Yu ECL, J Altern Complement Integr Med 2020, 6: 129
DOI: 10.24966/ACIM-7562/100129

HSOA Journal of Alternative, Complementary & Integrative Medicine

Research Article

From Body Mantle to Internal Core - a Parallel Framework to Organ Systems

Yu Edwin Chau-Leung[1,2,3*]

[1]School of Chinese Medicine, Hong Kong Baptist University, Hong Kong

[2]Hong Kong Institute of Integrative Medicine, the Chinese University of Hong Kong, Hong Kong

[3]Hong Kong Association for Integration of Chinese-Western Medicine, Hong Kong

Abstract

A framework describing a body perspective that can be used under Western Medicine (WM) and Chinese Medicine (CM) in parallel would facilitate a concerted look at the body in both perspectives. The major body systems may be viewed as operating systems, while closely interactive organ clusters forming whole body subsystems sub serve life functions. The whole body is viewed in layers: with the Mantle as border zone, the Under-layer Interface as interactional zone, the Core with organ systems, and the Deep biostratum of resources. The mantle acts as a barrier and interface, while the under-layer of fascial, circulatory and neurohumoral elements inter-relate with deeper provisions, supporting and stabilizing activities. The operating systems and life vigor subsystems function up to a surface border-zone to interact effectively and adaptively with the surrounding environment. While current academics consider the dynamic brain tightly integrated with the body as a self-organized system, a clinical framework is lacking. This paper provides a more or less seamless framework between social, physical, biochemical and cellular perspectives, which have formerly been dichotomizing with big gaps. With such a framework, WM workers can expand onto using some parts of the CM perspectives, not losing scientific emphasis of cellular studies, while recognizing that whole body processes in many clinical occasions can explain problems and be handled more effectively. This has implications in diagnosis and understanding pathophysiology. Accordingly, a spectrum of practice modes in medicine presented helps to understand clinical approaches, from lesion to complexity treatment.

Keywords: Chinese Medicine; Pathophysiology; Western Medicine ; Integrative Medicine

***Corresponding author:** Yu Edwin Chau-Leung, School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, E-mail: yuchauleung@gmail.com

Citation: Yu ECL (2020) From Body Mantle to Internal Core - a Parallel Framework to Organ Systems. J Altern Complement Integr Med 6: 129.

Received: November 17, 2020; **Accepted:** December 02, 2020; **Published:** December 09, 2020

Introduction

Western Medicine (WM) has been the main driver of modern healthcare systems. Though Chinese Medicine (CM) is making a comeback across the globe [1], its core principles formed during the pre-scientific era is often challenged by modern science. As medicine is based first on clinical framework and then on therapy, this paper describes a body perspective that can be used in parallel to the WM framework of organ systems. The full CM framework to be covered in scientific terms would need voluminous chapters when people would get lost in the maze. To cover this whole may contain presumptions and simplifications, which the author would beg for excuses. A succinctly short paper is presented. It is hoped that future scholars would use it as a frame to develop the advances that CM should offer, whether it be for integrative medicine or medical paradigms.

The Body Perspective

As clinical framework depends on pathophysiological understanding, it would be useful to have the body described in both CM and WM for further integration. WM is good at delineating finite issues, having clear environmental categories and describing discrete internal entities. On the other hand, CM excels on systemic integrality, embracive internal categories, and seeing the mind-body integrally under the influence of external environment. In fact, the way to seek and find reality has started with different emphasis since early times. CM emphasizes reality from knowing through abduction, with an analogical equivalencing classification 取類比象 rather than simply western logic. CM at its start relied on Chinese astronomy and earth studies as roots of ancient intelligence. Classical CM clinical comprehension has to pass a formality by a unity embracing math to rationing to phenomenal equivalents 象 with Yin-yang and five phases for a body perspective in form and function (Figure 1). In this formalization, there are the 5 Zang organs (*Z·Organs*) and 6 Fu viscera, even when ancient CM started with anatomical organ descriptions and measurements.

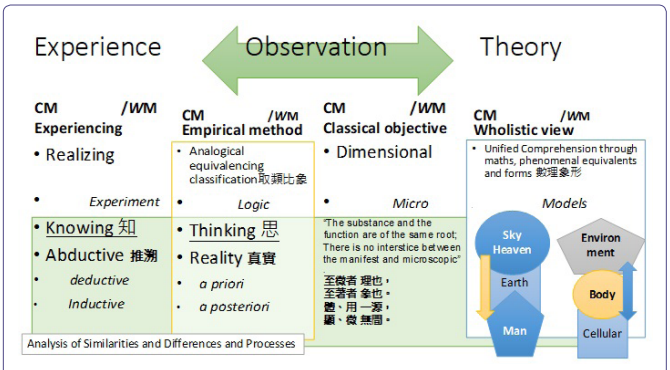

Figure 1: The experiential medicine between observation and theory of Chinese Medicine (CM) emphasizes reality from knowing through abduction, with an analogical equivalence classification 取類比象 rather than simply logic, reaching a dimensional perspective. CM clinical comprehension up to classical standard has to be formalized through a unity embracing Math, Rationing, Phenomenal equivalents and Forms (數, 理, 象, 形).

All these efforts to master reality rather than distracted by nitty-gritty details has tuned CM to view through the manifest down to the nano-microscopic details as a continuum without breaks [2]. Just as ancient astronomy, calendar, climatology and phenology have discrete measurements, there are definite items observable in the continuum perspective of CM. One way to see the whole body is in layers. Four layers are described with the mantle as borderzone, the under-layer interface as interactional zone, the core with organ systems, and the deep biostratum of resources (Figure 2).

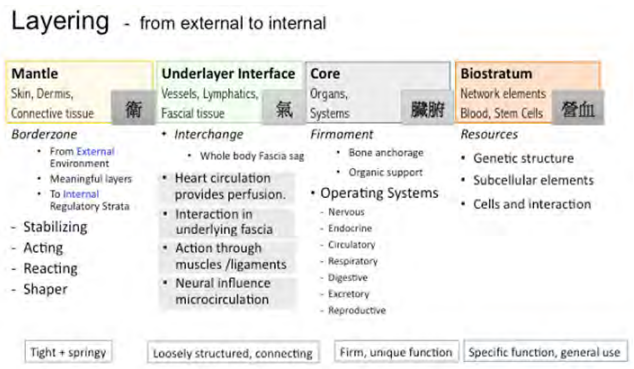

Figure 2: Four-layer concept of the whole body - the mantle as border zone, the under-layer interface as interactional zone, the core with organ systems, and the deep biostratum of resources.

Level 1: Mantle

Obviously in CM, the skin would not be just seen as epidermis and dermis. The body mantle, from the surface to underlying interstices, is subjected to constant changes. That includes meaningful layers with multiple functions, bound off from external surrounding, reaching to the inner support and regulatory strata. The body is subjected to physical and biochemical changes in the environment. Traction areas can become influential in this stabilizing, acting, reacting, shaping border-zone. The overall feeling and reaction is a correspondence between the whole border-zone and the outside world.

The outermost skin acts as a cover. As a barrier, the skin protects the body against pathogens and excessive water loss as well as the environmental elements. Laden with immune surveillance mechanisms, the skin can effect primarily innate immune response to ensure the effective engagement of the adaptive immune response and secondarily rapid and effective local adaptive immune responses to previously encountered antigens. The skin as an interface helps insulation, body temperature regulation, and facilitates the sensations of touch, heat, and cold. Interactive signaling and homeostatic regulation is on-going between the body core and its border zone. It is through sensing and reacting that the body is maintained in its environment, from body's interrelation through sampling microbiome data to heat exchange and border sensing, when contact surveillance addresses core demands.

