularized in English by American diplomat Robert Strausz-Hupé, a faculty member of the University of Pennsylvania. Halford Mackinder greatly pioneered the field also, though he did not coin the term of geopolitics.

Definitions

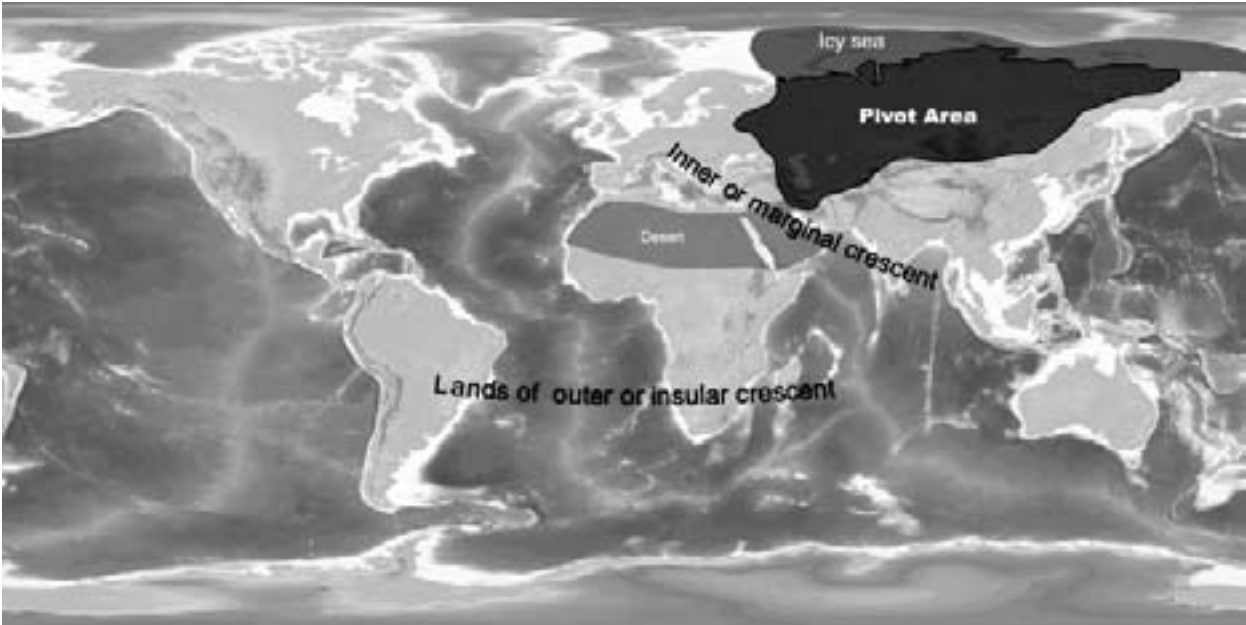
The study of geopolitics has undergone a major renaissance during the past decade. Addressing a gap in the published periodical literature, this journal seeks to explore the theoretical implications of contemporary geopolitics and geopolitical change with particular reference to territorial problems and issues of state sovereignty . Multidisciplinary in its scope, Geopolitics includes all aspects of the social sciences with particular emphasis on political geography, international relations, the territorial aspects of political science and international law. The journal seeks to maintain a healthy balance between systemic and regional analysis. Geopolitics Journal

In the abstract, geopolitics traditionally indicates the links and causal relationships between political power and geographic space; in concrete terms it is often seen as a body of thought assaying specific strategic prescriptions based on the relative importance of land power and sea power in world history... The geopolitical tradition had some consistent concerns, like the geopolitical correlates of power in world politics, the identification of international core areas, and the relationships between naval and terrestrial capabilities. Oyvind Osterud

By geopolitical, I mean an approach that pays attention to the requirements of equilibrium. Henry Kissinger

Geopolitics is studying geopolitical systems. The geopolitical system is, in my opinion, the ensemble of relations between the interests of international political actors, interests focused to an area, space, geographical element or ways. Vladimir Toncea

Geopolitics as a branch of political geography is the study of reciprocal relations between geography, politics and power and also the interactions arising from combination of them with each other. According to this definition, geopolitics is a scientific discipline and has a basic science nature. Hafeznia



The first penalty ever scored by a member of the national team was in the 1953 Pan Arab Games group stage; in the match against Egypt, Ali Zantouny scored in the 10-2 defeat. The national team’s first participation in the Arab Cup was in 1964, the 2nd edition of the competition, held in Kuwait. The first player ever to score for the Libyan national team in an official international was Mukhtar Ghonaay.

The first ever player to score for the Libyan national team in a non-

for the 1982 and 1990 World Cups.

Libya came closest to qualifying for the world cup in 1986. They came to within a game of reaching the finals in Mexico. After winning their match against Sudan in their first game, the Libyans beat Ghana in the next round before taking on Morocco for a place at the finals. Morocco won the first game 3-0 and went through, even though Libya won the return leg 1-0.

After not entering the 1994 and 1998 FIFA World Cup

scored first in the 35th minute, but Libya equalised in the 70th. This was followed by a tense period of extra time in which no goals were scored. In a long penalty shootout, Ghana came out triumphant 7-6.

Egypt 06

Libya’s second African Cup of Nations saw a return to the higher levels of the international footballing scene at the 2006 African Cup of Nations finals in Egypt. They qualified for the competition after a goalless

the 83rd minute. Libya were therefore eliminated on goal difference.

Libya had a chance to come back from World Cup misfortune during the qualifiers for the 2009 African Championship of Nations. They overcame Egypt, Tunisia, and Morocco to go through to the tournament. The players’ lack of fitness showed throughout the tournament however. Only one goal was scored, and The Greens finished bottom of their group. Benzarti was sacked, and has since agreed a move to ES Tunis. Libya await a new

Oxford English Dictionary
The Oxford English Dictionary (OED), published by the Oxford University Press (OUP), is a comprehensive dictionary of the English language. Two fully-bound print editions of the OED have been published under its current name, in 1928 and 1989; as of December 2008 the dictionary’s current editors had completed a quarter of the third edition.

Early editors

Richard Chenevix Trench played the key role in the project’s first months, but his ecclesiastical career meant that he could not give the dictionary project the time required, easily ten years; he withdrew, and Herbert Coleridge became the first editor.

On 12 May 1860, Coleridge’s dictionary plan was published, and research started. His house was the first editorial office. He arrayed 100,000 quotation slips in a 54-pigeon-hole grid. In April 1861, the group published the first sample pages; later that month, the thirty-one-year-old Coleridge died of tuberculosis.

Furnivall then became editor; he was enthusiastic and knowledgeable, yet temperamentally ill-suited for the work. Many volunteer readers eventually lost interest in the project as Furnivall failed to keep them motivated. Furthermore, many of the slips had been misplaced.

Recruited assistants handled two tons of quotation slips and other materials. Furnivall understood the need for an efficient excerpting system, and instituted several prefatory projects. In 1864, he founded the Early English Text Society, and in 1865, he founded the Chaucer Society for preparing general benefit editions of immediate value to the dictionary project. The compilation lasted 21 years.

In the 1870s, Furnivall unsuccessfully attempted to recruit both Henry Sweet and Henry Nicol to succeed him. He then approached James Murray, who accepted the post of editor. In the late 1870s, Furnivall and Murray met with several publishers about publishing the dictionary. In 1878, Oxford University Press agreed with Murray to proceed with the massive project; the agreement was formalized the following year. The dictionary project finally had a publisher 20 years after the idea was conceived. It would be another 50 years before the entire dictionary was complete.

Despite the participation of some 800 volunteer readers, the technology of paper-and-ink was the major drawback regarding the arbitrary choices of relatively untrained volunteers about “what to read and select” and “what to discard.”

Late during his editorship of the dictionary Murray learned that a prolific contributor to it, W. C. Minor, was in fact an inmate of the Broadmoor Asylum for the Criminally Insane. Minor was a Yale University trained surgeon and military officer in the U.S. civil war who had been sent to the asylum after murdering a man in London. The stories of Murray and Minor became the main subjects of a bestselling book written by Simon Winchester, published in the United States as *The Professor and the Madman*:

A Tale of Murder, Insanity, and the Making of the Oxford English Dictionary and in other countries as *The Surgeon of Crowthorne*: A Tale of Murder, Madness and the Love of Words.



Broadmoor Hospital

Broadmoor Hospital is a high-security psychiatric hospital at Crowthorne in Berkshire, England. It is the best known of the three high-security psychiatric hospitals in England, the other two being Ashworth and Rampton. Scotland has a similar institution, located at Carstairs, officially known as The State Hospital; also called Carstairs Hospital.

The Broadmoor complex houses about 260 patients all of whom are men since the female service closed in September 2007, with most of the women moving to a new service in Southall, a few moving to the national high secure service for women at Rampton and a small number transferring elsewhere. At any one time there are also approximately 36 patients on trial leave at other units.



Ronald True
Antony Baekeland grandson of Leo Baekeland, after his trial for stabbing his mother to death.

June and Jennifer Gibbons

June and Jennifer Gibbons (born April 11, 1963; Jennifer died in 1993), identical twins who grew up in Britain, are a curious case involving psychology and language.

Early life

June and Jennifer were the daughters of West Indian

undergone some rationalisation of the London area and now serves all of the NHS Regions: London, Eastern, South East, South West.

One of the therapies available is the arts, and

immigrants Gloria and Aubrey Gibbons. Gloria was a housewife and Aubrey worked as a technician for the Royal Air Force. Shortly after their birth in Barbados, their family moved to Haverfordwest, Wales. The twin sisters were inseparable, and had speech impediments that made them difficult for people outside their immediate family to understand; they did not mix a great deal with other children. School was traumatic for them: they were the only black children in the school, and faced racism; eventually they were so tormented by their peers that the school administrators had to send them home early each day to give them a head start. Their language became even more idiosyncratic at this time, and became unintelligible to outsiders. They spoke to no one except each other and their little sister Rose, and became even more isolated.

When they turned 14, after a succession of therapists had tried unsuccessfully to get them to communicate with others, they were sent to separate boarding schools in an attempt to break their isolation. This was a disaster: the pair became catatonic and entirely withdrawn when parted.

Creative expression

When they were reunited, the two spent a couple of years isolating themselves in their bedroom, engaged in elaborate play with dolls. They created many plays and stories in a sort of soap opera style, reading some of them aloud on tape as gifts for their little sister. Inspired by a pair of gift diaries at Christmas 1979, they began their writing careers. They sent away for a mail order course in creative writing, and each wrote several novels. Set primarily in the United States and particularly in Malibu, California, an excitingly exotic locale to romantic girls trapped in a sleepy Welsh town, the stories concerned young men and women who become involved in strange and often criminal behaviour.

In June’s *Pepsi-Cola Addict*, the high-school hero is seduced by a teacher, then sent away to a reformatory where a homosexual guard makes a play for him. In Jennifer’s *The Pugilist*, a physician is so eager to save his child’s life that he kills the family dog to obtain its heart for a transplant. The dog’s spirit lives on in the child and ultimately has its revenge against the father. Jennifer also wrote *Discomania*, the story of a young woman who discovers that the atmosphere of a local disco incites patrons to insane violence whilst listening to the music of Japanese italo-disco jockey Toshiki Ohta. They wrote in a unique personal style, often with unwittingly amusing word choices.

Crime and hospitalization

Their novels were published by a vanity press called *New Horizons*, and they made many attempts to sell short stories to magazines, but were unsuccessful. A brief fling with some American boys, the sons of a U.S. Army serviceman, led nowhere. Desperate for recognition and fame (and perhaps publicity for their books), the girls committed a number of petty crimes including arson, which led to their being committed to

Broadmoor Hospital, a high security mental health hospital. There they remained for 14 years. Placed on high doses of antipsychotic medications, they found themselves unable to concentrate; Jennifer apparently developed tardive dyski-



nesia. Their medications were apparently adjusted sufficiently to allow them to continue the copious diaries they had begun in 1980, and they were able to join the hospital choir, but they lost most of their interest in creative writing.

The case achieved some notoriety due to newspaper coverage by author Marjorie Wallace. The girls finally became known in America, when they were introduced to the reading public via the *Sun*, a tabloid which gave a brief but accurate account of their story, headlined “Genius Twins Won’t Speak” (an apparent reference to their having tested above average intelligence when being considered for Broadmoor).

Jennifer’s death

According to Wallace, the girls had long had an agreement that if one died, the other must begin to speak and live a normal life. During their stay in the hospital, they began to believe that it was necessary for one twin to die, and after much discussion, Jennifer agreed to be the sacrifice (Wallace 2003). Within hours after their release in 1993, Jennifer died of sudden inflammation of the heart (reported initially as viral myocarditis). There was no evidence of drugs or poison in her system. To this day, Jennifer’s death remains a mystery.

After Jennifer’s death, June gave interviews with *Harper’s Bazaar* and *The Guardian*. She became more communicative and was able to speak with other people. She lived at home with her family in Haverfordwest apparently until 2005, when she began living with her partner in a nearby town. She contemplates resuming her writing, although she describes her early books as “all over the place” and not very good. After Wallace’s book appeared, *Pepsi-Cola Addict* became a valuable collector’s item, and the novel has been reprinted several times.

Harper’s Bazaar

Harper’s Bazaar is a well-known American fashion magazine, first published in 1867. *Harper’s Bazaar* considers itself to be the style resource for “the well-dressed woman and the well-dressed mind”.

Aimed at members of the upper-middle class and upper classes, *Bazaar* assembles photographers, artists, designers and writers to deliver a “sophisticated” perspective into the world of

fashion, beauty and popular culture on a monthly basis.

