TRIPLICITIES

by Gary S. Tong

TRIPLICITIES IN THE HUMAN BODY

The following is a list of the numerous organs and processes that are triadic. Many more can most likely be found if the subject is further researched. The entries are grouped according to the body region where they are located. A fundamental role of triplicity in biological structuring seems more than evident in the number of examples we can find. This fact also strongly underwrites the existence of the Triple Body and its significance in yoga and in meditation. The UV (upper visceral system) exhibits an especially large distribution of triadic structures, owing to its complexity and refinement.

GENERAL

Three layers of the blastula (ectoplasm, mesoplasm, endoplasm) produced in the fertilized egg cell

Three regions of development in embryo: neural canal, notocord, digestive tact

Three regions of development in adult: spinal cord, vertebrae, digestive tract

SKIN, BONE, MUSCLE, VESSELS

Three layers of skin: epidermis, dermis, and subcutaneous connective layers.

Three layers of hair strands: cuticle, cortex, medulla

Three layers of connective tissue in muscles

Three types of muscles: striated, smooth, cardiac

Three major bodily structural materials: bone, cartilage, fascia

Three layers of nails: unguis, subunguis, stratum corneum

Three types of loose connective tissue: areolar, adipose, reticular

Three layers of arteries: tunica adventitia, tunica media, tunica intima

HEAD

Three layers of head skeleton: dermatocranium, splanchnocranium, neocranium

Three layers of scalp: skin, connective tissue, occipitalis frontalis muscle

Three parts of brain: forebrain, midbrain, hindbrain

Three facial dermatomes: ophthalmic, maxillary, mandibular

Three muscles of jaw: masseter, medial pterygoid, lateral pterygoid

Three parts of tooth: crown, neck, root

Three layers of the tooth: enamel, dentine, pulp

Three external ear muscles: anterior, superior, posterior

Three parts of ear: external, middle, inner

Three auditory bones: malleus, incus, stapes

Three ducts of the membranous labyrinth of the inner ear: cochlea, vestibule, semicircular canals

Three semicircular canal ducts: anterior, lateral, posterior

Three nerves serving vestibule: facial VII, vestibular, cochlear

Three branches of the trigeminal nerve: ophthalmic, maxillary, mandibular

Three kinds of salivary glands: sublingual, submaxillary, parotid

Three cranial nerves serving external eyes muscles: optical, trochlear, abducens

Three pairs of external eye muscles: upper and lower recti, lateral recti, obliques

Three layers of the eye: fibrous tunic, vascular tunic, neural tunic

Three layers of tear film over the eye: lipid (oil), lacrimal (aqueous), mucoid (mucin)

Three vertical (axial) tongue divisions: tip-blade, body, root (or base)

Three horizontal intrinsic lingual muscles: superior longitudinal, tranverse-vertical, inferior longitudinal

Three muscles connecting jaw and hyoid bone: genioglossus, geniohyoid, mylohyoid

Three pharyngeal muscles: superior, middle, inferior

Third eye, vestigial, from original three eye system)

Three layers of brain meninges: dura mater, arachnoid, pia mater

THORAX

Three layers spinal chord meninges: dura mater, arachnoid, pia mater

Three parts of deltoid muscle: clavicular, acromial, spinous

Three layers of mucosa in all stomach regions

Three parts of stomach: fundus (or cardiac), body, pylorus (or antrum)

Three major types of cells in stomach fundus

Three layers of heart wall: epicardium, myocardium, endocardium

Three layers surrounding the kidney: true capsule, perirenal fat and renal fascia

Three layers of adrenal cortex: glomerulosa, fasciculata, reticularis

Three portions of the thoracic diaphragm: sternal, costal, lumbar

Three sections of iliocostal muscle: iliocostalis cervicis, iliocostalis thoracis, iliocostalis lumborum

ABDOMEN

Three muscles of pelvic floor: coccygeus, iliococcygeus and pubococcygeus

Three layers of the wall of uterus: perimetrium, myometrium and endometrium

Three muscle layers of front (anterolateral) side of abdomen: external abdominal oblique, internal abdominal oblique, transversus abdominis

Three layers of muscular coat of stomach: longitudinal, circular, internal oblique

Three parts of small intestine: duodenum, jejunum, ileum

Three parts of large intestine: caecum, ascending colon, descending colon

Three layers of uterine tube: serosa, mucosa, lumen

Three tendinous intersectors and aponeural sheets of the rectus abdominis muscle

Three layers of urinary bladder layers: external, middle, internal

Three layers of testes: eternal spermatic fascia, cremaster muscle, internal spermatic fascia

Three layers of uterine tube: serosa, mucosa, lumen

Triangular middle (mediolateral) section of uterus

APPENDAGES

Three segments of arms and legs: upper arm, lower arm, hand; thigh, leg, foot

Three segments of fingers and toes: metacarpals and phalanges

Three segments of foot: metatarsals (toes), arch of the sole, heel

MISCELLANEOUS and MEDITATIONAL

Three phases of feeding: ingestion, mastication, swallowing

Three segments of alimentary canal where digestion occurs: stomach, small intestines and large intestine

Three segmented vertebrate body: head, body, tail

Three-segment minimal unit of peristaltic movement, cf. inchworm movement, crawling

Tripartite division, in speech, of vowels according to height and axial position

Three voice registers in music: soprano, tenor, bass

Three note triad chord, e.g., c-e-g keys on piano

Three note harmonic basis of Western polyphonic music

Three parts of insect body: head, thorax, abdomen

Three parts of insect thorax: protorax, mesothorax, metathorax

Three parts of insect digestive duct: foregut, midgut, hindgut

Three pairs of legs in insects: front, middle, back

Three legged tripodal motion of insects: three legs at a time move, other three support

Three layers of insect exoskeleton (body wall): epicuticle, endocuticle, epidermis

Three major types of bird feathers: filaplume, plumula, plume

Triplicity in vertebrate upper body: one head and two arms

Triplicity in vertebrate lower body: two legs and one tail

Triplicity (coronal) in vertebrate body: arms and feet on left and right sides plus body in middle

There is good basis for assuming that tripartite organization is a basic structural element in biological mechanics. Consider the triangle action in any muscle and bone lever in the body: two hinged bones pulled together by a muscle; just as in bivalves (clams): two plates with a connecting hinge muscle. Likewise, triads show up in plants as their three primary tissues: xylem and phloem, superficial epidermal layer, cortex (and pith).

Three colors of light, red, green and blue when mixed produce all other colors in our perception; as in color TV and computer monitor.

In holistics and meditation triplets are numerous, and with important practical applications. For example, you can easily verify that (a) with eyes relaxed, with lids either closed or else open, looking into distance, or up at the cloudless sky, with nothing to focus on, there are three distinct distances at which the eyes can focus and stay relaxed; (b) there are three ways to sense breathing—not the air flowing in the respiratory channel, but rather feeling the places where the cycle of muscular action of respiration is located. You can feel as if breathing either in the head, or in the chest or in the abdomen. Or, you can breathe in the upper, middle and lower parts of the head. These are, of course, appearances of zonal triads.Triads are universal in folklore, mythologies and religions, e.g., Brahma, Vishnu, and Shiva, or Shakti, Lakshmi, and Saraswati; the Three Lucky Gods (in popular Taoism), Taoist yoga's three passes, three treasures of essence, energy, spirit, and the three cauldrons (or dantians/tandens, or cinnabar fields); the three bodies of Buddha; Trinity and Three Wise Men of Christianity; the Three Moirai, Three Charites, Three Erinnyes, and Three Norns from Classical myths.