Notably, the heat exchange function is well emphasized in CM. There are notable dermatoses caused by excessive environmental heat e.g., miliaria, hypohidrosis syndrome and tropical acne, and also many dermatoses exacerbated by heat and humidity, including eczema and rosacea. The use of herbal cold and hot properties is dominantly useful. These 'cold/hot' properties have been described in modern terms with studies by chemistry [3,4] and on cells [5].

Below the skin is the fascia sag of the whole body. At the skin, this forms a rich connective tissue in the reticular layer and papillary dermis and a much looser connective tissue in the subcutaneous layer. These extend and are connected to the intermuscular septa. Fascia has been increasingly recognized as important in the body frame. The mantle is constantly changing even in physical orientation with its underlying fascial fabrics and undertaking forces just like bone trabecular remodeling lines even without definite observable form changes. The usefulness of herbs with fascial actions [6] can be viewed in the integrative formwork for dermatitis (Figure 3).

Internal systems interact at this border zone. The heart circulation provides perfusion; the inner gut and nutrients allow for redundancy and reserve capacity; and CM describes the internal food immunological support mechanisms for this border zone.

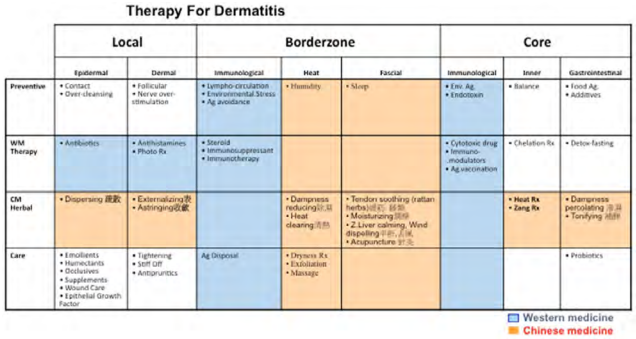

Figure 3: Complementary use of western medicine and Chinese medicine therapies in dermatitis. Tendon soothing therapies may reduce itch and inflammation.

Level 2: The Under-layer Interface

This multidimensional space is filled by fascial, circulatory and neurohumoral elements. These elements contribute to shaping interactions between external and internal domains. The fascia permeates from the mantle down to deeper loose connective tissue, extending to the dense intermuscular septa tied to bones, and reaching deeper tissues. In this space, vasculature under neural control and other physical and biochemical influences affect perfusion and microcirculation.

The connective tissues form a complex with a network among different parts of the body with different mechanical tensions. It contains proteins such as fibronectin that can be activated by fibroblasts to stretch out, increasing the density of the tissues for cell migration [7,8]. An intricate network of macrophages and inflammatory cells, epithelial cells, cytokines and growth factors [9] as well as matrix stiffness [10] and constituents [11] regulates my fibroblast differentiation. Fibroblasts migrating to tissues with different tension would change into different phenotypes accordingly: becoming chondrocytes when near the knee, and becoming osteoblasts and then osteocytes (bone cells) when at the periosteum [12]. Connective tissues are built from the mesoderm. It can be said that the living organism starts to build such a network with paths for the transportation of energy signals [13]. (The main pathways can be called Meridians).

In the network, both nervous and vascular elements support carrying the necessary nutrients, oxygen, proteins, reaching all organs, as well as immunity cells that migrate out. With an uneven spread of connective network when over-strained, the collecting ducts of the lymphatic vessels may become unable to drain the metabolic and cell debris [14]. A similar dimension, the Wei 衛氣 as a protective shielding layer and process, is described in CM as for laying over the mantle, warming and nourish skin and muscles, regulating on-off sweat

mechanisms, and preventing malevolent influences to prevail as a defense mechanism. While organic support of the body is bestowed by the major body organ systems, it is the interactional processes in between that are emphasized in CM (Figure 4).

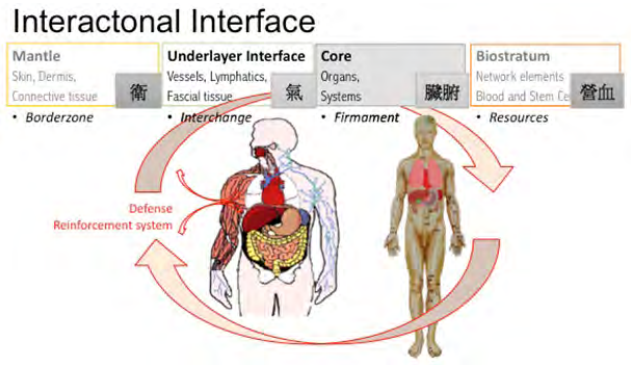

Figure 4: The inner core organic support is mediated by the under-layer as an interface with the mantle to the external environment.

With bones, muscles with the soft tissue organization, the basic motor functions have a base: having the skeleton as pillars, channels as reinforcement system like battalions, tendons and sinews unyielding, muscles like walls, and skins and hairs to protect them [15]. Bone acts as lever, joint as fulcrum, muscle for power, and tendons maintain resilience in the dynamics. The bone-tendon-ligament-muscle system is enclosed by stiff connective tissue layers that stabilize, support, and coordinates the activities. Weather, gravitational demands, habitual poise and tension, and weathering will influence the interaction in the fascia and muscles, while a good quality body interface would bring together the body connected in dynamics up and down throughout the body and layering neatly and orderly. Body health thereby is improved.

Level 3: The Organ Systems

The establishment of core organ systems under nervous, endocrine, circulatory, respiratory, digestive, excretory, reproductive, and musculoskeletal systems has tremendous impact on detail comprehension of the body. WM classified organs that started with reductionistic approaches through an attempt to provide explanation in terms of smaller fundamental entities, introduced by Descartes in Part V of his "Discourses" of 1637 to view it like a clockwork machine. Really, these major body systems of nervous, endocrine, circulatory, respiratory, digestive, excretory, reproductive can be seen as operating systems, each functioning for a designated purpose.

As every parts of the body are much interrelated, these WM body systems leave gaps in reconstructing the whole. As one integral whole, five subsystems are described below. They constitute the whole at least in a management science perspective (Figure 5).

The Food Handling System for Acquisition

While the body takes in external substances for the benefit of nutrition, the body also faces things foreign not being tolerated. In general, food is both nutritive to be useful as well as pathogenic or antigenic to be guarded, and processed through the respective digestive routes and vigilant neuro-immune mechanisms. Comprehensive food handling concepts essentially put these back all together while the WM perspective isolating the digestive system in body discussions would highlight only the nutritive processes. While WM describes

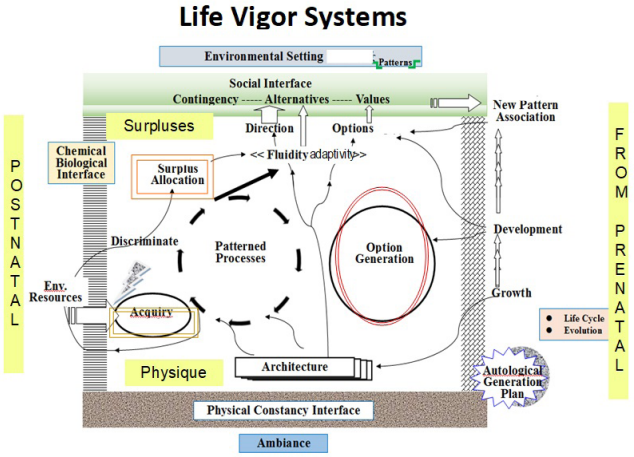

Figure 5: An individual, starting prenatally, grows up with a physical constancy interface ambient to his environment as having a certain physique. Postnatal discriminative acquisition allows body forward development. Facing his environment in patterns, his social interface is met with contingency, alternatives and underlying values. With his physique and acquiry, the operative major organ systems support living needs. Option generations depending on scenarios are related to readiness of resources and coded memory of successes. All these well patterned tend to furnish surpluses, which further provide fluidity in adaptiveness and new patterns to suit survival.

organ meaning a fully differentiated structural and functional mass in one unit specialized for some particular function, and system to mean a related organ group interactive for some particular specialized function, there can also be organ dusters. This "organ cluster complex" means a cluster of organs packed together in one functional structural complex, being closely interactive for some related specialized function. Organ clustering could have phylogenetic origin in facilitating close interaction.