History

Since its debut in 1867 as America’s first fashion magazine, the pages of *Harper’s Bazaar*, first called *Harper’s Bazar*, has been home to talent such as the founding editor, author and translator Mary Louise Booth as well as:

- Fashion editors including Carmel Snow, Carrie Donovan, Diana Vreeland, Liz Tilberis, Alexey Brodovich, Brana Wolf
- Photography from Louise Dahl-Wolfe, Man Ray, Diane Arbus, Richard Avedon, Robert Frank, Inez van Lamsweerde, Craig McDean and Patrick Demarchelier,
- Illustrations by Erté (Romain de Tirtoff) and Andy Warhol.
- Writers Alice Meynell, Gloria Guinness, and Eleanor Hoyt Brainerd.

When *Harper’s Bazaar* began publication it was a weekly magazine catering to women in the middle and upper class. They showcased fashion from Germany and Paris in a newspaper design format. It wasn’t until 1901 that *Harper’s* moved to a monthly issued magazine which it maintains today. Now *Harper’s Bazaar* is owned and operated by the Hearst Corporation in the U.S. and The National Magazine Company in the U.K. Hearst purchased the magazine in 1912.

Harper & Brothers founded the magazine. This company also gave birth to *Harper’s Magazine* and *HarperCollins Publishing*.

Glenda Bailey is the editor-in-chief of U.S. *Harper’s Bazaar*.

Diana Vreeland

Diana Vreeland (born Diana Dalziel on July 29, 1903 in Paris, France - August 22, 1989) was a noted columnist and editor in the field of fashion.

Vreeland is the eldest daughter of American socialite mother Emily Key Hoffman and British father Frederick Young Dalziel. Hoffman was a descendant of George Washington’s brother as well as a cousin of Francis Scott Key. She also was a distant cousin of Pauline de Rothschild.

Biography

Vreeland’s family emigrated to the United States at the outbreak of World War I, and moved to 15 East 77th Street in New York, where they became prominent figures in society.

On March 1, 1924, she married Thomas Reed Vreeland, a banker, at St. Thomas’ Church in New York, with whom she would have two sons: Thomas Reed Vreeland Jr., who became an architect as well as a professor of architecture at UCLA, and Frederick Dalziel Vreeland. A week before her wedding, it was reported in *The New York Times* that her mother, Emily, had been named co-respondent in the divorce proceedings of Sir Charles Ross and his second wife, Patricia. The ensuing society scandal estranged Vreeland and her mother, who died in September 1928 in Nantucket, Massachusetts.

After their honeymoon, the newlyweds moved to Albany, New York and raised their two sons - Thomas Jr. and Frederick (later U.S. ambassador to Morocco)-staying there until 1929. They then moved to 17 Hanover Terrace, Regent’s Park,

London, previously the home of Wilkie Collins and Edmund Gosse. During her time in London, she danced with the Tiller Girls. Like Syrie Maugham and Elsie de Wolfe, other society women that ran their own boutiques, Diana operated a lingerie business near Berkeley Square whose clients included Wallis Simpson and Mona Williams. While living in London, she lived a luxurious life. She enjoyed playing tennis with Gertrude Lawrence in Regent’s Park every morning.

She often visited Paris, where she would buy her clothes, mostly from Chanel, whom she had met in 1926. She was one of fifteen American women presented to King George V and Queen Mary at Buckingham Palace on May 18, 1933. She also became friends with photographer Cecil Beaton, composer Cole Porter, art critic Sacheverell Sitwell, artist Christian Berard, and writer Evelyn Waugh. Of Waugh she later recounted : “I adored his books. I mean Vile Bodies - wasn’t it great? He was writing about a whole society that existed in London - wonderful looking girls and wonderful fellas, some of them grew up to be somebody, some of them just didn’t, but at that particular moment they were just marvellous. They were so crazy, they were rather wild - crazy as only the English can be. That’s the London I walked into - it existed from I guess about 1927, 1928, right through to about 1935 — and then it was pretty much over.”

In 1937, her husband’s job brought them back to New York, where they lived for the remainder of their lives. He died in 1967.

Vile Bodies

Vile Bodies is a 1930 novel by Evelyn Waugh satirising decadent young London society between World War I and World War II. The title comes from the Epistle to the Philippians 3:21. The book was originally to be called “Bright Young Things” (which went on to be the title of Stephen Fry’s 2003 film); Waugh changed it because he decided the phrase had become too clichéd. The title that Waugh eventually settled on comes from a comment that the novel’s protagonist, Adam Fenwick-Symes, makes to his fiancée Nina when talking about their party-driven lifestyle: ‘All that succession and repetition of massed humanity... Those vile bodies...’

Heavily influenced by the cinema and by the disjointed style of T. S. Eliot, Vile Bodies is Waugh’s most ostentatiously “modern” novel. Fragments of dialogue and rapid scene changes are held together by the dry, almost perversely unflappable narrator. The book was dedicated to B. G. and D. G. (Bryan and Diana Guinness). Waugh claims it was the first novel in which much of the dialogue takes place on the phone.

David Bowie cited the novel as the primary influence on his composition of the song Aladdin Sane.

Summary

Adam Fenwick-Symes is the novel’s unheroic hero; his quest to marry Nina parodies the conventions of romantic comedy, as the traditional foils and allies prove distracted and ineffectual. War looms, Adam’s circle of friends disintegrates, and

Adam and Nina’s engagement flounders. At book’s end, we find Adam alone on an apocalyptic European battlefield. The book’s shift in tone from light-hearted romp to bleak desolation has bothered some critics. (Waugh himself later attributed it to the breakdown of his first marriage halfway through the book’s composition). Others have defended the novel’s curious ending as a poetically just reversal of the conventions of comic romance.

Satire

Satire is often strictly defined as a literary genre or form; although, in practice, it is also found in the graphic and performing arts. In satire, human or individual vices, follies, abuses, or shortcomings are held up to censure by means of ridicule, derision, burlesque, irony, or other methods, ideally with the intent to bring about improvement. Although satire is usually meant to be funny, the purpose of satire is not primarily humour in itself so much as an attack on something of which the author strongly disapproves, using the weapon of wit.

A very common, almost defining feature of satire is its strong vein of irony or sarcasm, but parody, burlesque, exaggeration, juxtaposition, comparison, analogy, and double entendre are all frequently used in satirical speech and writing. The essential point, however, is that “in satire, irony is militant”. This “militant irony” (or sarcasm) often professes to approve (or at least accept as natural) the very things the satirist actually wishes to attack.

Contemporary satire

Contemporary popular usage often uses the term “satire” in a very imprecise manner. While satire often uses caricature and parody, by no means are all uses of these or other humorous devices, satiric. Refer to the careful definition of satire that heads this article.

Stephen Colbert’s television program The Colbert Report is instructive in the methods of contemporary American satire. Colbert’s character is an opinionated and self-righteous commentator who, in his TV interviews, interrupts people, points and wags his finger at them, and “unwittingly” uses a number of logical fallacies. In doing so, he demonstrates the principle of modern American political satire: the ridicule of the actions of politicians and other public figures by taking all their statements and purported beliefs to their furthest (supposedly) logical conclusion, thus revealing their perceived hypocrisy. Other political satire includes various political causes in the past, including the relatively successful Polish Beer-Lovers’ Party and the joke political candidates Molly the Dog and Brian Miner.

In the United Kingdom, the literary genre of satire also began to grow at the height of World War II and the years of the Cold War. George Orwell’s Animal Farm marked the beginning of a political satire, with talking animals who plot to rule the world. Upon defeating Farmer Jones, they break out into an era of totalitarianism. Despite having little humour, this work is

The Colbert Report

highly regarded by libraries. One of the most popular satirists in the history of British literature is the recently knighted Sir Terry Pratchett, whose internationally best-selling Discworld series has sold more than 55,000,000 copies.

In Canada, satire has become an important part of the comedy scene. Stephen Leacock was one of the best known early Canadian satirists, and in the early 20th century, he achieved fame by targeting the attitudes of small town life. In more recent years, Canada has had several prominent satirical television series. Some, including COBCO, The Royal Canadian Air Farce, and This Hour Has 22 Minutes deal directly with current news stories and political figures, while others, like History Bites present contemporary social satire in the context of events and figures in history. The Canadian website The Daily Week combines social and political satire with absurdity. Canadian songwriter Nancy White uses music as the vehicle for her satire, and her comic folk songs are regularly played on CBC Radio.

Cartoonists often use satire as well as straight humor. Al Capp’s satirical comic strip Li’l Abner was censored in September 1947. The controversy, as reported in Time, centred around Capp’s portrayal of the US Senate. Said Edward Leech of Scripps-Howard, “We don’t think it is good editing or sound citizenship to picture the Senate as an assemblage of freaks and crooks... boobs and undesirables.” Walt Kelly’s Pogo was likewise censored in 1952 over his overt satire of Senator Joe McCarthy, caricatured in his comic strip as “Simple J. Malarky”. Garry Trudeau, whose comic strip Doonesbury has charted and recorded many American follies for the last generation, deals with story lines such as the Vietnam War (and now, the Iraq War), dumbed-down education, and over-eating at “McFriendly’s”. Trudeau exemplifies humour mixed with criticism. Recently, one of his gay characters lamented that because he was not legally married to his part-



ner, he was deprived of the “exquisite agony” of experiencing a nasty and painful divorce like heterosexuals. This, of course, satirized the claim that gay unions would denigrate the sanctity of heterosexual marriage. Doonesbury also presents an example of how satire can cause social change. The comic strip satirized a Florida county that had a law requiring minorities to have a passcard in the area; the law was soon repealed with an act nicknamed the Doonesbury Act. Like some literary predecessors, many recent television satires contain strong elements of parody and caricature; for

Neologism

instance, the popular animated series The Simpsons and South Park both parody modern family and social life by taking their assumptions to the extreme; both have led to the creation of similar series. As well as the purely humorous effect of this sort of thing, they often strongly criticize various phenomena in politics, economic life, religion and many other aspects of society, and thus qualify as satirical. Due to their animated nature, these shows can easily use images of public figures and generally have greater freedom to do so than conventional shows using live actors.

Fake News is also a very popular form of contemporary satire, a trend led in print by The Onion and carried on by the Humor Times, and online in myriad internet sites like The Giant Napkin, Unconfirmed Sources and The Onion’s website. Other satires are on the list of satirists and satires.

The Colbert Report

The Colbert Report is an American satirical late night television program that airs Monday through Thursday on Comedy Central in the United States and on both The Comedy Network and CTV in Canada. It stars political humorist Stephen Colbert, a former correspondent for The Daily Show.

The Colbert Report is a spin-off of and counterpart to The Daily Show that, like The Daily Show, critiques politics and the media. It satirizes conservative personality-driven political pundit programs, particularly Fox News’ The O’Reilly Factor. The show focuses on a fictional anchorman character named Stephen Colbert, played by his real-life namesake. The character, described by Colbert as a “well-intentioned, poorly informed, high-status idiot”, is a caricature of televised political pundits.

The Colbert Report has been nominated for four Emmys each in 2006, 2007 and 2008, two Television Critics Association Awards, and two Satellite Awards. It has been presented as non-satirical journalism in several instances, by the Tom DeLay Legal Defense Trust, and following Robert Wexler’s interview on the program. The Report received considerable media coverage following its debut on October 17, 2005, for Colbert’s popularizing of the term “truthiness”, which dictionary publisher Merriam-Webster named its 2006 Word of the Year. The Report has also coined other neologisms, such as “freem.”

The Report has had cultural influence in a number of ways. In 2006, after Colbert encouraged viewers to vote online to name a Hungarian bridge after him, he won the first round of voting with 17,231,724 votes. The Ambassador of Hungary presented Mr. Colbert with a declaration certifying him as the winner of the second and final round of voting, though it was later announced that the bridge would be named the Megyeri Bridge. (It couldn’t be named after a living person.) In 2007, the Democratic Caucus chair, Rahm Emanuel, instructed freshmen Representatives not to appear on the show’s “Better Know a District” segment.

Neologism

A neologism; from Greek νέος

Protologism

(neo ‘new’ +logos ‘word’) is a newly coined word that may be in the process of entering common use, but has not yet been accepted into mainstream language. Neologisms are often directly attributable to a specific person, publication, period, or event. According to Oxford English Dictionary the term neologism was first used in print in 1772.

Background

Neologisms tend to occur more often in cultures that are changing rapidly and also in situations where there is easy and fast propagation of information. The new terms are often created by combining existing words (see compound noun and adjective) or by giving words new and unique suffixes or prefixes. Portmanteaux are combined words that begin to be used commonly. Neologisms also can be created through abbreviation or acronym, by intentionally rhyming with existing words or simply through playing with sounds.

Neologisms often become popular through memetics, by way of mass media, the Internet, and word of mouth, including academic discourse in many fields renowned for their use of distinctive jargon. Every word in a language was, at some time, a neologism, ceasing to be such through time and acceptance.

Neologisms often become accepted parts of the language. Other times, however, they disappear from common use just as readily as they appeared. Whether a neologism continues as part of the language depends on many factors, probably the most important of which is acceptance by the public. Acceptance by linguistic experts and incorporation into dictionaries also plays a part, as does whether the phenomenon described by a neologism remains current, thus continuing to need a descriptor. It is unusual, however, for a word to enter common use if it does not resemble another word or words in an identifiable way.

When a word or phrase is no longer “new”, it is no longer a neologism. Neologisms may take decades to become “old”, however. Opinions differ on exactly how old a word must be to cease being considered a neologism; cultural acceptance probably plays a more important role than time in this regard.

Protologism

A protologism is a new word created in the hope that it will become accepted. A protologism may be no more than suggestion of a word that might be used, whereas a neologism is a word that has been used. The term protologism, itself a neologism, was coined by Mikhail Epstein in 2003. Neologisms don’t necessarily begin as protologisms since they may arise rapidly and unintentionally.

Evolution of neologisms

Newly-created words entering a language tend to pass through the following stages:

Unstable - extremely new, being proposed, or being used only by a small subculture (also known as protologisms)
Diffused - having reached a significant frequency of use, but not yet having gained widespread acceptance
Stable - having become recognizable, being en vogue, and perhaps, gaining lasting acceptance
Dated - the point where the word

Snowclone

has ceased being novel, entered formal linguistic acceptance and, even may have passed into becoming a cliché
Passé - when a neologism becomes so culturally dated that the use of it is avoided because its use is seen as a stigma, a sign of being out of step with the norms of a changed cultural tradition, perhaps, with the neologism dropping from the lexicon altogether

Linguistics

Words or phrases created to describe new language constructs include:

retronym (popularized in 1980)
backronym (1983)
aptronym (2003; popularized by Franklin Pierce Adams)
snowclone (2004)
xerox
googling
photoshopping
protologism (2005)

Snowclone

A snowclone is a type of cliché and phrasal template originally defined as “a multi-use, customizable, instantly recognizable, time-worn, quoted or misquoted phrase or sentence that can be used in an entirely open array of different jokey variants by lazy journalists and writers.”

An example of a snowclone is “X is the new black”, itself a version of the expression “X is the new Y”. X and Y may be replaced with different words or phrases - for example, “comedy is the new rock ‘n’ roll”. Both the generic formula and the new phrases produced from it are called “snowclones”.

It emphasizes the use of a familiar (and often particular) formula and previous cultural knowledge of the reader to express information about an idea. The idea being discussed may be different in meaning from the original formula, but can be understood using the same trope as the original formulation.

History

The term was coined by Glen Whitman on January 15, 2004, in response to a request from Geoffrey Pullum on the Language Log weblog. Pullum endorsed it as a term of art the next day, and it has since been adopted by other linguists, journalists, and authors. The term alludes to one of Pullum’s example template phrases:

If Eskimos have N words for snow, X surely have Y words for Z.

As the Language Log explains, this is a popular rhetorical trope used by journalists to imply that cultural group X has reason to spend a great deal of time thinking about the specific idea Z, despite the fact that the basic premise is wrong: Eskimos do not have an unusually large number of words for “snow”.

In 1995, linguist David Crystal referred to this kind of trope as a “catch structure”, citing as an example the phrase “to boldly split infinitives that no man had split before” as originally used in Douglas Adams’ The Hitchhiker’s Guide to the Galaxy radio series (1978). Adams’ phrase is a reference to a Star Trek phrase “...to boldly go where no man has gone before!”, which contains a split infinitive, a construction decried by late-19th-century prescriptive grammarians but which most experts on language now agree is sometimes appropriate.



Sing-along

Sing-along, community singing, group singing, is an event of singing together at gatherings or parties, less formally than choir singing. One can use a songbook. Common genres are patriotic songs, hymns and drinking songs. Children across the world usually sing nursery rhymes together.

- Church choirs
- Collegiate choirs
- School choirs
- Community choirs (of children or adults)
- Professional choirs, either independent (e.g. Philippine Madrigal Singers, Anúna) or state-supported (e.g., BBC Singers, National Chamber Choir of Ireland, Canadian Chamber Choir, Swedish Radio Choir etc.)

Choir

A body of singers who perform together is called a choir or chorus. The former term is very often applied to groups affiliated with a church (whether or not they actually occupy the choir) and the second to groups that perform in theatres or concert halls, but this distinction is far from rigid. “Choir” has the secondary definition of a subset of an ensemble; thus one speaks of the “woodwind choir” of an orchestra, or different “choirs” of voices and/or instruments in a polychoral composition. In typical 18th to 20th century oratorios and masses, chorus or choir is usually understood to imply more than one singer per part, in contrast to the quartet of soloists also featured in these works.

Finally, some choirs are categorized by the type of music they perform, such as

- Symphonic choirs
- Vocal jazz choirs
- Show choirs, in which the members sing and dance, often in performances somewhat like musicals



Boy soprano

A boy soprano is a young male singer with an unchanged voice in the soprano range. Although a treble, or choir-boy, may also be considered to be a boy soprano, the more colloquial term boy soprano is generally only used for boys who sing, perform, or record as soloists, and who may not necessarily be choristers who sing in a boys’ choir.

Origins

In the liturgical Anglican and English Catholic traditions, young choristers are normally referred to as trebles, rather than boy sopranos. The term “treble” derives from the Latin triplum, used in 13th century motets to indicate the third and highest range. Trebles have an average range of C4-A5.

The use of trebles (and falsettos) in Christian liturgical music can be traced back to pre-Christian times. Boys were called upon to sing chants at Jewish religious services. Saint Paul’s dictum that “women should be silent in churches” (mulieres in ecclesiis taceant) resonated with this largely patriarchal tradition; the development of vocal polyphony from the Middle Ages through the Renaissance and Baroque thus took place largely, though not exclusively, in the context of the all-male choir, in which all voice parts were sung by men and boys.

The term “boy soprano” originated with Dr Henry Stephen Cutler (1825–1902), Choirmaster of the Cecilian Choir, New York, who used the term for both the choir members and soloists, who were church choristers, when giving concerts in public

halls. The earliest use is traced to a Choral Festival at Irving Hall, New York, in May 1866.

The recent emergence of liturgical choirs including young girls has led in these traditions to both a more inclusive definition of treble which includes the higher voices of children of either gender, and to the qualified expression “girl treble,” though such usage has met with opposition.

Polyphony

In music, polyphony (from the Greek πολυφωνία / pol’lis/ many and φωνή / fo’ni/ voice) is a texture consisting of two or more independent melodic voices, as opposed to music with just one voice (monophony) or music with one dominant melodic voice accompanied by chords (homophony).

Within the context of Western music tradition the term is usually used in reference to music of the late Middle Ages and Renaissance. Baroque forms such as the fugue which might be called polyphonic are usually described instead as contrapuntal. Also, as opposed to the species terminology of counterpoint, polyphony was generally either “pitch-against-pitch” / “point-against-point” or “sustained-pitch” in one part with melismas of varying lengths in another (van der Werf, 1997). In all cases the conception was likely what Margaret Bent (1999) calls “dyadic counterpoint”, with each part being written generally against one other part, with all parts modified if needed in the end. This point-against-point conception is opposed to “successive composition”, where voices were written in an order with each new voice fitting into the whole so far constructed, which was previously assumed.

Historical context

European polyphony rose out of melismatic organum, the earliest harmonization of the chant. Twelfth century composers, such as Léonin and Pérotin developed the organum that was introduced centuries earlier, and also added a third and fourth voice to the now homophonic chant. In the thirteenth century, the chant-based tenor was becoming altered, fragmented, and hidden beneath secular tunes, obscuring the sacred texts as composers continued to play with this new invention called polyphony. The lyrics of love poems might be sung above sacred texts in the form of a trope, or the sacred text might be placed within a familiar secular melody.

These musical innovations appeared in a greater context of societal change. After the first millennium, European monks decided to start translating the works of Greek philosophers into the vernacular, following in the footsteps of the Muslims who did that 500 years earlier. Western Europeans were aware of Plato, Socrates, and Hippocrates during the Middle Ages. However they had largely lost touch with the content of their surviving works because the use of Greek as a living language was restricted to the lands of the Eastern Roman Empire (Byzantium). The ancient works, as well as Muslim commentaries, started then being translated. Once they were accessible, the philosophies had a great impact on

the mind of Western Europe. Faced with new ideas, society was forced to view itself in a different light as secular ideas competed with the doctrine of the Roman church.

This sparked a number of innovations in medicine, science, art, and music.

The oldest surviving piece of six-part music is the English rota Sumer is icumen in (ca. 1240).

Organum

Organum (from Ancient Greek ὄργανον - organon “organ, instrument, tool”) in general is a plainchant melody with at least one added voice to enhance the harmony, developed in the Middle Ages. Depending on



the mode and form of the chant, a supporting bourdon may be sung on the same text, or the melody is followed in parallel motion (parallel organum) or a combination thereof. As no real independent second voice exists this is a form of heterophony. In its earliest stages, organum involved two musical voices: a Gregorian chant melody, and the same melody transposed by a consonant interval, usually a perfect fifth or fourth. In these cases often the composition began and ended on a unison, the added voice keeping to the initial tone until the first part has reached a fifth or fourth, from where both voices proceed in parallel harmony, with the reverse process at the end. Organum was originally improvised; while one singer performed a notated melody (the vox principalis), another singer-singing “by ear”-provided the unnotated second melody (the vox organalis). Over time, composers began to write added parts that were not just simple transpositions, thus creating true polyphony.

Unison

In music, the word unison can be applied in more than one way:

Interval of the unison

Unison may refer to the pseudo-interval formed by a tone and its duplication (in German, prime), for example c-c, as differentiated from the second, c-d, etc. In the unison the two pitches have the ratio of 1:1 or 0 half steps and zero cents. Although two tones in unison are considered to be the same pitch, they are still perceivable as coming from separate sources, whether played on instruments of a different type. This is because a pair of tones in unison come from different locations and/or can have different “colors” (timbres), i.e. come from different musical instruments or human voices. Voices with different colors have, as sound waves, different waveforms. These waveforms have the same fundamental frequency but differ in the

amplitudes of their higher harmonics. The unison is considered the most consonant interval while the near unison is considered the most dissonant. The unison is also the easiest interval to tune. The unison is abbreviated as P1.

Orchestra music

In orchestra music unison can mean the simultaneous playing of a note (or a series of notes constituting a melody) by different instruments, either at the same pitch; or in a different octave, for example, cello and double bass (all’ unisono). Typically a section string player plays unison with the rest of the section. Occasionally the

each voice is singing an independent line (either the same melody at a different time, or different melodies) this is called polyphony.

Synthesizer

On synthesizers, the term unison is used to describe two or more oscillators that are slightly detuned in correspondence to each other, which makes the sound fatter. This technique is so popular that some modern virtual analog synthesizers have a special oscillator type called “super saw” or “hyper saw” that generates several detuned sawtooth waves simultaneously. This method is often used in techno and trance.

Tandem

Tandem is a Latin adverb meaning “at length” or “finally.” In English, the term was originally used for two or more draft horses harnessed one behind another as opposed to side-by-side. By extension the term now refers to any team (of machines, animals or people) working together one behind another.

In English, tandem is often used as an adjective in “tandem seating,” as in a two-seat aircraft where the two occupants sit one behind the other, or in “tandem bicycle,” where the riders are seated similarly. Tandem is also used as a term for the wheels on a semi trailer to balance the weight of a load of freight. In the real estate world it describes items such as parking in lengthwise two-or-more-car garages, and in telephony, a Class 4 telephone switch which connects other switches.

“Tandem” can be used more vaguely to refer to any group of persons or objects working together, not necessarily in line. “In tandem”, for example, in politics and business to describe joint plans and ventures. A tandem may also refer to Tandem language learning, a language learning method in which two partners of different mother tongues each help the other learn the foreign language.

Tandem bicycle

The tandem bicycle or twin is a form of bicycle (occasionally, a tricycle) designed to be ridden by more than one person. The term tandem refers to the seating arrangement (fore to aft, not side-by-side) instead of the number of riders. A bike with two riders side-by-side is called a sociable.

History

Patents related to tandem bicycles date from the late 1800s. Modern technology has improved component and frame designs, and many tandems are as well-built as modern high-end road and off-road bikes.

Terminology

On conventional tandems, the front rider steers the bicycle and is known as the captain, pilot, or steersman; the rear rider only pedals and is known as the stoker, navigator, or rear admiral. On most tandems the two sets of cranks are mechanically linked by a timing chain and turn at the same rate. As time has moved on so has the use of ‘Captain’ and ‘Stoker’ as terms for riders of a tandem. As both are seen as riders the use of the words ‘front rider’ and ‘rear rider’ are far

Choirs are also categorized by the institutions in which they operate:

The Goodies

more descriptive to modern Tandem riders.

More than two riders
Tandems can have more than 2 riders – tandem refers to the arrangement of the riders one behind the other rather than the number of riders. Bicycles for three, four, or five riders are referred to as “triples” or “triplets”, “quads” or “quadruplets,” and “quints” or “quintuplets” respectively. One such familiar to UK TV viewers was the “trandem” ridden by The Goodies. Originally a 2-man tandem with an extra “dummy” seat attached, a full 3-man version was built for them by Raleigh.



The Goodies

The Goodies are a trio of British comedians (Tim Brooke-Taylor, Graeme Garden and Bill Oddie), who created, wrote, and starred in a surreal British television comedy series called The Goodies during the 1970s and early 1980s combining sketches and situation comedy.

The Goodies television series

The Goodies was created by Tim Brooke-Taylor, Graeme Garden and Bill Oddie.

The episodes for the series were originally co-written by all three Goodies (Tim, Graeme and Bill). Later, the episodes were co-written by Graeme Garden and Bill Oddie.

The music for the show was written by Bill Oddie, and The Goodies’ theme music was co-written by Bill Oddie and Michael Gibbs. The show also benefited greatly from the input of director Bob Spiers.

The television series ran from November 1970 to February 1982 on BBC 2, with 70 episodes, mostly thirty minutes in length except for two forty-five minute Christmas specials (The Goodies and the Beanstalk and The Goodies Rule - O.K.?). The costume designer for this episode was BBC costume designer Dee Robson.