The Zang Spleen (*Z·Spleen*) has immunological and digestive functions. *Z·Spleen* in CM is not spleen, though names similar. Zang Organs (*Z·Organs*) definitely are not the WM organs referred to with the same name. The clustered association of gut with its gut mucosa and pancreas and the spleen works together as a functional structural complex closely interacting with supporting mechanisms. It embraces the whole handling mechanism for food taken in. It is coupled with stomach function. Re-discovering it as food-handling mechanism as a whole [16], the mechanism of choosing for food before ingesting is linked with gut hormones and neural mechanisms [17].

The nervous system is related inside this view. The Enteric Neural System (ENS) is a network of neurons and glial cells that coordinate GI function [18]. Most enteric processes, including immune response, detecting nutrients, motility, microvascular circulation, and epithelial product and fluid secretion, are mediated by the ENS [19]. The vagus communicates with the ENS [20] and is one of the primary bidirectional routes of communication between the gut and the brain. Vagal afferent neurons play a crucial role in regulating host behavior, including feeding behavior [21]. It is currently well recognized that vagus signals can mediate psychiatric and inflammatory disorders [22]. The vagus itself mediates GI-sensory signaling to dorsal hippocampal glutamatergic neurons, and promotes hippocampal-dependent learning and memory function [23]. Memory is related to gut feelings. Gut-derived signals whether vagal [24] or endocrine [25] interact with the higher brain to regulate memory and cognition.

Dysfunction of vegetative nervous system of gastrointestinal tract coexists. The majority of patients with *Z·Spleen* dysfunction with chronic diarrhea and peptic ulcer have an overactive parasympathetic nervous system. Through balancing the up-flow and down-flow cycling movements, the functional activities of vegetative nervous system can be restored to help other multi-organ disturbances [16].

The bidirectional communication between the brain and the gut [26] include gut microbiota interactions [27,28], which also influence innate and adaptive immunity early in life [29]. Gut microbiota plays a role in developmental programming of the brain, specifically, synapse maturation and synaptogenesis [30]. As the gut microbiota interacts with elements of the host neuroendocrine system to modify host behaviors, stress, eating behavior, sexual behavior and sociability are affected [31].

With this view of a functional structural complex closely interacting to embrace the whole handling mechanism for food taken in, it becomes simpler to understand many more maturational changes occurring in the immunity apparatus while intestinal absorption gradually assumes full function after birth. Gut feelings are fed in to the hippocampus, which has a rapid expansion in the first two years of life [32]. The vagus nerve facilitates hippocampal neurogenesis [33]. The hippocampus expands and develops at the age when gut development and microbiota are established as visceral sensations and the enteric nervous system develop together. All this will open more research findings by scientific studies. It should help future medicine to understand how food choice patterns could affect even the immunological development of the "self" for the person to protect oneself and to match and tolerate his environment better.

The Patternable Energy-Process Driver

Air for use in cellular metabolism prevails in organisms. Plants use stomata to provide a steady flow of air throughout the plant's network of air channels [34]. The animal kingdom has evolved unique ways of extracting oxygen from the air for use in cellular respiration. Gas exchange in frogs can be done with their wet skin acting as a respiratory surface. For lung respiration, frogs use mouth retracting the throat instead of a diaphragm to draw air into them. Vertebrates evolved to use lungs. In mammals, the lungs normally develop as paired ventral outgrowths of the foregut endoderm [35].

The body changes with the environment to achieve steady states of homeostasis. Nervous control from the respiratory pacemaker system in the brainstem causes contraction of the diaphragm and intercostal muscles. The balance of the inspiratory and then orderly expiratory descending movements depends on the stability and dynamics of each phase. Acclimatization refers to the physiological adaptation to suit different conditions of climate or environment. Cardiovascular, respiratory and cellular metabolism adapts to allow living in high altitudes [36]. Residual volume (lung volume after complete expiration) is doubled in these highlanders.

The body also adapts to and fits its surrounding psychosocial environment. Breathing is behavioral dependent, and not just a stereotypic rhythm. Pontine respiratory nuclei inputs to medullary rhythmogenic circuits shape and adapt the breathing pattern, particularly mediating an inspiratory off-switch associated with postinspiratory glottal constriction, which determines timing, duration, and patterning of respiratory airflow. There are non-rhythmic drives during speech, singing and swallowing. To meet changes in internal and external states effectively, the breathing pattern changes in speed and complexity to cope, patterning from eupneic to adaptive breathing linked to exploratory (foraging and sniffing) and expulsive (vocalizing, coughing, sneezing, and retching) behaviors, as well as conveyance of basic emotions [37]. When nervous, respiratory rhythm is affected by the degree of anxiety even during quiet breathing [38]. The lung is known as the delicate organ. The lung has an innate aversion to cold, to heat, to dryness, to dampness. It is also easily affected by nervous stress. A loss of voice is observed after a day without sleep.

The lung is the essential respiration organ to bring in oxygen. The phases of lung movement and their balance can affect the Qi processes of the body according to CM. Its related tidal action at tissue level can be likened to a sea beach lubricating organs with necessary materials. With this perspective with the above characteristics, the Zang Lung (*Z·Lung*) provides the tidal energy to the boundary and body border-zone. Even and smooth respiratory cycles offer much to tissues and the body's peaceful balance. CM for Z·Lung noticed that, together with intestine clearing process, the hair of the body and head would be lustrous. The Z·Lung functions to warm the tissues between the skin and muscles, replenish the skin, nourish the muscles, and regulate the opening and closing of the pores, and protects against malevolent factors. Perfusion assisted by high tidal pressure generated by deep breathing would flood and empty dynamically to perfuse tissues. Pranayama has been shown, over time, to reduce oxygen consumption per unit work [39] with increase handgrip strength [40] and improve autonomic function [41]. Gongfu fighters trained their breath to fight.

To acclimatize to environment, the body can also achieve it actively. The lung is the only organ that the body can consciously alter its function by different dimensions of rhythm, depth and pace to pattern body processes. The practice of conscious inhalation, retention and exhalation in Pranayama can be either fast or slow. It improves pulmonary function [42] and cardiovascular profile [43] with decreased heart rate and decreased blood pressure, and even heat acclimatization [44]. Poor stress acclimatization is often associated with rapid shallow breathing.

The respiratory lining has defensive functions [45], amongst the three major internal-external interfaces, lungs, intestine, and skin. Apart from airway epithelial host defense functions, rhythmic upward beating action of the cilia to clear the airways removes potential harmful substances. The lung also has non-respiratory functions including filtering out small blood clots and any gas micro-bubbles incidentally in the venous blood stream. Synchronization in lung patterns is important.

The brain and lung can be both participatory and bilateral in returns. Breath holding has been shown to induce theta waves [46] reducing anxiety. The lung contributes much to physical vitality. The system goes along synchronized in a patterned environment generally, while it can be innately re-patterned when necessary.

The Situational Option-Generation System

The person's life and living history, current climate, and environmental exposures may all affect the individual's behavior in actuation and adaptation. For the brain to adapt and actualize appropriately for a change in circumstance, the body needs be prepared to be readily maneuverable. The required body parts have to be well perfused and irrigated with essential materials to suit the need, which may be different in motion and in emotion. Mastery with integrity and

integrality is good control of the functional mode in response to environment, according to coded memory for coherent circulatory dynamics maintained by intrinsic structural functional characteristics of the heart with stabilizing mechanisms to maintain circulation. Thanks to modern re-awakening for neurocardiology [47-49] establishing the interplays of the nervous and cardiovascular systems, that these are better appreciated.