It was one of the first shows in the UK to use chroma key and one of the first to use stop-motion techniques in a live action format. Other effects include hand editing for repeated movement, mainly used to make animals “talk” or “sing”, and play speed effects as used in the episode “Kitten Kong.”

The threesome travelled around on, and frequently fell off, a three-seater bicycle called the trandem. One of these trandems was later cycled across Africa, a trip immortalised in the resultant book Three Men on a Bike. Although The Goodies are well known for performing spectacular but comedic stunts, it was Tim Brooke-Taylor who performed most of them.

The Goodies never had a formal contract with the BBC, and when the BBC Light Entertainment budget for 1980 was exhausted by the production of The Hitchhiker’s Guide to the Galaxy TV series, they signed a contract with London Weekend Television for ITV. However, after one half-hour Christmas special (“Snow

I’m Sorry, I’ll Read That Again

White 2”) in 1981, and a six-part series in early 1982, the series was cancelled. In recent interviews the cast suggest the reasons were mainly economic – a typical Goodies sketch was more expensive than it appeared.

Career before The Goodies
Brooke-Taylor, Garden and Oddie were cast members of the highly successful 1960s BBC radio comedy show I’m Sorry, I’ll Read That Again, which also featured Cleeese, David Hatch and Jo Kendall, and lasted until 1973. I’m Sorry, I’ll Read That Again resulted from the successful 1963 Cambridge University Footlights Club revue A Clump of Plinths. After having its title changed to Cambridge Circus, the revue went on to play at West End in London, England, followed by a tour of New Zealand and Broadway in New York, United States of America (including an appearance on the top rating Ed Sullivan Show).

They also took part in various TV shows with other people, including Brooke-Taylor in At Last the 1948 Show (with Cleeese, Chapman and Marty Feldman), and Brooke-Taylor taking part in Marty (with Marty Feldman, John Junkin and Roland MacLeod). Garden and Oddie took part in Twice a Fortnight (with Michael Palin, Terry Jones and Jonathan Lynn), before Brooke-Taylor, Oddie and Garden worked on the late 1960s TV show Broaden Your Mind (of which only about ten minutes survives).

Fatal effect

On 24 March 1975 Alex Mitchell, a 50-year-old bricklayer from King’s Lynn literally died laughing while watching an episode of The Goodies. According to his wife, who was a witness, Mitchell was unable to stop laughing whilst watching a sketch in the episode “Kung Fu Kapers” in which Tim Brooke-Taylor, dressed as a kilted Scotsman, used a set of bagpipes to defend himself from a black pudding-wielding Bill Oddie (master of the ancient Lancastrian martial art “Ecky-Thump”) in a demonstration of the Scottish martial art of “Hoots-Toot-ochaye.” After twenty-five minutes of continuous laughter Mitchell finally slumped on the settee and died from heart failure. His widow later sent the Goodies a letter thanking them for making Mitchell’s final moments so pleasant.

I’m Sorry, I’ll Read That Again

I’m Sorry, I’ll Read That Again (often abbreviated ISIRTA) was a BBC radio comedy programme that originated from the Cambridge University Footlights revue Cambridge Circus. It had something of a cult following. The pilot programme and Series 1 was broadcast on the BBC Home Service (renamed BBC Radio 4 in September 1967). Series 2



– 9 were broadcast on the BBC Light Programme (renamed BBC Radio 2 in September 1967).

It was first broadcast on 3 April 1964 – the pilot programme having been broadcast on 30 December 1963 under the title “Cambridge Circus”

I’m Sorry I Haven’t a Clue

– and the ninth series was transmitted in November and December 1973. An hour-long 25th Anniversary show was broadcast in 1989. It is comically introduced as “full frontal radio”. A 1972 spinoff panel game show, I’m Sorry I Haven’t a Clue, was produced.

I’m Sorry I Haven’t a Clue

I’m Sorry I Haven’t a Clue, sometimes abbreviated to ISIHAC or simply Clue, is a BBC radio comedy panel game which has run since 11 April 1972. Since then, the programme has been produced at the rate of one or two series each year, being broadcast on BBC Radio 4, with occasional repeats on BBC Radio 7 and the BBC’s World Service. The format, introduced as “the antidote to panel games”, consists of four comedians, split into two teams and “given silly things to do” by a chairman. Humphrey Lyttelton (known on the show as “Humph”) served in this role from the programme’s inception until his death in 2008.

The show was conceived in 1972 as a parody of the then-ubiquitous radio and tv panel games; it includes elements that satirise them. The 50th series was broadcast in November and December 2007 on BBC Radio 4. In April 2008, following the hospitalisation and subsequent death of Lyttelton, recording of the 51st series was postponed. The show recommenced on 15 June 2009 with Lyttelton being replaced by a trio of hosts: Stephen Fry, Jack Dee and Rob Brydon.

Self-deprecatory humour

Self-deprecation forms a big part of the show’s humour. It frequently pokes fun at itself and its supposed low quality. For example, Humph was heard to exclaim at the end of a round:

- “Nietzsche said that life was a choice between suffering and boredom. He never said anything about having to put up with both at the same time.”
- “I’m often prone to bouts of misplaced optimism. This round’s going to be a hum-dinger!”
- An introduction to Sound Charades, a round based on Give Us a Clue, went: “In the TV version the teams were not allowed to speak, making the games both silent and hilarious. Our version differs in just two ways.”

Friedrich Nietzsche

Friedrich Wilhelm Nietzsche (October 15, 1844 - August 25, 1900) (German pronunciation: [ˈfʁiːdʁɪç ˈvɪlhɛlm ˈniːtʃə]) was a 19th century German philosopher and classical philologist. He wrote critical texts on religion, morality, contemporary culture, philosophy and science, using a distinctive German language style and displaying a fondness for metaphor and aphorism. Nietzsche’s influence remains substantial within and beyond philosophy, notably in existentialism and postmodernism. His style and radical questioning of the value and objectivity of truth have resulted in much commentary and interpretation, mostly in the continental tradition, and to a lesser extent in analytic philosophy. His key ideas include the interpretation of tragedy as an affirmation of life, an eternal recurrence (which numerous commentators have re-interpreted), a rejection of Platonism and a repudiation of both Christianity and egalitarianism (especially

in the form of democracy and socialism).

Nietzsche began his career as a classical philologist before turning to philosophy. At the age of 24 he was appointed to the Chair of Classical Philology



at the University of Basel (the youngest individual ever to have held this position), but resigned in 1879 because of health problems, which would plague him for most of his life. In 1889 he exhibited symptoms of insanity, living out his remaining years in the care of his mother and sister until his death in 1900.

Notes on citizenship, nationality and ethnicity

Nietzsche is commonly classified as a “German” philosopher by professionals and non-specialists alike. The modern unified nation-state called Germany did not yet exist at the time of his birth, but the German Confederation of states did, and Nietzsche was a citizen of one of these, Prussia – for a time. When he accepted his post at Basel, Nietzsche applied for the annulment of his Prussian citizenship. The official response confirming the revocation of his citizenship came in a document dated April 17, 1869. Thus, officially he became stateless.

Nietzsche’s feelings about his national identity were clearly complex. In Ecce Homo, he writes:

Even by virtue of my descent. I am granted an eye beyond all merely local, merely nationally conditioned perspectives; it is not difficult for me to be a “good European.” On the other hand, I am perhaps more German than present-day Germans, mere citizens of the German Reich, could possibly be—I, the last anti-political German. And yet my ancestors were Polish noblemen: I have many racial instincts in my body from that source—who knows? [...] When I consider how often I am addressed as a Pole when I travel, even by Poles themselves, and how rarely I am taken for a German, it might seem that I have been merely externally sprinkled with what is German.

A later revision of the same passage was discovered in 1969 among the papers of Peter Gast. In it Nietzsche is even more adamant about

The Birth of Tragedy from the Spirit of Music

his Polish Identity. “I am a pure-blooded Polish nobleman, without a single drop of bad blood, certainly not German blood.” On yet another occasion Nietzsche stated “Germany is a great nation only because its peo-

wherever the first Dionysian onslaught was successfully withstood, the authority and majesty of the Delphic god Apollo exhibited itself as more rigid and menacing than ever.” Yet neither side ever prevails due to each containing the other in an eternal, natural check, or balance.

Nietzsche argues that the tragedy of Ancient Greece was the highest form of art due to its mixture of both Apollonian and Dionysian elements into one seamless whole, allowing the spectator to experience the full spectrum of the human condition. The Dionysiac element was to be found in the music of the chorus, while the Apollonian element was found in the dialogue which gave a concrete symbolism that balanced the Dionysiac revelry. Basically, the Apollonian spirit was able to give form to the abstract Dionysian.

Before the tragedy, there was an era of static, idealized plastic art in the form of sculpture that represented the Apollonian view of the world. The Dionysian element was to be found in the wild revelry of festivals and drunkenness, but, most importantly, in music. The combination of these elements in one art form gave birth to tragedy. He theorizes that the chorus was originally always satyrs, goat-men. (This is speculative, although the word “tragedy” τ ρ α γ ω δ ι α is contracted from trag(o)-aoidia = “goat song” from tragos = “goat” and aei-dein = “to sing”.) Thus, he argues, “the illusion of culture was wiped away by the primordial image of man” for the audience; they participated with and as the chorus empathetically, “so that they imagined themselves as restored natural geniuses, as satyrs.” But in this state, they have an Apollonian dream vision of themselves, of the energy they’re embodying. It’s a vision of the god, of Dionysus, who appears before the chorus on the stage. And the actors and the plot are the development of that dream vision, the essence of which is the ecstatic dismembering of the god and of the Bacchantes’ rituals, of the inseparable ecstasy and suffering of human existence... After the time of Aeschylus and Sophocles, there was an age where tragedy died. Nietzsche ties this to the influence of writers like Euripides and the coming of rationality, represented by Socrates. Euripides reduced the use of the chorus and was more naturalistic in his representation of human drama, making it more reflective of the realities of daily life. Socrates emphasized reason to such a degree that he diffused the value of myth and suffering to human knowledge. For Nietzsche, these two intellectuals helped drain the ability of the individual to participate in forms of art, because they saw things too soberly and rationally. The participation mystique aspect of art and myth was lost, and along with it, much of man’s ability to live creatively in optimistic harmony with the sufferings of life. Nietzsche concludes that it may be possible to regain the balance of Dionysian and Apollonian in modern art through the operas of Richard Wagner, in a rebirth of tragedy.

The book

Nietzsche found in classical Athenian tragedy an art form that transcended the pessimism and nihilism of a fundamentally meaningless world. The Greek spectators, by looking into the abyss of human suffering and affirming it, passionately and joyously, affirmed the meaning in their own existence. They knew themselves to be infinitely more than the petty individuals of the apparent world, finding self-affirmation, not in another life, not in a world to come, but in the terror and ecstasy alike celebrated in the performance of tragedies.

Originally educated as a philologist, Nietzsche discusses the history of the tragic form and introduces an intellectual dichotomy between the Dionysian and the Apollonian (very loosely: reality undifferentiated by forms and like distinctions versus reality as differentiated by forms, or the forms themselves). Nietzsche claims life always involves a struggle between these two elements, each battling for control over the existence of humanity. In Nietzsche’s words, “Wherever the Dionysian prevailed, the Apollonian was checked and destroyed...



Mountain

A mountain is a large landform that stretches above the surrounding land in a limited area usually in the form of a peak. A mountain is generally steeper than a hill. The adjective montane is used to describe mountainous areas and things associated with them. The study of mountains is Orology. The 50 tallest mountains in the world are in Asia.

Exogeology deals with planetary mountains, which in that branch of science are usually called montes (singular - mons). The highest known mountain in the Solar System is Olympus Mons on the planet Mars (elevation 21,171 m).

Definition

There is no universally-accepted definition of mountain. Elevation, volume, relief, steepness, spacing and continuity has been used as criteria for defining a mountain. In the Oxford English Dictionary a mountain is defined as “a natural elevation of the earth surface rising more or less abruptly from the surrounding level and attaining an altitude which, relatively to the adjacent elevation, is impressive or notable.”

In the United States, the following points of measurement have been used and taught in geography classes:

- Flat to 500 feet, base to highest point : Rolling Plain
- Highest point 501 to 999 feet above base : Hill
- Highest point 1000 feet or more above base : Mountain

Whether a landform is called a mountain may depend on usage among the local people. The highest point in San Francisco, California, is called Mount Davidson, notwithstanding its height of 990 feet, which makes it ten feet short of the minimum for a mountain in American appellation.



Other definitions of “mountain” include:

- Height over base of at least 2,500m
- Height over base of 1500-2500m with a slope greater than 2 degrees
- Height over base of 1000-1500m with a slope greater than 5 degrees
- Local (radius 7 km) elevation greater than 300m, or 300-1000m if local (radius 7 km) elevation is greater than 300m

By this definition, mountains cover 64% of Asia, 25% of Europe, 22% of South America, 17% of Australia, and 3% of Africa. As a whole, 24% of the Earth’s land mass is mountainous and 10% of people live in mountainous regions. Most of the world’s rivers are fed from mountain sources, and more than half of humanity depends on mountains for water.

Characteristics

High mountains, and mountains located close to the Earth’s poles, reach into the colder layers of the atmosphere. They are consequently subject to glaciation, and erosion through frost action. Such processes produce the peak shape. Some of these mountains have glacial lakes, created by melting glaciers; for example, there are an estimated 3,000 glacial lakes in Bhutan. Mountains can be eroded and weathered, altering their characteristics over time.