The Cortical-autonomic-medullary-heart Complex has its lower medulla-autonomic heart system reflexively regulating stability of the circulation, while connections up the higher cortical autonomous system provides regulation for situational circulatory responses, motive or emotive as necessary. The brain is well involved. The central components are a part of the limbic brain. Conscious efforts could mode cardiovascular function through the classical involuntary ANS [50,51]. Cortical function through projections, to autonomic control centers having direct control over sympathetic and parasympathetic activity, provides mechanisms for volitional option-control of cardiovascular function (Figure 6).

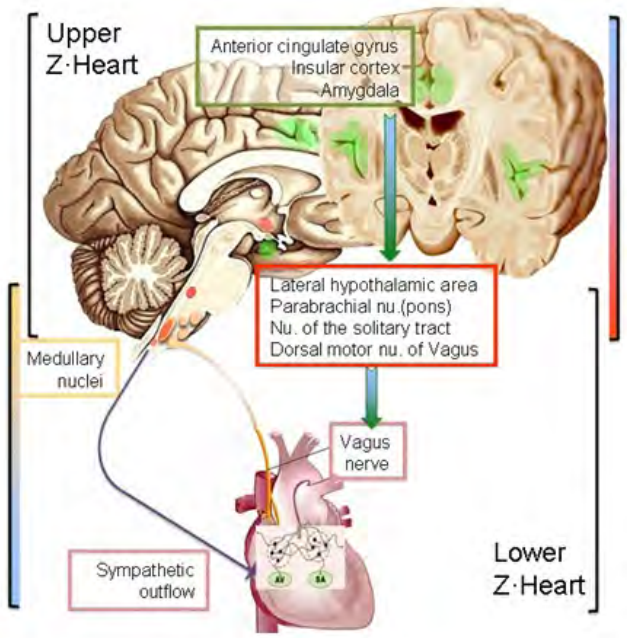

Figure 6: Zang Heart, functional structure. The underlying medullary-autonomic lower complex maintains autonomous circulatory dynamics running reflexively to provide basic stability. Circulatory motive or emotive modes are driven by the resolution signals from the cortical autonomic-system. The limbic systems above in the upper complex, under previous memory registered with adaptive changes of heart and body arousal, set the level of motivational behaviors to face emotional events or stress environment.

CM views the Zang Heart (Z·Heart) perceiving and handling various stimuli more globally [52]. Basic circulatory stability is regulated and maintained by the underlying medullary-autonomic lower complex. Circulatory modes are driven by the resolution signals from the cortical autonomic-system, and memory is a feature of the setup. The heart pangs, pulse races in apprehension, love and other emotional behavior. The whole setup (Figure 6) governs a delicate subliminal reflexive system to condition freewheeling of the circulation, patterned for motional assertions and emotional body reactions [52]. The upper complex monitors circulatory dynamic responses through cortical sampling of direct sensed environmental and retrieved past-stored data and senses how the body is feeling. Resolution signals are sent down to the medulla and heart to adjust situational circulatory modes. It may just well be that the heart is uniquely positioned as a powerful central mediating point interconnecting body and mind, motivity and emotion. Unhappy emotional events, threatening life situations and motivational plans referring to previous memory banks for a charted course are registered with adaptive changes of heart and body arousal, enabling the body to face emotional events or stress environment. Autonomous circulatory dynamics runs reflexively to provide basic stability. The limbic systems above in the upper complex set the level of arousal and are involved in motivation and reinforcing behaviors. The heart itself provides the necessary motive power for supporting perfusion for activities as the body transforms between emotive or motive optional modes. The balance to be motive or emotive depends on its emphasis and strategic position to prepare for a body well perfused and readily maneuverable. The brain senses and works out for the body itself for that environment to determine its mobility or motivation as directed by motives or emotive moves according to their importance, even "fight or flight" responses. The heart is that delicate organ which becomes the chief sensor up brain for body state and the chief brain-down effecter such that the body can be congruent with the mind to meet living demands, while the brain senses and coordinates with them.

The whole Z·Heart complex enables responses and some decision systems, and makes prepared perfusional support, all in a way reacting for self-preservation. The thermal influence of the environment may also induce neurocardiologic consequences, sometimes clinically significant [52,53]. Circadian circulatory rhythms would follow the patterned climate in perfusion function [54]. The body with variable motivity and emotivity in terms of integral needs has to be perfused to fulfill its adaptation and actions for functional actualization. Cortical function through projections, to autonomic control centers having direct control over sympathetic and parasympathetic activity, provides mechanisms for volitional control of cardiovascular function [50,55,56]. The Z·Heart provides circulatory responses by situational recognition primed with past experiences and memories (Figure 7). CM-described the capacity to transform spirit (into different modes of mental mastery). As it integrates emotional and cognitive components of the mind with autonomic cardiovascular control, the whole complex is connected to the whole central nervous system and the body, as neural and circulatory networks evolves together with repeated remodeling since development [52,57]. Perfusion and neural activities go together and information and perfusional elements go hand in hand. Remodeling of their interactions produces patterned responses to stimuli or stress, so that perfusion and nervous activity can be in balance and matched during endeavors or actions. Matching perfusion with activity is crucial. Poor synchrony means poor internal health and risks, even stroke and cognitive disorders [58].

These mechanisms together with neuroendocrinal interactions with the thermal regulation would work for perfusion needs so that, when working well to adapt to the environment, the Z·Heart synchronizes with all organs and the whole works with mastery and efficiency, in a state demonstrated as psycho physiological coherence with the whole body in optimal function [59,60], as affecting and are affected by body organs.

The CM Z·Heart could be taken as functioning to transform different mental mastery or situational endeavors. CM somehow saw in ancient times that link as a whole between the mind and heart, which

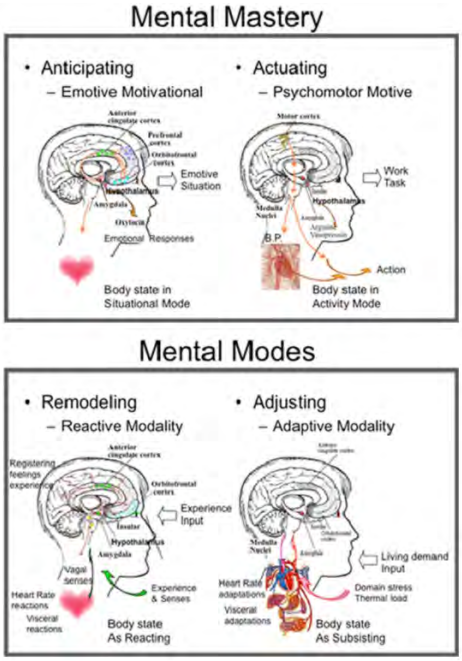

Figure 7: Zang Heart, transforming mental mastery.

reciprocal interactions are established with recent advances. CM literature illustrates how the mind, body, heat, brain, and thermal environment influence each other. The western Cartesian mind-body dualism, viewing the two as essentially separate entities since Descartes [60] would make matters worse [61]. That blinded scholars to see how, during endeavors in living, nervous activities and perfusional support are actually closely coupled together to accomplish it [52]. In fact, core directives for life necessitate the heart and brain to evolve and work together as a unit to bring forward the whole person to live for life.

The Cultivated Action-for-life System

The above vital systems all start early in life. The body has its endowment related to evolution. The constitution and program for growth and development is very much determined for each individual though some variation allowed for. Throughout Chordata vertebrates, the hind part is long and strong to drive the body towards its goals.