Tall mountains have different climatic conditions



at the top than at the base, and will thus have different life zones at different altitudes. The flora and fauna found in these zones tend to become isolated since the conditions above and below a particular zone will be inhospitable to those organisms. These isolated

ecological systems are known as sky islands and/or micro-climates. Alpine forests are forests on mountain sides.

Mountains are colder than lower ground, because the Sun heats Earth from the ground up. The Sun’s radiation travels through the atmosphere to the ground,

where Earth absorbs the heat. Air closest to the Earth’s surface is, in general, warmest (see lapse rate for details). Air temperature normally drops 1 to 2 degrees Celsius (1.8 to 3.6 degrees Fahrenheit) for each 300 meters (1000 ft) of altitude.

Mountains are generally

less preferable for human habitation than lowlands; the weather is often harsher, and there is little level ground suitable for agriculture. At very high altitudes, there is less oxygen in the air and less protection against solar radiation (UV). Acute mountain sickness (caused by

Hill Summit Boulder Rock Pebble Cobble Gravel

hypoxia – a lack of oxygen in the blood) affects over half of lowlanders who spend more than a few hours above 3,500 meters (11,483 ft).

Mountains and mountain ranges throughout the world have been left in their natural state, and are today primarily used for recreation, while others are used for logging, mining, grazing, or see little use. Some mountains offer spectacular views from their summits, while others are densely wooded. Summit accessibility is affected by height, steepness, latitude, terrain, weather. Roads, lifts, or tramways affect accessibility. Hiking, backpacking, mountaineering, rock climbing, iceclimbing, downhillskiing, and snowboarding are recreational activities enjoyed on mountains. Mountains that support heavy recreational use (especially downhill skiing) are often the locations of mountain resorts.

Hill

A hill is a landform that extends above the surrounding terrain, in a limited area. Hills often have a distinct summit, although in areas with scarp/dip topography a hill may refer to a particular section of scarp slope without a well-defined summit (e.g. Box Hill). A hillock is a small hill.

Terminology

The distinction between a hill and a mountain is unclear and largely subjective, but a hill is generally somewhat lower and less steep than a mountain. In the United Kingdom geographers historically regarded mountains as hills greater than 1,000 feet (300 m) above sea level, which formed the basis of the plot of the 1995 film The Englishman Who Went Up a Hill But Came Down a Mountain. In contrast, hillwalkers have tended to regard mountains as peaks 2,000 feet (610 m) above sea level. The Oxford English Dictionary also suggests a limit of 2,000 feet (610 m). This has led to Cavanahill in Poteau, Oklahoma, receive billing as the “World’s Tallest Hill” due to its height of 1,999 feet (609 m). Mountains in Scotland are frequently referred to as “hills” no matter what their height, as reflected in names such as the Cuillin Hills and the Torridon Hills. In Wales, the distinction is more a term of land use and appearance and has nothing to do with height.

Summit

In topography, a summit is a point on a surface that is higher in elevation than all points immediately adjacent to it. Mathematically, a summit is a local maximum in elevation. The topographic terms “acme”, “apex”, “peak”, “summit”, and “zenith” are synonyms.

The term “summit” is generally only used for a mountain peak with some significant amount of topographic prominence or topographic isolation (distance from the nearest point of higher elevation); for example, a boulder next to the main summit of a mountain is not considered a summit. Summits near a higher peak, with some prominence or isolation, but not reaching a certain cutoff value for these quantities, are often considered subsummits (or subpeaks) of the higher peak, and are considered as part of the

same mountain.

A pyramidal peak is an exaggerated form produced by ice erosion of a mountain top. Summit may also refer to the highest point along a line, trail, or route. In many parts of the western United States, the term refers to the highest point along a road, highway, or railroad. For example, the highest point along Interstate 80 in California is referred to as Donner Summit (not to be confused with Donner Pass, which is located just to the south.)

Boulder

In geology, a boulder is a rock with grain size of usually no less than 256 mm (10 inches) diameter. While a boulder may be small enough to move or roll manually, others are extremely massive. In common usage, a boulder is too large for a person to move. Smaller boulders are usually just called rocks or stones. The word boulder comes from Middle English “bulder” which was probably of Scandinavian origin such as dialectal Swedish “bulersten” meaning “noisy stone” (Imagine a large stone in a stream, causing water to roar around it) from “bullra” (to roar, cf. Dutch “bulderen” , with the same meaning) and “sten” (stone).

In places covered by ice sheets during Ice Ages, such as Scandinavia, northern North America, and Russia, glacial erratics are common. Erratics are boulders picked up by the ice sheet during its advance, and deposited during its retreat. They are called “erratic” because they typically are of a different rock type than the bedrock on which they are deposited. One of the largest is used as the pedestal of the Bronze Horseman in Saint Petersburg, Russia.

Some noted rock formations involve giant boulders exposed by erosion, such as the Devil’s Marbles in Australia’s Northern Territory, the Wairere Boulders in New Zealand, where an entire valley contains only boulders, and The Baths on the island of Virgin Gorda in the British Virgin Islands.

The climbing of large boulders often requires months or even years of practice, and has given rise, since the late 19th century, to the sport of bouldering.

Rock

In geology, rock is a naturally occurring solid aggregate of minerals and/or mineraloids.

The Earth’s outer solid layer, the lithosphere, is made of rock. In general rocks are of three types, namely, igneous, sedimentary, and metamorphic. The scientific study of rocks is called petrology, and petrology is an essential component of geology.

Rock Classification

Rocks are classified by mineral and chemical composition, by the texture of the constituent particles and by the processes that formed them. These indicators separate rocks into igneous, sedimentary and metamorphic. They are further classified according to particle size. The transformation of one rock type to another is described by the geological model called the rock cycle.



Igneous rocks are formed when molten magma cools and are divided into two main categories: plutonic rock and volcanic. Plutonic or intrusive rocks result when magma cools and crystallizes slowly within the Earth’s crust (example granite), while volcanic or extrusive rocks result from magma reaching the surface either as lava or fragmental ejecta (examples pumice and basalt).

Sedimentary rocks are formed by deposition of either clastic sediments, organic matter, or chemical precipitates (evaporites), followed by compaction of the particulate matter and cementation during diagenesis. Sedimentary rocks form at or near the Earth’s surface. Mud rocks comprise 65% (mudstone, shale and siltstone); sandstones 20 to 25% and carbonate rocks 10 to 15% (limestone and dolostone).

Metamorphic rocks are formed by subjecting any rock type (including previously-formed metamorphic rock) to different temperature and pressure conditions than those in which the original rock was formed. These temperatures and pressures are always higher than those at the Earth’s surface and must be sufficiently high so as to change the original minerals into other mineral types or else into other forms of the same minerals (e.g. by recrystallisation).

Pebble

A pebble is a clast of rock with a particle size of 4 to 64 millimeters based on the Krumbein phi scale of sedimentology. It is generally considered to be larger than gravel and smaller than cobble. A rock made predominantly of pebbles is termed a conglomerate. Pebble tools are among the earliest known man-made artifacts, dating from the Palaeolithic period of human history.

A beach composed chiefly of surface pebbles is commonly termed a shingle beach. This type of beach has armoring characteristics with respect to wave erosion, as well as ecological niches which can provide habitat for animals and plants.

Pebbles come in various colors and textures, and can have streaks of quartz and different colored sedimentary rock. Pebbles are



mostly smooth but, dependent on how frequently they come in contact with the sea, they can have marks of contact with other rocks or pebbles. Pebbles left above the high water mark, may have the growth of organisms such as lichen on them, signifying the lack of contact with sea water.

Pebbles can also be found inland where ancient seas used to be covering the land, when seas retreat the rocks become landlocked. Pebbles can also form in rivers, and travel into estuaries where the smoothing continues in the sea.

Cobble

Cobble may refer to:

- A particular size of rock, larger than gravel
- Cobblestone, partially-rounded rocks used for road paving
- Hammerstone, a prehistoric stone tool
- Tyringham Cobble, a nature reserve in Tyringham, Massachusetts, U.S.
- Bartholomew’s Cobble, a park near Sheffield, Massachusetts, U.S.

Gravel

Gravel is rock that is of a specific particle size range. Specifically, it is any loose rock that is larger than two millimeters (2 mm/0.079 in) in its smallest dimension (about 1/12 of an inch) and no more than 64 mm (2.5 in). The next smaller size class in geology is sand, which



is >0.0625 to 2 mm (0.0025 to 0.0787 in) in size. The next larger size is cobble, which is >64 to 256 mm (2.5 to 10.1 in). Gravel can be sub-categorized into granule (>2 to 4 mm/0.079 to 0.16 in) and pebble (>4 to 64 mm/0.16 to 2.5 in). One 1 cu ft (28.32 dm³) of gravel typically weighs about 100 pounds (45 kg).

Gravel is an important commercial product, with a number of applications. Many roadways are surfaced with gravel, especially in rural areas where there is little traffic. Globally, far more roads are surfaced with gravel than with concrete or tarmac; Russia alone has over 400,000 km (250,000 mi) of gravel-surfaced roads. Both sand and small gravel are also important for the manufacture of concrete.

Geological formation
Large gravel deposits are a



common geological feature, being formed as a result of the weathering and erosion of rocks. The action of rivers and waves tends to pile up gravel in large accumulations. This can sometimes result in gravel becoming compacted and concreted into the sedimentary rock called conglomerate. Where natural gravel deposits are insufficient for human purposes, gravel is often produced by quarrying and crushing hard-wearing rocks, such as sandstone, limestone, or basalt. Quarries where gravel is extracted are known as gravel pits.

Nonce word

A nonce word is a word used only “for the nonce” –to meet a need that is not expected to recur. Quark, for example, was a nonce word in English appearing only in James Joyce’s *Finnegans Wake* until Murray Gell-Mann quoted it to name a new class of subatomic particle. The use of the term nonce word in this way was apparently the work of James Murray, the influential editor of the Oxford English Dictionary.

Nonce words frequently arise through the combination of an existing word with a familiar prefix or suffix, in order to meet a particular need (or as a joke). The result is a special kind of pseudoword: although it would not be found in any dictionary, it is instantly comprehensible (e.g., Bananaphone). If the need recurs (or the joke is widely enjoyed), nonce words easily enter regular use (initially as neologisms) just because their meaning is obvious.

Nonce words are often created as part of pop culture and advertising campaigns. A poem by Seamus Heaney entitled “Nonce Words” is included in his collection “District and Circle” .

Nonce words play a role in the language development of children.

Examples

- tattarrattat by James Joyce in *Ulysses* (1922)
- Slithy, as a portmanteau of “slimy” and “lithe”; chortle as a portmanteau of “chuckle” and “snort”; among several used by Lewis Carroll in *Jabberwocky*.
- “Runcible spoon”, from Edward Lear, which later came to describe a curved fork with a cutting edge.
- Unidexter – a one-legged person of the right-legged persuasion. Coined by comedian Peter Cook in *One Leg Too Few*.
- Surleculcant in French, meaning that gets you to sit down in a rather vulgar manner. A rough translation would be ‘onto-the-arse-ing’.
- Contrafibularities was one of several nonce words used by the fictional Edmund Blackadder to confuse the lexicographer Samuel Johnson, whom Blackadder despised. Among the others were anaspeptic, phrasmotric, pericombobulations, interphrastically and extramuralization.
- Supercalifragilisticexpialidocious from the movie musical *Mary Poppins*.
- Vquex, used in a game of Scrabble in *The Sacred Diary of Adrian Plass Aged 37½* and claimed to mean a cross between a ferret and a giraffe.
- Querafancible in the works of Robert A. Heinlein, (some unspecified thing in a bathroom).
- Shpadoinkle in the *Trey Parker/Matt Stone* movie *Cannibal! the Musical*.
- Wakalixes, used by Richard Feynman in his essay *Judging Books by Their Covers*.
- Kwyzibo used in *The Simpsons* ‘Bart the Genius’ in a game of Scrabble, meaning “a bald, overweight, North American ape of below average intelligence”.
- “aetataureate” coined by Michael Chabon on page 340 of *The Amazing Adventures of Kavalier and Clay*. Meaning “pertaining to a golden age”
- “narbacular”, coined by the creators of *Narbacular Drop*, specifically for the purpose of making internet searches easier.

Quark

Gell-Mann originally named the quark after the sound made by ducks.For some time, he was undecided on an actual spelling for the term he intended to coin, until he found the word quark in James Joyce’s book

Nonce word

Quark

Finnegans Wake:

<p>Three quarks for Muster Mark! Sure he has not got much of a bark And sure any he has it's all beside the mark.</p> <p>— James Joyce, <i>Finnegans Wake</i></p>

Gell-Mann went into further detail regarding the name of the quark in his book, *The Quark and the Jaguar*:

<p>In 1963, when I assigned the name “quark” to the fundamental constituents of the nucleon, I had the sound first, without the spelling, which could have been “kwork”. Then, in one of my occasional perusals of <i>Finnegans Wake</i>, by James Joyce, I came across the word “quark” in the phrase “Three quarks for Muster Mark”. Since “quark” (meaning, for one thing, the cry of the gull) was clearly intended to rhyme with “Mark”, as well as “bark” and other such words, I had to find an excuse to pronounce it as “kwork”. But the book represents the dream of a publican named Humphrey Chimpden Earwicker. Words in the text are typically drawn from several sources at once, like the “portmanteau” words in “Through the Looking-Glass”. From time to time, phrases occur in the book that are partially determined by calls for drinks at the bar. I argued, therefore, that perhaps one of the multiple sources of the cry “Three quarks for Muster Mark” might be “Three quarts for Mister Mark”, in which case the pronunciation “kwork” would not be totally unjustified. In any case, the number three fitted perfectly the way quarks occur in nature.</p>
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Zweig preferred the name ace for the particle he had theorized, but Gell-Mann’s terminology came to prominence once the quark model had been commonly accepted.