Over the functions of excretory and related bladder function, reproduction and related sexual functions for life, there need be associated neuro-endocrine mechanisms in mating, and for controlling water and fluid metabolism. The one retro-infra-peritoneal organ mass of adrenal, kidneys and bladder, ovaries, reproductive structures, and the pelvic and back musculature may be taken as one organ cluster complex. This mass often constitutes more than half the whole body mass. It can be viewed as one complex because intricate interrelationship between parts in that structure and with neuro-endocrine mechanisms together subserves functions for life.

The adrenal with its Hypothalamus-Pituitary-Adrenal (HPA) axis and the kidney and renal auto-regulatory mechanisms are providing the cohesive internal stability. The close inter-coordination of these two functions can be much elaborated, though separately put in WM as different systems. Their neuro-endocrinal and functional tie with reproductive system and physiology would be more obvious when not distracted by separating them.

The back and pelvic musculature forms one important functional group. These muscles are also basic to agility and supporting assertion of stable movements. Life functions can be attributed to postural, coping and aggressive dynamics displayed by the back and pelvic musculature. These are supported by the adrenals, meeting life needs. The postural and pelvic muscles are muscles for courting and mating. Together with muscles coordinating the two perineal tracts, they are important in animals for reproduction, to facilitate smooth operational mechanisms, not just in muscular terms. To illustrate, a lordosis behavior (standing coupled with a strong vertebral dorsiflexion) during courting in rats is, after stimulation up, a facilitated series of responses from the hormone-primed hypothalamus powerfully down activating over the large postural hind muscles to assure smooth courtship performance for mating. Any step missing would disable the male to fertilize [62].

The brain is involved, being cultivated behavior-determined. For neural adaptations with hormones determine programmed behavior through specific hormone receptors in the brain, cultural influences are more important for drives. Underlying motivation mechanisms may be a general arousal or a specific mechanism for each particular biological need. Desires are cultivated on top with social experiences and cultural influences. Even with impressive intellectual capacity with the cerebral cortex, humans are still subject to the wide variety of facilitating and inhibitory drive mechanisms. These cultural memories and drives may reside in neuroendocrine substructures acting through the musculature complex to coordinate responses for coping, aggression and will-set dynamics of life and living.

This one integral, closely interactive, closely inter-coordinated organ-cluster complex, serving reproduction, excretion, mating and coping behaviors and assertion with stress tolerance in living have been collectively viewed as the Z·Kidney [63]. Interestingly, noted in CM, strengthening the postural muscle coordination and power would strengthen the axis up to the brain. Support of this cohesive internal stability and facilitative cohesiveness of interactive mode would strengthen endurance to the environment for better senescence. The functional features of that one structure include controlling water and fluid metabolism, related bladder function, sexual behaviors, coping and aggression, and agility such as gongfu dynamics and supporting assertion of fine stable movements including dancing and other craftsmanship skills.

The Saliency Allocation-for-endeavor System

Physical and mental functions need be brought together to match situations instantly and anticipatorily with good grasp of surrounding changes. For the liver and its provision of metabolic processes on one end, and operations meeting external levels on the other end, there needs be a mechanism to suffice energy supporting endeavors and performance. The liver has its mechanisms to work out adaptively for provision of needs for resource synchronization to cater optimally for situations. Saliency mechanisms provide the gist.

In keeping saliency, the body and mind are focused on situations and environment, and extra efforts minimized. Equipped with the mental-visual-tactile-mental coordinative infrastructure and cortical associative system, a good mental grasp spares unnecessary energy waste during operations [64]. Situation change requires a new grasp for readiness, altering habituated patterns if necessary. The visual system is well-evolved for input-output linkages, error tracking, and formal interactive adjustments. Proprioception and vision go reflexively

together to reduce scattering of energy processes during endeavors [65]. Visual attention coupled with anticipatory mechanisms through scenarios formed from lifetime and accustomed scenes would put the body poised for operational modes set for accustomed moments. Coupled with scenarios, the prefrontal cortex holds a plan in focus for long enough duration to complete it.

The liver provides the body for sufficient metabolic support to activities. However supported, metabolic constraints are certainly present, and the liver works out frugally by its tripartite complex with metabolic, neurologic, and rhythmic signaling control [66]. Towards matching diverse internal cues, body operations are configured with patterns. Thus nutrient and energy metabolism is synchronized, with rhythms adaptive to new life scenarios.

Formed scenarios facilitate their execution, overcoming pertinent variations in activity. Short of a good match in preparedness to the situations for resource restoration, the body or mind may be tuned up, or ill tuned, or become exhausted, and may result in anxiety or depression. The liver-brain energizer base is evolved in balance and control to cater for environmental and situational demand [66] facilitating cost savings. CM views this Z·Liver as the capital, starting from gut resources to the pattern-configurable liver-brain base that supports mental and physical dynamics and the associated reactive and patterned recruitment of hepato-splanchnic circulation [66,67]. Trade-offs is restored at night. A person has to face many situations. If a good grasp is achieved, situational demands are well disposed, the body and mind operations are well coordinated, and life and work silently go on.

Level 4: The Deep Bio-Stratum of Resources

These consist of many elements, from cellular to sub cellular levels. The cellular and intercellular components of physiology and pathology are well known. To understand further, the biophysical phenomena at this level not emphasized in the past are now enhanced to a great extent. The cytoskeleton and the biophysical actions of various molecular networks are now recognized as important in the whole body functions. These would be aligned with the above few levels of the body to achieve effective output, and more studies can be done.

This level includes other elements, particularly the genetic and epigenetic mechanisms. These once thought only affecting hereditary and developmental disorders are now known to be important for grown-ups, even in elderly problems.

Applications

The Core-to-match Model

The above is a highly abbreviated account of the five life-vigor systems constituted by organ complexes. They are much better elaborated in original lengthy dissertations [16,52,63,64,66] and scientific evidences therein should be searched for in case of doubts. With this body framework, it would be easier to understand the development of an individual in which the core-vs-match [68] mechanism as rings after rings of development allows the body to function integrally well in the changing environment.

An example of deviation in such rings after rings of development can probably be found in autism. Rather than simply deleterious genes contributing to the clinical problem, it is found that many parts altered that are contributing to the whole [69]. It certainly starts in fetal life probably after the mid pregnancy, but postnatal mal-development also counts a major part, such that large therapeutic margins thus exist postnatally. Genes are common gene variants altered to make the body having susceptibility similarly carried by other psychiatric developmental disorders. Gut microbiome keys in early. Then there in the gut is an enteric nervous system that associates with gut microbiome maladaptive change that affect brain and behavior. All these early body changes and mind changes build up the many autistic features. Early impaired matching capabilities in visuomotor coordination, resource functioning, food guardedness, atypical reward-seeking and self-stimulatory drives lead to more atypical ties with emotion-evading and altered self-relevant reward behaviors. Sleep problems impair remodeling. Before large-scale brain networks later mature, former impairments as rings-on-rings system maladjustments have driven behavior and attention dysfunctional processes and secondary deranged neural connectivity. These understanding depict what most researchers cannot see the whole and spent futile efforts messing only the parts. And it is not all with the brain. Using the core and trajectory hypothesis, gaps in understanding are filled.

Refreshing Pathophysiological understanding

The body changes and reacts with the environment to achieve steady states of homeostasis. As the body adapts to and fits its surrounding physical environment and social and mental influences, the four levels would be variously affected. For addressing therapy, when there is a single problem, correction is specific. When multiple levels are affected to varying degrees, therapy aims for correction, restitution and support.

The endomysial myofascia net, as a slowly reacting but plastic system, accommodating postural patterns, is strung with repetitive use to align to the lines of tension and movement. Subject to environmental asymmetrical shears and wears, forces deform it with effects intercalated such that the surface healed and rehabilitated several times. The resultant outer mantle shaped for that moment of space-time would at another time form another way of layering that conforms to the new space-time. Traction would affect snug dynamics. A scratch would invoke more scratch. Even a touch would become irritating as well. This is especially so in patients with tensed up fascia and ligaments, through tightened tendons. Such is common in patients with inadequate sleep, tense-up with incessant work, and toiling with a lot of computer games. A person tight cannot voluntary breathe with slow ordered breathing, unless tuned by a bystander to become relaxed.

While WM in dermatitis has emphasized on searching for the allergic list with allergen tests, it must be understood that irritants in fact include biological, chemical, and physical ones. For this matter, WM and CM complement. Hence, in patients with dried-up skin, particularly like what in CM called dry-heat 燥熱, the dry skin can be seen involving deep inside, even beyond the skin, often associated with thickening as well as easy bruising. Here it is in CM that treatment to soothe the tendons 緩筋 and its related Z·Liver, as well as moistening inside while also skin moisturizing, would be helpful to ease itch and the skin condition (Figure 3). While itch is currently studied and interpreted with neurological mechanisms, relief therapy can never be paralleled with finding the real physical insult. Such treatment at site can break the vicious itch-scratch cycle. Similarly, erythematotelangiectatic and papulopustular rosacea that seems difficult to be treated in WM, except with presently laser therapy, can remit quite readily and for a long time with herbal formula that effectively change vascular

hyper excitability and it related heat turnover could restore the circulatory flush or capillary dilatation of the disease for a long time.

For other adaptations of the body to its surrounding, any situation change requires a new grasp for readiness, altering habituated patterns if necessary. Whenever there is a significant change, the grip heightens for grasping, eyes are perfused, and hand are at the same time perfused [70], all being prepared for any switch needed for re-adjusting physical or mental grasp. When eyes are closed with no more dissipative involvement, the grasp is loosened, and trade-offs are restored [67]. A person tight with over-burnt eyes cannot sustain looking 30 degrees down, being highly strung. Re-tuned, his eye and mind settled for more concentrated thoughts and efforts.

A lot more on pathophysiological changes can be elaborated. With this system of body so defined, climates and weather changes with body influence can be better understood. Both WM and CM have an array of descriptions of pathology as for body changes found in such environments.

Implications

Diagnostics

Some may notice the much similarity to CM. It is recommended to read on those CM syndromes. For example, TCM classifies Z·Kidney dysfunction by its clinical symptom complex into Z·Kidney Yang deficiency, Yin deficiency, Qi deficiency and Essence deficiency [16,52,63,64,66,71-74].

An integrative embracive diagnostic framework can be considered, first by understanding the strengths of WM and CM [75]. Additional evaluation for forms and fascia alignment is needed when it comes to workup as for a movement specialist. Use of the core and match model for assessing deviations can be considered in mental dysfunction and health disorder, obesity as an example. This is particularly worth considering developmental disorders such as autism [69].

In general terms, diagnosis would cover biomedical lesions, functional structures with body dysfunctions, the whole body dysfunctional configurations, and lifestyle mal-adaptations with poor snug or poor fit problems. Then a range of causal relationships between body, core, layers, matching and environment for their relative weights for the cause can be understood in a better picture.

Spectrum of practice modes in medicine

The person seeks as a whole individual to re-attain a good adaptation of the surroundings and adaptively to environment by matching his system competency with efficiency and effectiveness. On the other hand, clinicians would be looking for precision medicine to better effects and less side problems.

Essentially, from early biomedicine to modern approaches and now to CM, four forms of practice of medicine can be described: for lesions, multicausal, holistic, and integral (Table 1). Each has its own advantages and limitations and ways to establish evidence and role. Different situations may call for different approaches. Problems and issues need be matched when certain actions and dispositions are made. How much weight for a certain situation is needed by general or specific evaluation and treatment is different in situations.

Advantages of this Parallel Framework

- It would be useful to understand with the closely related organ complexes with their innate coherence, which in certain conditions and body problems, explain better clinically than just grouping many disparate functional entities and organs
- This framework pulls CM concepts to modern medicine and will allow elaborations in plain words
- It allows WM workers to expand onto using some parts of the CM framework yet not losing scientific emphasis of microscopic cellular studies, while recognizing that whole body processes in many clinical occasions can explain problems and handle them more effectively. Otherwise, a lot of effective measures are lost from simply using the WM approach when it can otherwise be effective
- This framework provides a more or less seamless framework between social, physical, biochemical and cellular perspectives,

	Modern Medicine to Chinese Medicine			
	Lesion-based	**Multicausal approach**	**Holistic approach**	**Integral Approach**
Basis	Lesion	Causal relationship	Whole person. Multifaceted.	Succinctly and saliently fitted and targeted
Approach	One lesion one disease	Cause-oriented - solving the problem through analysing the root, pertinent and associated causes	Full coverage of "listable" problems of the whole person	The complex solved at a key impact point
Operational focus	Pathophysiology of the lesion	Multiple factors searched for and weighed in terms of "significance"	Macro - physical, psychological and social aspects Micro - genetic, biochemical, cellular, structural	Find critical line of approach, cracking the problems, with nothing lacking - use insight-directing tools
Management	Directing towards the LESION	Handling the CAUSES all together	Multidisciplinary - correct EVERY deviation from the balanced state	Addressing the KEY imbalance
Limitations	When not too exact, not able to address the underlying problem	Difficult to really identify the most significant cause to handle the problem effectively	Expensive to be comprehensive. Some "problems" may be missed out and not handled	Difficult - required insight enhanced by insight tools
Nature	Standardized ←•—•—•—•—•—•—•—•—•—•—•→ Personalized			
Validation	Randomized Control Trials (RCT)	RCT with matching statistics	Systemic Biology	Abduction and Simulation

Table 1: Clinical Approaches, from lesion to complexity treatment.

which have unnecessarily been dichotomizing with big gaps. The important past observations are retained while the present model offers a more stable comprehensible entity

- As the body changes and reacts with the environment to achieve steady states of homeostasis, academics are currently moving to view the interdependent brain-body as a whole, with the dynamic and complex brain tightly coupled and integrated with the rest of the body as a self-organized system [76]. Only it lacks a good clinical framework to work on. This framework with an interactive biological perspective would embrace the physical, biochemical and social environmental influences as the body adapts to and fits its surrounding

- As clinical framework depends on pathophysiological understanding, the wide gap between CM and WM description of the body haunts further integration and the mislinkage often disheartening to furthering academic pursuits [77]. This framework could facilitate a concerted look at the body in both CM and WM perspective. The distaste in parts of the academic world for possibility of pseudoscience [78] in the vast system of CM practice would become unnecessary

- While the major WM body systems may be viewed as operating systems, the whole body subsystem from body clusters could be viewed as functioning for life vigor. The operating systems and life vigor subsystems function up to a border zone to interact effectively with the surrounding environment.

- This framework could be useful in both body and mental sciences and allows probing for more useful research and observations to understand the brain and body as one closed system to explain disorders better.

References

1. Yu ECL (2019) Rethinking Traditional Chinese Medicine In Modern Healthcare. Asia Global online, Hong Kong

2. The Book of Change by Yi Chuan 伊川易傳 (2013) In Wenyuange Siku Quanshu 文淵閣四庫全書. Taipei: Taiwan shangwu yinshuguan, Taiwan.

3. Liang F, Li L, Wang M, Nui X, Zhan J, et al. (2013). Molecular network and chemical fragment-based characteristics of medicinal herbs with cold and hot properties from Chinese medicine. J Ethnopharm 148: 770-779.

4. Fu X, Mervin LH, Li X, Yu H, Li J, et al. (2017) Toward understanding the cold, hot, and neutral nature of Chinese Medicines using insilico mode-of-action analysis. J Chem Inf Model 57: 468-483.