The quark flavors were given their names for a number of reasons. The up and down quarks are named after the up and down components of isospin, which they carry. Strange quarks were given their name because they were discovered to be components of the strange particles discovered in cosmic rays years before the quark model was proposed; these particles were deemed “strange” because they had unusually long lifetimes. Glashow, who co-proposed charm quark with Bjorken, is quoted as saying, “We called our construct the ‘charmed quark’, for we were fascinated and pleased by the symmetry it brought to the subnuclear world.” The names “top” and “bottom” were chosen because they are “logical partners for up and down quarks”. In the past, top and bottom quarks were sometimes referred to as “truth” and “beauty” respectively, but these names have mostly fallen out of use.

James Joyce

James Augustine Aloysius Joyce (2 February 1882 - 13 January 1941) was an Irish expatriate author of the 20th century. He is known for his landmark novel *Ulysses* (1922) and its controversial successor *Finnegans Wake* (1939), as well as the short story collection *Dubliners* (1914) and the semi-autobiographical novel *A Portrait of the Artist as a Young Man* (1916).

Although he spent most of his adult life outside Ireland, Joyce’s psychological and fictional universe is firmly rooted in his native Dublin, the city which provides the settings and much of the subject

James Joyce

matter for all his fiction. In particular, his tempestuous early relationship with the Irish Roman Catholic Church is reflected through a similar inner conflict in his recurrent alter ego Stephen Dedalus. As the result of his minute attentiveness to a personal locale and his self-imposed exile and influence throughout Europe, notably in Paris, Joyce paradoxically became both one of the most cosmopolitan yet most regionally focused of all the English language writers of his time.



Life

James Augustine Aloysius Joyce was born on February 2, 1882 to John Stanislaus Joyce and Mary Jane Murray in the Dublin suburb of Rathgar. He was the oldest of 10 surviving children; two of his siblings died of typhoid. His father’s family, originally from Fermoy in Cork, had once owned a small salt and lime works. Joyce’s father and paternal grandfather both married into wealthy families. In 1887, his father was appointed rate (i.e., a local property tax) collector by Dublin Corporation; the family subsequently moved to the fashionable adjacent small town of Bray 12 miles (19 km) from Dublin. Around this time Joyce was attacked by a dog; this resulted in a lifelong canine phobia. He also suffered from a fear of thunderstorms, which his deeply religious aunt had described to him as being a sign of God’s wrath.

In 1891, Joyce wrote a poem, “Et Tu Healy,” on the death of Charles Stewart Parnell. His father was angry at the treatment of Parnell by the Catholic church and at the resulting failure to secure Home Rule for Ireland. The elder Joyce had the poem printed and even sent a copy to the Vatican Library. In November of that same year, John Joyce was entered in *Stubbs Gazette* (an official register of bankruptcies) and suspended from work. In 1893 John Joyce was dismissed with a pension. This was the beginning of a slide into poverty for the family, mainly due to John’s drinking and general financial mismanagement.

James Joyce was initially educated by the Jesuit order at Clongowes Wood College, a boarding school near Clane in County Kildare, which he entered in 1888 but had to

leave in 1892 when his father could no longer pay the fees. Joyce then studied at home and briefly at the Christian Brothers school on North Richmond Street, Dublin, before he was offered a place in the Jesuits’ Dublin school, Belvedere College, in 1893. The offer was made at least partly in the hope that he would prove to have a vocation and join the Order. Joyce, however, was to reject Catholicism by the age of 16, although the philosophy of Thomas Aquinas would remain a strong influ-

ence on him throughout his life.

He enrolled at the recently established University College Dublin (UCD) in 1898. He studied modern languages, specifically English, French and Italian. He also became active in theatrical and literary circles in the city. The article Ibsen’s New Drama, his first published work, was published in 1900 and resulted in a letter of thanks from the Norwegian dramatist himself. Joyce wrote a number of other articles and at least two plays (since lost) during this period. Many of the friends he made at University College Dublin would appear as characters in Joyce’s written works. He was an active member of the Literary and Historical Society, University College Dublin, and presented his paper “Drama and Life” to the L&H in 1900.

After graduating from UCD in 1903, Joyce left for Paris to “study medicine”, but in reality he squandered money his family could ill afford. He returned to Ireland after a few months, when his mother was diagnosed with cancer. Fearing for her son’s “impiety”, his mother tried unsuccessfully to get Joyce to make his confession and to take communion. She finally passed into a coma and died on August 13, Joyce having refused to kneel with other members of the family praying at her bedside. After her death he continued to drink heavily, and conditions at home grew quite appalling. He scraped a living reviewing books, teaching and singing—he was an accomplished tenor, and won the bronze medal in the 1904 Feis Ceoil.

On 7 January 1904, he attempted to publish *A Portrait of the Artist as a Young Man*, an essay-story

dealing with aesthetics, only to have it rejected by the free-thinking magazine *Dana*. He decided, on his twenty-second birthday, to revise the story and turn it into a novel he planned to call *Stephen Hero*. However, he never published this novel in its original name. This was the same year he met Nora Barnacle, a young woman from Galway city who was working as a chambermaid at Finn’s Hotel in Dublin. On 16 June 1904, they went on their first date, an event that would be commemorated by providing the date for the action of *Ulysses*.

Joyce remained in Dublin for some time longer, drinking heavily. After one of his alcoholic binges, he got into a fight over a misunderstanding with a man in St. Stephen’s Green; he was picked up and dusted off by a minor acquaintance of his father, Alfred H. Hunter, who brought him into his home to tend to his injuries. Hunter was rumored to be Jewish and to have an unfaithful wife, and would serve as one of the models for Leopold Bloom, the main protagonist of *Ulysses*. He took up with medical student Oliver St John Gogarty, who formed the basis for the character Buck Mulligan in *Ulysses*. After staying in Gogarty’s Martello Tower for 6 nights he left in the middle of the night following an altercation that involved Gogarty shooting a pistol at some pans hanging directly over Joyce’s bed. He walked all the way back to Dublin to stay with relatives for the night, and sent a friend to the tower the next day to pack his possessions into his trunk. Shortly thereafter he eloped to the continent with Nora.

Major works

Finnegans Wake

Joyce as depicted on the Irish £10 banknote, issued 1993-2002. Having completed work on *Ulysses*, Joyce was so exhausted that he did not write a line of prose for a year. On 10 March 1923 he informed a patron, Harriet Weaver: “Yesterday I wrote two pages—the first I have since the final Yes of *Ulysses*. Having found a pen, with some difficulty I copied them out in a large handwriting on a double sheet of foolscap so that I could read them. Il lupo perde il pelo ma non il vizio, the Italians say. The wolf may lose his skin but not his vice or the leopard cannot change his spots”. Thus was born a text that became known, first, as *Work in Progress* and later *Finnegans Wake*.

By 1926 Joyce had completed the first two parts of the book. In that year, he met Eugene and Maria Jolas who offered to serialise the book in their magazine *transition*. For the next few years, Joyce worked rapidly on the new book, but in the 1930s, progress slowed considerably. This was due to a number of factors, including the death of his father in 1931, concern over the mental health of his daughter Lucia and his own health problems, including failing eyesight. Much of the work was done with the assistance of younger admirers, including Samuel Beckett. For some years, Joyce nursed the eccentric plan of turning over the book to his friend James Stephens to complete, on the grounds that Stephens was born in the same hospital as

Joyce exactly one week later, and shared the first name of both Joyce and of Joyce’s fictional alter-ego (this is one example of Joyce’s numerous superstitions).

Reaction to the work was mixed, including negative comment from early supporters of Joyce’s work, such as Pound and the author’s brother Stanislaus Joyce. In order to counteract this hostile reception, a book of essays by supporters of the new work, including Beckett, William Carlos Williams and others was organised and published in 1929 under the title *Our Exagmination Round His Factification for Incamination of Work in Progress*. At his 47th birthday party at the Jolases’ home, Joyce revealed the final title of the work and *Finnegans Wake* was published in book form on 4 May 1939.

Joyce’s method of stream of consciousness, literary allusions and free dream associations was pushed to the limit in *Finnegans Wake*, which abandoned all conventions of plot and character construction and is written in a peculiar and obscure language, based mainly on complex multi-level puns. This approach is similar to, but far more extensive than that used by Lewis Carroll in *Jabberwocky*. If *Ulysses* is a day in the life of a city, then *Wake* is a night and partakes of the logic of dreams. This has led many readers and critics to apply Joyce’s oft-quoted description in the *Wake* of *Ulysses* as his “usylesssly unreadable Blue Book of Eccles” to the *Wake* itself. However, readers have been able to reach a consensus about the central cast of characters and general plot.

Much of the wordplay in the book stems from the use of multilingual puns which draw on a wide range of languages. The role played by Beckett and other assistants included collating words from these languages on cards for Joyce to use and, as Joyce’s eyesight worsened, of writing the text from the author’s dictation.

The view of history propounded in this text is very strongly influenced by Giambattista Vico, and the metaphysics of Giordano Bruno of Nola are important to the interplay of the “characters”. Vico propounded a cyclical view of history, in which civilisation rose from chaos, passed through theocratic, aristocratic, and democratic phases, and then lapsed back into chaos. The most obvious example of the influence of Vico’s cyclical theory of history is to be found in the opening and closing words of the book. *Finnegans Wake* opens with the words ‘riverrun, past Eve and Adam’s, from swerve of shore to bend of bay, brings us by a commodus vicus of recirculation back to Howth Castle and Environs.’ (‘vicus’ is a pun on Vico) and ends ‘A way a lone a last a loved a long the’. In other words, the book ends with the beginning of a sentence and begins with the end of the same sentence, turning the book into one great cycle. Indeed, Joyce said that the ideal reader of the *Wake* would suffer from “ideal insomnia” and, on completing the book, would turn to page one and start again, and so on in an endless cycle of reading.

Jabberwocky

“Jabberwocky” is a poem of nonsense verse written by Lewis Carroll, originally featured as a part of his novel Through the Looking-Glass, and What Alice Found There (1871). It is considered by many to be one of the greatest nonsense poems written in the English language. The poem is sometimes used in primary schools to teach students about the use of portmanteau and nonsense words in poetry, as well as use of nouns and verbs.

The poem
<p>’Twas brillig, and the slithy toves Did gyre and gimble in the wabe; All mimsy were the borogoves, And the mome raths outgrabe.</p>
<p>“Beware the Jabberwock, my son! The jaws that bite, the claws that catch! Beware the Jubjub bird, and shun The frumious Bandersnatch!”</p>
<p>He took his vorpal sword in hand: Long time the manxome foe he sought— So rested he by the Tumtum tree, And stood awhile in thought.</p>
<p>And as in uffish thought he stood, The Jabberwock, with eyes of flame, Came whiffing through the tulgey wood, And burred as it came!</p>
<p>One, two! One, two! and through and through The vorpal blade went snicker-snack! He left it dead, and with its head He went galumphing back.</p>
<p>“And hast thou slain the Jabberwock? Come to my arms, my beamish boy! O frabjous day! Callooh! Callay!” He chortled in his joy.</p>
<p>’Twas brillig, and the slithy toves Did gyre and gimble in the wabe; All mimsy were the borogoves, And the mome raths outgrabe.</p>

Portmanteau

A portmanteau word is used broadly to mean a blend of two (or more) words, and narrowly in linguistics fields to mean only a blend of two or more function words.

Meaning

“Portmanteau word” is used to describe a linguistic blend, namely “a word formed by blending sounds from two or more distinct words and combining their meanings.”

Such a definition of “portmanteau word” overlaps with the grammatical term contraction, and linguists avoid using the former term in such cases. As an example: the words do + not become the contraction don’ t, a single word that represents the meaning of the combined words.

Examples

Many neologisms are examples of blends, but many blends have become part of the lexicon. In Punch in 1896, the word brunch (breakfast + lunch) was introduced as a “portmanteau word. In 1964, the newly independent African republic of Tanganyika and Zanzibar chose the portman-teau word Tanzania as its name. A spork is an eating utensil that is a combination of a spoon and fork.

“Wikipedia” is an example of a portmanteau word because it combines the word “wiki” with the word “Encyclopedia.”

The name Motown derives from the portmanteau of Motor and town. It is also a nickname for the city of Detroit.

“Jeoportmanteau!” is a recurring category on the American television quiz show

Jeopardy!. The category’ s name is itself a portmanteau of “Jeopardy” and “port-manteau”. Responses in the category are portmanteaus constructed by fitting two words together. For example, the clue “Brett Favre or John Elway plus a knapsack” yielded the response “What is a ‘quarterbackpack’ ?”

Blaxploitation is a film genre/style, whose name derives from a portman-teau of “black” and “exploitation,” reflecting its main theme of social problems, along with the stereotypical depiction of Black people in film.