5. Yu S, Li C, Ding Y, Huang S, Wang W, et al. (2020) Exploring the 'cold/hot' properties of traditional Chinese medicine by cell temperature measurement. Pharm Biol 58: 208-218.

6. Yu ECL (2019) Newsletter: Association for Integrative Aesthetic Medicine Hong Kong Limited 1: 3-5.

7. Rhee S (2009) Fibroblasts in three dimensional matrices: cell migration and matrix remodeling. Exp Mol Med 41: 858-865.

8. van Helvert S, Storm C, Friedl P (2017) Mechanoreciprocity in cell migration. Nature Cell Biology 20: 8-20.

9. Kis K, Liu X, Hagood JS (2011) Myofibroblast differentiation and survival in fibrotic disease. Expert Rev Mol Med 13: 27.

10. Wang J, Zohar R, McCulloch CA (2006) Multiple roles of alpha-smooth muscle actin in mechanotransduction. Exp Cell Res 312: 205-214.

11. Baranyi U, Winter B, Gugerell A, Hegedus B, Brostjan C, et al. (2019) Primary Human Fibroblasts in Culture Switch to a Myofibroblast-Like Phenotype Independently of TGF Beta. Cells 8: 721.

12. Yamamoto K, Kishida T, Sato Y, Nishioka K, Ejima A, et al. (2015) Direct conversion of human fibroblasts into functional osteoblasts by defined factors. Proc Natl Acad Sci USA 112: 6152-6157.

13. Fung PCW, Kong RKC (2018) Relationship among the Meridians, Sinew Channels and Integrative Five Fluid Circulation System. Traditional Chinese Medicine 7: 74-92.

14. Fung PCW (2013) Chapter 5. Plausible Biomedical Consequences of Acupuncture Applied at Sites Characteristic of Acupoints in the Connective-Tissue-Interstitial-Fluid System. In: Chen, L.L. and Cheng, T.O., Eds., Acupuncture in Modern Medicine, In Tech Open, Rijeka, 95-131.

15. Chinese Text Project (2020) Meridian. Chinese Text Project, China.

16. Yu ECL (2013) Redescription of Zang Spleen Model in Modern Anatomico-functional Terms. J Chin Med 24: 183-209.

17. Zanchi D, Depoorter A, Egloff L, Haller S, Mählmann L, et al. (2017) The impact of gut hormones on the neural circuit of appetite and satiety: A systematic review. Neurosci Biobehav Rev 80: 457-475.

18. Nagy N, Goldsteina AM (2017) Enteric nervous system development: A crest cell's journey from neural tube to colon. Semin Cell Dev Biol 66: 94-106.

19. Furness JB (2016) Integrated Neural and Endocrine Control of Gastrointestinal Function. In: Brierley S, Costa M (eds) The Enteric Nervous System. Advances in Experimental Medicine and Biology, vol 891, Springer, Cham.

20. Schemann M (2005) Control of gastrointestinal motility by the "gut brain" – the enteric nervous system. J Pediatr Gastroenterol Nutr 41: 4-6.

21. de Lartigue G, de la Serre CB, Espero E, Lee J, Raybould HE (2012) Leptin Resistance in Vagal Afferent Neurons Inhibits Cholecystokinin Signaling and Satiation in Diet Induced Obese Rats. PLoS One 7: 32967.

22. Breit S, Kupferberg A, Rogler G, Hasler G (2018) Vagus Nerve as Modulator of the Brain–Gut Axis in Psychiatric and inflammatory Disorders. Front Psychiat 9: 44.

23. Suarez AN, Hsu TM, Liu CM, Noble EE, Cortella AM, et al. (2018) Gut vagal sensory signaling regulates hippocampus function through multi-order pathways. Nat Commun 9: 2181.

24. Klarer M, Arnold M, Günther L, Winter C, Langhans W, et al. (2014) Gut vagal afferents differentially modulate innate anxiety and learned fear. J Neurosci 34: 7067-7076.

25. McGregor G, Malekizadeh Y, Harvey J (2015) Mini review: food for thought: regulation of synaptic function by metabolic hormones. Mol Endocrinol 29: 3-13.

26. Grenham S, Clarke G, Cryan JF, Dinan TG (2011) Brain-gut-microbe communication in health and disease. Front Physiol 2: 94.

27. Sampson TR, Mazmanian SK (2015) Control of brain development, function, and behavior by the microbiome. Cell Host Microbe 17: 565-576.

28. Sudo N (2019) Role of gut microbiota in brain function and stress-related pathology. Biosci Microbiota Food Health 38: 75-80.

29. Yamamoto M, Yamaguchi R, Munakata K, Takashima K, Nishiyama M, et al. (2012) A Microarray Analysis of Gnotobiotic Mice Indicating That Microbial Exposure During the Neonatal Period Plays an Essential Role in Immune System Development. BMC Genomics 13: 335.

30. Diaz Heijtz R, Wang S, Anuar F, Qian Y, Bjorkholm B, et al. (2011) Normal gut microbiota modulates brain development and behavior. Proc Natl Acad Sci USA 108: 3047-3052.

31. Cussotto S, Sandhu KV, Dinan TG, Cryan JF (2018) The Neuroendocrinology of the Microbiota-Gut-Brain Axis: A Behavioural Perspective. Front Neuroendocrinol 51: 80-101.

32. Gilmore JH, Shi F, Woolson SL, Knickmeyer RC, Short SJ, et al. (2012) Longitudinal development of cortical and subcortical gray matter from birth to 2 years. Cereb Cortex 22: 2478-2485.

33. Ogbonnaya ES, Felice D, Levone BR, Conroy L, Conroy LC, et al. (2018) The vagus nerve modulates BDNF expression and neurogenesis in the hippocampus. Eur Neuropsychopharmacol 28: 307-316.

34. Lundgren MR, Mathers A, Baillie AL, Dunn J, Wilson MJ, et al. (2019) Mesophyll porosity is modulated by the presence of functional stomata. Nature Communications 10.

35. Warburton D, Schwarz M, Tefft D, Flores-Delgado G, Anderson KD, et al. (2000) The molecular basis of lung morphogenesis. Mech Dev 92: 55-81.

36. Beall CM, Steegmann AT (2000) Human Adaptation to Climate: Temperature, Ultraviolet, Radiation and Altitude. Stinson S, Bogin B, O'Rourke D (eds,), In: Human Biology: an evolutionary and biocultural perspective. Wiley-Liss, USA.

37. Dutschmann M, Dick TE (2012) Pontine Mechanisms of Respiratory Control. Compr Physiol 2: 2443-2469.

38. Kato A, Takahashi K, Homma I (2017) Relationships between Trait and Respiratory Parameters during Quiet Breathing in Normal Subjects. The Journal of Physiological Sciences 68: 369-376.

39. Raju PS, Madhavi S, Prasad KV, Reddy MV, Reddy ME, et al. (1994) Comparison of effects of yoga & physical exercise in athletes. Indian J Med Res 100: 81-86.

40. Thangavel D, Gaur GS, Sharma VK, Bhavanani AB, Rajajeyakumar M, et al. (2014) Effect of slow and fast pranayama training on handgrip strength and endurance in healthy volunteers. J Clin Diagn Res 8: 1-3.

41. Pal G, Velkumary S, Madanmohan (2004) Effect of short-term practice of breathing exercises on autonomic functions in normal human volunteers. Indian J Med Res 120: 115-121.

42. Budhi RB, Payghan S, Deepeshwar S (2019) Changes in lung function measures following Bhastrika Pranayama (bellows breath) and running in healthy individuals. Int J Yoga 12: 233-239.

43. Nivethitha L, Mooventhan A, Manjunath NK (2016) Effects of Various Prāṇāyāma on Cardiovascular and Autonomic Variables. Anc Sci Life 36: 72-77.