Portmanteau words may be produced by joining together proper nouns with common nouns, such as “gerrymandering,” which refers to the scheme of Massachusetts Governor Elbridge Gerry for politically contrived redistricting: one of the districts created resembled a salamander in outline. Two proper names can also be used in creating a portman-teau word in reference to the partnership between people, especially in cases where both persons are well-known, or sometimes to produce epithets such as “Billary” (referring to former United States president Bill Clinton and Hillary Rodham Clinton). In this example of recent American political history, the purpose for blending is not so much to combine the meanings of the source words but “to suggest a resemblance of one named person to the other” ; the effect is often derogatory, as linguist Benjamin Zimmer notes. In contrast, the public and even the media use portmanteaux to refer to their favorite pairings as a way to “...giv[e] people an essence of who they are within the same name.” This is particularly seen in cases of fictional and real-life “supercouples.” An early and well-known example, Bennifer, referred to film stars (and former couple) Ben Affleck and Jennifer Lopez. Other examples include Brangelina (Brad Pitt and Angelina Jolie) and TomKat (Tom Cruise and Katie Holmes). In double-barreled names, the hyphen is almost pushing one name away from the other. Meshing says “I am you and you are me,” notes one expert.

Portmanteaux (or portman-teaus) can also be created by attaching a prefix or suffix from one word to give that association to other words. Subsequent to the Watergate scandal, it became popular to attach the suffix “-gate” to other words to describe contemporary scandals, e.g. “Filegate” for the White House FBI files controversy, and Spygate, an incident involving the 2007 New England Patriots. Likewise, the suffix “-holism” or “-holic,” taken from the word “alcoholism” or “alcoholic,” can be added to a noun, creating a word that describes an addiction to that noun. Chocoholic, for instance, means a person who is “addicted” to chocolate. Also, the suffix “-athon” is often appended to other words to connote a similarity to a marathon (for example, telethon, phonathon and walkathon).

Wikipedia

(pronounced /ˌwɪˈkiːpiːdiə/ or /ˌwɪkiːpiːdiə/) is a free, web-based and collaborative multilingual encyclopedia project supported by the non-profit



Wikimedia Foundation. Its name is a portmanteau of the words wiki (a technology for creating collaborative web-sites, from the Hawaiian word wiki, meaning “quick”) and

Wikipedia

Sanger, it is currently the largest and most popular general reference work on the Internet.

Critics of Wikipedia accuse it of systemic bias



encyclopedia. Wikipedia’ s 13 million articles (3 million in English) have been written collaboratively by

and inconsistencies (including undue weight given to popular culture), and allege that it favors consensus



volunteers around the world, and almost all of its articles can be edited by anyone who can access the Wikipedia website. Launched in 2001 by Jimmy Wales and Larry

over credentials in its editorial process.Wikipedia’ s reliability and accuracy are also an issue. Other criticisms center on its susceptibility to vandalism

and the addition of spurious or unverified information, though scholarly work suggests that vandalism is generally short-lived.

Wikipedia’ s departure from the expert-driven style of the encyclopedia building mode and the large presence of unacademic contents have been noted several times. When Time magazine recognized You as its Person of the Year for 2006, acknowledging the accelerating success of online collaboration and interaction by millions of users around the world, it cited Wikipedia as one of several examples of Web 2.0 services, along with YouTube, MySpace, and Facebook. Some noted the importance of Wikipedia not only as an encyclopedic reference but also as a frequently updated news resource because of how quickly articles about recent events appear.

Systematic bias

Systemic bias is the inherent tendency of a process to favor particular outcomes. The term is a neologism that generally refers to human systems; the analogous problem in non-human systems (such as measurement instruments or mathematical models used to estimate physical quantities) is often called systematic bias, and leads to systematic error in measurements or estimates.

Bias in human institutions

One might refer, for example, to the systemic, systematic, or institutional bias of a particular institution in devaluing contributions by women, men or ethnic minorities. For example, a poetry competition that was consistently won by white women could be subject to suspicion of a bias if there were no inherent reason that white women would consistently be the best poets. Such a bias could be deliberate on the part of the judges or entirely unconscious.

For example, the poetry contest might be judged by a pool drawn from its own previous winners, reasoning that prize-winning poets are the best to judge a poetry contest. However, it might be that in addition to choosing for poetic skill, they are also inclined to choose people with whom they have values in common, either about poetry or about other matters, resulting in a continuous stream of prize-winning white female poets. In this case, the bias could arise from either conscious or unconscious defense of gender and racial interests or simply from their shared point of view. In either case, it results in a biased representation of the reality they are describing in terms of quality of poets and poetry.

Because cognitive bias is inherent in the experiences, loyalties, and relationships of people in their daily lives, it cannot be eliminated by education or training, but awareness of biases can be enhanced, allowing for the adoption of compensating correction mechanisms. For example, the theory behind affirmative action in the United States is precisely to counter biases in matters of gender, race, and ethnicity, by opening up institutional participation to people with a wider range of backgrounds, and hence presumably a wider range of points of view. In India the system of scheduled castes and tribes was

intended to address systemic bias within the caste system. Similar to affirmative action, it mandates the hiring of persons within certain designated groups. However, in both instances (as well as numerous others), many people claim that a reverse systemic bias now exists.

Neologism

A neologism from Greek νέος (neo ‘new’ + logos ‘word’) is a newly coined word that may be in the process of entering common use, but has not yet been accepted into mainstream language. Neologisms are often directly attributable to a specific person, publication, period, or event. According to Oxford English Dictionary the term neologism was first used in print in 1772.

Other uses

In psychiatry, the term neologism is used to describe the use of words that only have meaning to the person who uses them, independent of their common meaning. This is considered normal in children, but a symptom of thought disorder (indicative of a psychotic mental illness, such as schizophrenia) in adults.

People with autism also may create neologisms.

Use of neologisms may also be related to aphasia acquired after brain damage resulting from a stroke or head injury.

In theology, a neologism is a relatively new doctrine (for example, rationalism). In this sense, a neologist is one who proposes either a new doctrine or a new interpretation of source material such as religious texts.

Sources of neologism
Science
Words or phrases created to describe new scientific hypotheses, discoveries, or inventions include:
<ul style="list-style-type: none">x-ray, or röntgenograph (November 8, 1895, by Röntgen) radar (1941) from Radio Detection And Ranging laser (1960) from Light Amplification by Stimulated Emission of Radiation black hole (1968) prior (1982) beetle bank (early 1990s) lidar (late 90s) from Light Detection And Ranging
Science fiction
Concepts created to describe new, futuristic ideas include,
<ul style="list-style-type: none">beaming (1931) hyperspace (1934) robotics (1941) waldo (1942) Dyson sphere (circa 1960) grok (1961) ansible (1966) phaser (1966) warp speed (1966) ringworld (1971) replicant (1982) cyberspace (1984) xenocide (1991) metaverse (1992) alien space bats (1998) teleojuxtaposition (2003)

Nonce word

(to see article, refer to the beginning)



Stokely Carmichael (June 29, 1941 - November 15, 1998), also known as Kwame Toure, was a Trinidadian-American black activist active in the 1960s American Civil Rights Movement. He rose to prominence first as a leader of the Student Nonviolent Coordinating Committee (SNCC, pronounced “Snick”) and later as the “Honorary Prime Minister” of the Black Panther Party. Initially an integrationist, Carmichael later became affiliated with black nationalist and Pan-Africanist movements.



Background

Carmichael born to Adolphus and Mabel Carmichael. Adolphus moved his family to the United States in 1943 when Stokley was two. Carmichael attended the Bronx High School of Science in New York City and then entered Howard University in 1960. It is at Howard where Carmichael was introduced to SNCC and at Howard where he and his classmate, Walter P. Carter, joined the student organization. Carmichael graduated, from Howard, with a bachelor’s degree in philosophy in 1964. At Howard his professors included Sterling Brown, Nathan Hare and Toni Morrison.

Black Power

Carmichael participated in the Mississippi Freedom Summer, serving as a regional director for SNCC workers and helping to organize the Mississippi Freedom Democratic Party (MFDP). He was deeply disillusioned with the national Democratic Party when the party refused to seat the multi-racial MFDP delegation in place of the official all-white, pro-segregation Mississippi Democratic Party during the 1964 Democratic Party National Convention in Atlantic City, New Jersey. This incident led him to seek alternative means for the political empowerment of African-Americans and to become increasingly influenced by the ideologies of Malcolm X and Kwame Nkrumah.

In 1966 Carmichael journeyed to Lowndes County, Alabama, where he brought together the county’s African-American residents to form the Lowndes County Freedom Organization (LCFO). The organization was an effort to form a political party that would bring black residents of Lowndes – who were a majority in the county, but held no elected offices and were locked out of local politics – into power. The organization chose a black panther as its emblem, ostensibly in response to the Alabama Democratic Party’s use of a White Rooster. In the press the LCFO became known as the “Black Panther Party” - a

moniker that would eventually provide inspiration for the more-well known Black Panther Party later founded by Huey P. Newton and Bobby Seale in Oakland, California. Carmichael often satirically made references to the media’s one-sided renaming of the party:

“In Lowndes County, we developed something called the Lowndes County Freedom Organization. It is a political party. The Alabama law says that if you have a Party you must have an emblem. We chose for the emblem a black panther, a beautiful black animal which symbolizes the strength

and dignity of black people... Now there is a Party in Alabama called the Alabama Democratic Party. It is all white. It has as its emblem a white rooster and the words “white supremacy – for the right”. Now the gentlemen of the Press, because they’re advertisers, and because most of them are white, and because they’re produced by that white institution, never called the Lowndes County Freedom Organization by its name, but rather they call it the Black Panther Party. Our question is, Why don’t they call the Alabama Democratic Party the “White Cock Party”? It’s fair to us...

Death and Legacy

After two years of treatment at the Columbia-Presbyterian Medical Center in New York, he died of prostate cancer at the age of 57 in Conakry, Guinea. He claimed that his cancer “was given to me by forces of American imperialism and others who conspired with them.” He claimed that the FBI had introduced the cancer to his body as an attempt at assassination. After his diagnosis in 1996, benefits were held in Denver; New York; Atlanta; and Washington, D.C., to help defray his medical expenses; and the government of Trinidad and Tobago, where he was born, awarded him a grant of \$1,000 a month for the same purpose

In 2007, the publication of previously secret Central Intelligence Agency documents revealed that Carmichael had been tracked by the CIA as part of their surveillance of black activists abroad, which began in 1968 and continued for years.

In a final interview given to the Washington Post, he spoke with contempt for the economic and electoral progress made during the past thirty years. He acknowledged that blacks had won election to major mayorships, but stated that the power of mayoralty had been diminished and that such progress was essentially meaningless.

Stokely Carmichael is credited with coining the phrase “institutional racism”, which is defined as a form of racism that occurs in institutions such as public bodies and corporations,

including universities. In the late 1960s Carmichael defined “institutional racism” as “the collective failure of an organization to provide an appropriate and professional service to people because of their color, culture or ethnic origin.”

Civil rights leader Jesse Jackson gave a speech celebrating Carmichael’s life, stating: “He was one of our generation who was determined to give his life to transforming America and Africa. He was committed to ending racial apartheid in our country. He helped to bring those walls down.”

In 2002, scholar Molefi Kete Asante listed Stokely Carmichael on his list of 100 Greatest African Americans.

Central Intelligence Agency

The Central Intelligence Agency (CIA) is a civilian intelligence agency of the United States government.

It is an independent U.S. Government agency responsible for providing national security Intelligence (information gathering) to senior U.S. policymakers.

It is the successor of the Office of Strategic Services (OSS) formed, during World War II, to coordinate espionage activities between the branches of the US military services. The National Security Act of 1947 established the CIA, affording it “no police or law enforcement functions, either at home or abroad.” One year later this mandate was expanded to include “sabotage, anti-sabotage, demolition and evacuation measures... Subversion (and) assistance to underground resistance movements, guerrillas and refugee liberation movements, and support of indigenous anti-communist elements in threatened countries of the free world.”

Today, the CIA’s primary function is collecting, and analyzing information about foreign governments, corporations, and individuals which it uses to advise public policymakers. The agency conducts covert operations, paramilitary actions and exerts foreign political influence through its Special Activities Division. Prior to December 2004, the CIA was literally the central intelligence organization for the US government, charged with coordinating and overseeing not only its own activities, but also the activities of the intelligence community as a whole. The Intelligence Reform and Terrorism Prevention Act of 2004 created the office of the Director of National Intelligence (DNI), who took over some of the government and intelligence community (IC)-wide functions that had previously been the CIA’s. The DNI manages the United States Intelligence Community and in so doing it manages the intelligence cycle. Among the functions that moved to the DNI were the preparation of estimates reflecting the consolidated opinion of the 16 IC agencies, and preparation of briefings for the president.

2004 was a critical year in the history of the CIA, as there is a marked difference between the agency as it was during the period that it bore IC-wide responsibilities, and the agency as it is today, given its present set of responsibilities. The IC still has internal politics, although an increasing number of

interagency “centers”, as well as the Intellipedia information sharing mechanism, are hoped to improve cooperation between each member.

The current CIA still has a number of functions in common with other countries’ intelligence agencies; see relationships with foreign intelligence agencies. The CIA’s headquarters is in Langley in Fairfax County, Virginia, a few miles west of Washington, D.C. along the Potomac River.

Sometimes, the CIA is referred to euphemistically in government and military parlance as Other Government Agencies (OGA), particularly when its operations in a particular area are an open secret. Other terms include The Company and The Agency.

Early Cold War, 1953-1966

Allen Dulles, who had been a key OSS operations officer in Switzerland during World War II, took over from Smith, at a time where US policy was dominated by intense anti-



communism. Various sources existed, the most visible being the investigations and abuses of Senator Joseph McCarthy, and the more quiet but systematic containment doctrine developed by George Kennan, the Berlin Blockade and the Korean War. Dulles enjoyed a high degree of flexibility, as his brother, John Foster Dulles, was simultaneously Secretary of State. Concern regarding the Soviet Union and the difficulty of getting information from its closed society, which few agents could penetrate, led to solutions based on advanced technology. Among the first success was with the Lockheed U-2 aircraft, which could take pictures and collect electronic signals from an altitude above Soviet air defenses’ reach. After Gary Powers was shot down by an SA-2 surface to air missile in 1960, causing an international incident, the SR-71 was developed to take over this role.

SR-71

The Lockheed SR-71 is an advanced, long-range, Mach 3 strategic reconnaissance aircraft developed from the Lockheed A-12 and YF-12A aircraft by the Lockheed Skunk Works as a Black project. The SR-71 was unofficially named the Blackbird, and called the Habu by its crews, referring to an Okinawan species of pit viper. Clarence “Kelly” Johnson was responsible for many of the design’s innovative concepts. A defensive feature of the aircraft was its high speed and operating altitude, whereby, if a surface-to-air missile launch were detected, standard evasive action was simply to accelerate. The SR-71 line was in service from 1964 to 1998, with 12 of the 32 aircraft being destroyed in accidents, though none were lost to enemy action.

Design and operational details

A particularly difficult issue with flight at over Mach 3 is the high temperatures generated. As an aircraft moves through the air, the air in front of the aircraft compresses and this heats the air, and the heat conducts into the aircraft’s airframe. To help with this, high temperature materials were needed and the airframe was substantially made of titanium, obtained from the USSR, at the height of the Cold War. Lockheed used many guises to prevent the Soviet government knowing what the titanium was to be used for. In order to control costs, Lockheed used a more easily-worked alloy of titanium which softened at a lower temperature. Finished aircraft were painted a dark blue (almost black) to increase the emission of internal heat (since fuel was used as a heat sink for avionics cooling) and to act as camouflage against the sky. The aircraft was designed to minimize its radar cross-section, an early attempt at stealth design.

Titanium

(pronounced /taiˈteɪniəm/) is a chemical element with the symbol Ti and atomic number 22. Sometimes called the “space age metal”, it has a low density and is a strong, lustrous, corrosion-resistant (including to sea water, aqua regia and chlorine) transition metal with a silver color.

Titanium can be alloyed with iron, aluminium, vanadium, molybdenum, among other elements, to produce strong lightweight alloys for aerospace (jet engines, missiles, and spacecraft), military, industrial process (chemicals and petrochemicals, desalination plants, pulp, and paper), automotive, agri-food, medical prostheses, orthopedic implants, dental and endodontic instruments and files, dental implants, sporting goods, jewelry, mobile phones, and other applications. Titanium was discovered in England by William Gregor in 1791 and named by Martin Heinrich Klaproth for the Titans of Greek mythology.

The element occurs within a number of mineral deposits, principally rutile and ilmenite, which are widely distributed in the Earth’s crust and lithosphere, and it is found in almost all living things, rocks, water bodies, and soils. The metal is extracted from its principal mineral ores via the Kroll process or the Hunter process. Its most common compound, titanium dioxide, is used in the manufacture of white pigments. Other compounds include titanium tetrachloride (TiCl4) (used in smoke screens/skywriting and as a catalyst) and titanium trichloride (TiCl3) (used as a catalyst in the production of polypropylene).

The two most useful properties of the metal form are corrosion resistance and the highest strength-to-weight ratio of any metal. In its

unalloyed condition, titanium is as strong as some steels, but 45% lighter. There are two allotropic forms and five naturally occurring isotopes of this element; 46Ti through 50Ti, with 48Ti being the most abundant (73.8%). Titanium’s properties are chemically and physically similar to zirconium.

Mobile phone

A mobile phone or mobile (also called cellphone and handphone, as well as cell phone, wireless phone, cellular phone, cell, cellular telephone, mobile telephone or cell telephone) is a long-range, electronic device used for mobile telecommunications (mobile telephony, text messaging or data transmission) over a cellular network of specialized base stations known as cell sites. In addition to the standard voice function, current mobile phones may support many additional services, and accessories, such as SMS for text messaging, email, packet switching for access to the Internet, gaming, Bluetooth, infrared, camera with video recorder and MMS for sending and receiving photos and video, MP3 player, radio and GPS. Most current mobile phones connect to a cellular network consisting of switching points and base stations (cell sites) owned by a mobile network operator (the exception is satellite phones, which are mobile but not cellular).

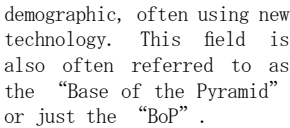
As opposed to a radio telephone, a mobile phone offers full duplex communication, automatised calling to and paging from a public switched telephone network (PSTN), and handoff (American English)/handover (British/European English) during a phone call when the user moves from one cell (base station coverage area) to another. A mobile phone offers wide area service, and should not be confused with a cordless telephone, which also is a wireless phone, but only offer telephony service within a limited range, e.g. within a home or an office, through a fixed line and a base station owned by the subscriber.



The International Telecommunication Union estimated that mobile cellular subscriptions worldwide would reach approximately 4.1 billion by the end of 2008. Mobile phones have gained increased importance in the sector of Information and communication technologies for development in the 2000s and have effectively started to reach the bottom

The phrase “bottom of the pyramid” is used in particular by people developing new models of doing business that deliberately target that

the very poor in mind is that of a shampoo that works best with cold water. Such a product is marketed by Hindustan Lever.



Several books and journal articles have been written on the potential market by members of business schools offering consultancy on the burgeoning market. They include *The Fortune at the Bottom of the Pyramid* by C.K. Prahalad of the University of Michigan, *Capitalism at the Crossroads* by Stuart L. Hart of Cornell University and the first empirical article, *Reinventing strategies for emerging markets: Beyond the transnational model*, by Ted London of the University of Michigan and Hart. London has also developed a working paper, commissioned by the United Nations Development Programme, that explores the contributions of the BoP literature to the poverty alleviation domain.

As The Economist reported on August 11, 2005, one example of “bottom of the pyramid” is the growing microcredit market in South Asia, particularly in India. With technology being steadily cheaper and more ubiquitous, it is becoming economically efficient to “lend tiny amounts of money to people with even tinier assets”. The firm discussed in the article, Sa-Dhan, argues that the availability of credit to the poor “helps the poor but allows banks to increase their business.”

Another example of the bottom of the pyramid targeting at work is eChoupal in rural India. ITC manages an agricultural trading company. To eliminate the inefficiencies in its supply chain caused by corrupt middle men at local rural markets, it created a network of “e-Choupals” (choupal = village square) in rural communities. Through these e-Choupals, individual farmers have been able to check the market trading price of their produce and sell it directly to ITC. Both the individual farmers and ITC have increased their revenues, because the layers of inefficiency no longer have a role in the transaction between seller and buyer.

An example of product that is designed with needs of

land from the Nubian landlords. Since then, the Kikuyu have come to predominate the population and by 1974 had effectively gained control over administrative positions. This occurs primarily through political patronage, as certain owners are protected by local government officers largely based on their Kikuyu ethnicity, and changes in administrative personnel may have drastic impacts on a landlord's security.

Kibera has residents coming from all the major ethnic backgrounds with some areas being specifically dominated by one tribe (eg. Kisumu Ndogo that is predominantly Luo). Many are coming from rural areas due to the problems of rural underdevelopment. This multi-ethnic nature coupled with the tribalism of Kenyan politics has led Kibera to be the site of small ethnic conflicts throughout its near 100 year history (most recently in 2002 in which many resident's homes were attacked by arson).

Kibera is featured in Fernando Meirelles' s film *The Constant Gardener*, which is based on the book of the same name by John le Carré. It is also mentioned in the music video *World On Fire* by Sarah McLachlan, which profiled the work of Carolina for Kibera, a grassroots organization named a Hero of Global Health in 2005 by Time Magazine.

Robert Neuwirth devotes a chapter of his book *Shadow Cities to Kibera* and calls it a squatter community, predicting that places like Kibera, Sultanbeyli in Istanbul, Turkey, and Sanjay Gandhi in Mumbai, India, are the prototypes of the cities of tomorrow. Among other things Neuwirth points out that such cities should be reconsidered as merely slums, as many locals were drawn to them while escaping far worse conditions in rural areas. Michael Holman's 2005 novel *Last Orders at Harrods* is based in a fictional version of the slum, called Kireba. Bill Bryson visited Africa for CARE and wrote a companion book called "Bill Bryson's African Diary" which includes a description of his visit to Kibera. Kibera is also the backdrop for the award-winning short film *Kibera Kid* which featured a cast entirely drawn from Kibera residents. The film has played in film festivals worldwide including the Berlin Film Festival and won a Student Emmy from Hollywood. In his documentary *Living with Corruption* Sorious Samura stayed with a family in Kibera to film the corruption that occurs even at the lowest levels of Kenyan society. Furthermore, Kibera is portrayed in the Austrian 2007 documentary *Über Wasser: Menschen und gelbe Kanister*.

Sarah Ann McLachlan (born 28 January 1968(1968-01-28)) is a Canadian musician, singer and songwriter.

She is known for her emotional ballads and mezzo-soprano vocal range. As of 2006, she has sold over 40 million albums worldwide. Her best-selling album to date is *Surfacing*, for which she won two Grammy Awards (out of three nominations) and eight Juno Awards. In addition to her personal artistic efforts, she founded the Lilith Fair tour, which

McLachlan hand-wrote a letter, copies of which were sent to members of her fan club in late March 2006, stating that she was beginning work on a holiday album due to be released later that year.

On 29 July, a press release announced McLachlan would be releasing a new album 17 October titled *Wintersong* on Arista Records. The first new studio recording since the 2003 release of *Afterglow*, the album includes 11 new recordings, featuring covers of Joni Mitchell's "River", Gordon Lightfoot's "Song for a Winter's Night", and John Lennon's "Happy Xmas (War Is Over)", which she recorded with her outreach children and youth choir, and seasonal favourites interpreted by McLachlan with her signature style: "Christmas Time Is Here", "O Little Town of Bethlehem", "Have Yourself a Merry Little Christmas", "Silent Night", "The First Noel", and "Greensleeves (What Child Is This?)", among others. Included, also, is the title track, an original work of McLachlan's.

Wintersong debuted at No. 42 on the Billboard 200 album chart the week ending 4 November 2006. It has peaked at #7 and has sold 759,162 copies in the US to date. For the week of 5 December 2006, it was the #1 album on iTunes. Worldwide the album has sold 1.1 million copies to date. It has been certified Platinum in the U.S and 2x Platinum in Canada.

Wintersong was nominated for both a Grammy Award, in the Best Traditional Pop Vocal Album category, as well as for a Juno Award, for Pop Album of the Year.

On 3 October 2006, the live album *Mirrorball* was re-released as *Mirrorball: The Complete Concert*. This release contains 2 discs that span over 2 hours of a concert performed in Portland, Oregon, in April 1998.

In November 2006, McLachlan performed the song "Ordinary Miracle" for that year's feature film, *Charlotte's Web*. The song was written by Glen Ballard and David A. Stewart of Eurythmics. McLachlan was the subject of rumours of an Oscar nomination for the song, but in the end was not nominated. She helped to promote the song and movie by performing it on *The Oprah Winfrey Show* as well as during the Macy's Thanksgiving Day Parade. As of January 2008, "Ordinary Miracle" was covered by Kathy Fisher for use in commercials for CVS/pharmacy, and jazz singer Emilie-Claire Barlow recorded her own version of the song for *Sun Life Financial* commercials in Canada.

McLachlan has collaborated on two tracks since Wintersong. In early 2007, she added her voice to Dave Stewart's Go Green, alongside Nadirah X, Imogen Heap, Natalie Imbruglia, and others.

McLachlan also appeared on Annie Lennox's album, *Songs of Mass Destruction*. Together with Madonna, Céline Dion, Pink, Sugababes, Angélique Kidjo, k.d. lang, Faith Hill, Fergie, Melissa Etheridge, Bonnie Raitt, Shakira, Anastacia, Joss Stone, Dido, and KT Tunstall, Sarah loaned her voice to the track "Sing".

Songs of Mass Destruction
Songs of Mass Destruction is the title of the fourth studio album by Annie Lennox, released on October 1, 2007 in the UK and October 2, 2007, in the U.S. The album debuted at number 7 in the UK, and number 9 in the U.S. where it sold 78,000 copies its first week.

All songs written by
Lennox, except rap on
"Womankind" written and
performed by Nadirah X.

- Fergie Stacy Ann Ferguson (born March 27, 1975), better known by her stage name Fergie, is an American singer-songwriter, fashion designer and actress. She was a member of the kids' television series *Kids Incorporated*, and the girl group Wild Orchid. Ferguson was also a co-host of the television show *Great Pretenders*. She is a vocalist for the hip hop/pop group the Black Eyed Peas, as well as a solo artist, having released her debut album, *The Dutchess*, in September 2006. The album spawned five Billboard Hot 100 Top 5 singles (three of which went to number one) making *The Dutchess* the seventh album from a female artist to spawn five Top 5 hits.

Ferguson was born in Hacienda Heights, California, the daughter of Terri Jackson (née Gore) and Patrick Ferguson. Her parents are of Mexican, Irish, Scottish

and Native American descent. The daughter of devout Roman Catholic school teachers, she was raised in a suburban area with strict Roman Catholic values while attending Mesa Robles Middle School and Glen A. Wilson High School. She studied dance and began to do and voice-over work, providing the voice for Sally in two made-for-television Peanuts cartoons. From 1984 to 1989, she starred on the TV show Kids Incorporated. All that time, she was a cheerleader, straight-A student and a spelling bee champion, as well as a Girl Scout.

Peanuts is a syndicated daily and Sunday comic strip written and illustrated by Charles M. Schulz, which ran from October 2, 1950, to February 13, 2000 (the day after Schulz's death), con-