44. Muzik O, Reilly KT, Diwadkar VA (2018) Brain over body"-A study on the willful regulation of autonomic function during cold exposure. Neuroimage 172: 632-641.

45. Amatngalim GD, Hiemstra PS (2018) Airway Epithelial Cell Function and Respiratory Host Defense in Chronic Obstructive Pulmonary Disease. Chin Med J (Engl) 131: 1099-1107.

46. Desai R, Tailor A, Bhatt T (2015) Effects of yoga on brain waves and structural activation: A review. Complement Ther Clin Pract 21: 112-118.

47. Sherman DG, Hart RG, Shi F (1987) Heart-brain interactions: neurocardiology or cardio neurology comes of age. Mayo Clin Proc 62: 1158-1160.

48. Penn MS, Bakken EE (2007) Heart-brain medicine: where we go from here and why. Cleve Clin J Med 74: 4-6.

49. Ritz K, van Buchem MA, Daemen MJ (2012) The heart-brain connection: mechanistic insights and models. Neth Heart J 21: 55-57.

50. Dikshit BB (1934) The production of cardiac irregularities by excitation of the hypothalamic centres. J Physiol 81: 382-394.

51. Silvani A, Calandra-Buonaura G, Dampney RAL, Cortelli P (2016) Brain–heart interactions: physiology and clinical implications. Philos Trans A Math Phys Eng Sci 374.

52. Yu ECL (2015) Reviewing Zang Heart to Create a New Comprehensive Anatomico-functional Model. J Chin Med 26: 28.

53. Pörtner HO (2010) Oxygen- and capacity-limitation of thermal tolerance: a matrix for integrating climate-related stressor effects in marine ecosystems. J Exp Biol 213: 881-893.

54. Schroeder A, Loh D, Jordan M, Roos K, Colwell C (2011) Circadian regulation of cardiovascular function: A role for vasoactive intestinal peptide. Am J Physiol Heart Circ Physiol 300: 241-250.

55. Cechetto DF, Saper CB (1990) Role of the cerebral cortex in autonomic function. In: Loewy AD, Spyer KM (eds,), Central Regulation of Autonomic Function. Oxford University Press, UK.

56. Gordan R, Gwathmey JK, Xie LH (2015) Autonomic and endocrine control of cardiovascular function**.** World J Cardiol 7: 204-214.

57. Feldman R (2006) From biological rhythms to social rhythms: physiological precursors of mother-infant synchrony. Develop Psychol 42: 175-188.

58. Tiller W, McCraty R, Atkinson M (1996) Cardiac coherence: A new non-invasive measure of autonomic system order. Altern Ther Health Med 2: 52-65.

59. McCraty R (2000) Psychophysiological coherence: A link between positive emotions, stress reduction, performance and health. Proceedings of the Eleventh International Congress on Stress, Mauna Lani Bay, Hawaii, USA.

60. Descartes RR, Florent SF, Homine D (1662) Apud Franciscum Moyardum & Petrum Leffen.

61. Sana M (2011) Mind-body Dualism: A critique from a Health Perspective. Monogr 9: 202-209.

62. Pffaff DW (1999) Drive: Neurobiological and molecular mechanisms of sexual motivation. Massachusetts Institute of Technology, USA.

63. Yu ECL (2011) Redescription of Zang Kidney model - Anatomico-functional Tie. J Chin Med 22: 19-35.

64. Yu ECL (2019) Salient Grasp of Situations as a Mechanism Against Stress for Zang Liver. Chinese J Med Res 2: 27-30.

65. Sarlegna FR, Sainburg RL (2009) The Roles of Vision and Proprioception in the Planning of Reaching Movements. Adv Exp Med Biol 629: 317-335.

66. Yu ECL (2019) Zang Liver as a Frugality Rhythmic System for Stability for Activities and Against Stress. Chinese J Med Res 2: 31-35.

67. Liu ZW, Shu J, Tu JY, Zhang CH, Hong J (2017) Liver in the Chinese and Western Medicine. Integr Med Int 4: 39-45.

68. Yu ECL (2020) CORE-vs-MATCH MODEL for Autism and Neuro-Developmental Disorders. J Paediatr Neonatol 2: 112.

69. Yu ECL (2020) Developing Autism, The Parts Become The Whole Scholars Press.

70. Stewart JM, Montgomery LD, Glover JL, Medow MS (2007) Changes in regional blood volume and blood flow during static handgrip. Am J Physiol Heart Circ Physiol 292: 215-223.

71. Yu ECL (2009) Understanding Traditional Chinese Medicine Organs in the context of modern medicine - Part 3 Zang Spleen. HK Pract 31: 64-78.

72. Yu ECL (2011) Understanding Traditional Chinese Medicine organs in the context of modern medicine – Part 4: Zang Lung. The Hong Kong Practitioner 33: 72-81.

73. Yu ECL (2007) Understanding Traditional Chinese Medicine Organs in the context of modern medicine - Part 2 Zang Heart. HK Pract 29: 427-436.

74. Yu ECL (2007) Understanding Traditional Chinese Medicine Organs in the context of modern medicine - Part 1 Zang Kidney. HK Pract 29: 311-320.

75. Yu ECL (1998) The Basic Clinical Diagnostic Framework Synergized. Chin Med J (Engl) 111: 460-465.

76. Palacios-García I, Parada FJ (2020) Measuring the Brain-Gut Axis in Psychological Sciences: A Necessary Challenge. Frontiers in Integrative Neuroscience 13: 73.

77. Cao C, Brown B (2019) Understanding Chinese medicine and western medicine to reach the maximum treatment benefit. J Transl Sci 5: 1-2.

78. https://en.wikipedia.org/wiki/Traditional_Chinese_medicine

Advances In Industrial Biotechnology | ISSN: 2639-5665

Advances In Microbiology Research | ISSN: 2689-694X

Archives Of Surgery And Surgical Education | ISSN: 2689-3126

Archives Of Urology

Archives Of Zoological Studies | ISSN: 2640-7779

Current Trends Medical And Biological Engineering

International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X

Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276

Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292

Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370

Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594

Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X

Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562

Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608

Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879

Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397

Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751

Journal Of Aquaculture & Fisheries | ISSN: 2576-5523

Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780

Journal Of Biotech Research & Biochemistry

Journal Of Brain & Neuroscience Research

Journal Of Cancer Biology & Treatment | ISSN: 2470-7546

Journal Of Cardiology Study & Research | ISSN: 2640-768X

Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943

Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771

Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844

Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801

Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978

Journal Of Cytology & Tissue Biology | ISSN: 2378-9107

Journal Of Dairy Research & Technology | ISSN: 2688-9315

Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783

Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X

Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798

Journal Of Environmental Science Current Research | ISSN: 2643-5020

Journal Of Food Science & Nutrition | ISSN: 2470-1076

Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X

Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566

Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485

Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662

Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999

Journal Of Hospice & Palliative Medical Care

Journal Of Human Endocrinology | ISSN: 2572-9640

Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654

Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493

Journal Of Light & Laser Current Trends

Journal Of Medicine Study & Research | ISSN: 2639-5657

Journal Of Modern Chemical Sciences

Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044

Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X

Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313

Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400

Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419

Journal Of Obesity & Weight Loss | ISSN: 2473-7372

Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887

Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052

Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X

Journal Of Pathology Clinical & Medical Research

Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649

Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670

Journal Of Plant Science Current Research | ISSN: 2639-3743

Journal Of Practical & Professional Nursing | ISSN: 2639-5681

Journal Of Protein Research & Bioinformatics

Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150

Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177

Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574

Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060

Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284

Journal Of Toxicology Current Research | ISSN: 2639-3735

Journal Of Translational Science And Research

Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193

Journal Of Virology & Antivirals

Sports Medicine And Injury Care Journal | ISSN: 2689-8829

Trends In Anatomy & Physiology | ISSN: 2640-7752