

1 The following topics by Gary S. Tong are functions, processes, and phenomena, all of which—with a few  
2 exceptions—are governed by the single factor of **glottoregulation**. Thus, the apparent complexity reduces to a  
3 few simple axiomatic elements (see line 000).

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#### 4 **Language**

5 (Lg) Currently, linguistics has not introduced a single significant addition to the most elementary facts of speech,  
6 but the field can now be brought up to date.

7 (Lg) (Physiol) Mirroring: the tool is present in many more actions than usually assumed; for example, it enables  
8 infants to learn speech through hearing, not by imitation.

9 (Lg) A rigorous proof of the hard wiring of grammar, as advanced by N. Chomsky in Universal Grammar.

10 (Lg) The general basis of articulation of language and of specific languages—something that has never been  
11 known.

12 (Lg) What is a syllable? It has been claimed to be impossible to define, but a definition is now finally available,  
13 and it is far from what has intuitively been assumed.

14 (Lg) The General Lingual Matrix (GLM)—a universal tool that systematizes grammar, vocabulary, and  
15 cognition in language.

16 (Lg) Tegulation, a fundamental process in speech production so far unnoticed. Both the GLM and tegulation  
17 rigorously support Chomsky's Universal Grammar.

18 (Lg) OTC, or Organic Taxonomy of Consonants: a novel physiological systematization of consonants and their  
19 interrelations, previously unknown.

20 (Lg) The remarkable mechanism that produces all other phonemes from three essential phonemes by  
21 permutation using a 3×3 lingual matrix.

22 (Lg) It is essential to know that the front and back parts of the tongue body alternate in all lingual functions, such  
23 as syllable generation and voicing.

24 (Lg) (Physics) Linguistics has never employed a standard engineering tool—the center of mass—to study  
25 synergistic forces in speech and to understand complex muscular actions.

26 (Lg) (Physiology) Cymatics and tegulation: two lingual wave mechanisms that govern language flow, structure,  
27 and word creation.

28 (Lg) The effect of climate on speech: rectification of an overblown paper by Ian Maddieson  
29 (<https://doi.org/10.1121/2.0000198>).

30 (Lg) The ubiquitous errors across different ethnicities, each with distinct bodily organization affecting cognition  
31 and physiology related to language.

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## 32 **Physics**

33 (Physics) Linguistics has never employed a standard tool of engineering and physics—the center of mass—to  
34 study synergistic forces in speech and to understand complex muscular actions.s

35 (Physics) (Mind) The center point and its surrounding (manifold) field—an engineering element essential in  
36 synergistic studies.

37 (Physics) (Mind and Body) Any movement is optimally comfortable and requires minimal bodily or mental  
38 exertion as long as it is anchored in its particular center of mass. This core anchoring explains how dancers,  
39 singers, and others can continue without difficulty in breathing and movement.

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## 40 **Biology**

41 (Biol) Glottoregulation: exposition of a previously unknown axiomatic function underlying and regulating all  
42 body movements, observable as body–mind organization and central control. The movement of this function—  
43 its track of muscle relaxation—has never been understood as *ch'i* or *prana*.

44 (Biol) The cause of yawning—a coherent physiological explanation for the first time.

45 (Biol) Odd versus even beats of rhythm have physiological bases and functions and relate to right versus left  
46 feet.

47 (Biol) The only rigorous, demonstrable, and testable hypothesis for the origin of bird flight.

48 (Biol) Respiratory mechanics comprise five actions within a change of prime mover (between three zones of  
49 breathing), analogous to gear switching.

50 (Biol) The source of insect flight—another first: a mechanical sound vibrator combined with signaling  
51 appendages.

52 (Biol) (Respiration) Breathing occurs in a three-zone cycle previously unknown. Inhalation and exhalation do  
53 not simply alternate but perform distinct actions that require explanation; the yoga master Sri Narayananda  
54 notes that in nasal breathing, left–right dominance alternates.

55 (Biol) (Physiol) (Monosoma) Bodily kinetic differences among major racial and ethnic groups.

56 (Biol) Development disrupts congruence of layers in gastrulation, but this can be reconstructed through  
57 glottoregulation to reveal systemic bodily behaviors.

- 58 (Biol) An original and confirmable uniformitarian hypothesis accounting for human bipedality, whose sources  
59 still exist in two human and ape functions.
- 60 (Biol) (Mind) Music and art—the synesthetic process: how sounds and sights engender sensations in body and  
61 mind.
- 62 (Biol) (Cognit) The tongue is divided both horizontally and axially into three parts, each reaching differently into  
63 articulation, the mind, and cognition.
- 64 (Biol) (Mind) (Physiol) The Upper Visceral Body—a previously unrecognized organ system arising from  
65 vertebrate evolution.
- 66 (Biol) (Physiol) How talking that sounds normal can be taught to the deaf.
- 67 (Biol) Unexpected behaviors in the conceptualization and lingual articulation of the numbers 3, 6, and 9,  
68 otherwise claimed by N. Tesla to be the key to the universe.
- 69 (Biol) (Mind) The geometrical structure of the mind—body: geometry built into human and animal bodies and  
70 minds (cf. sports, billiards, archery, and notably the archer fish).
- 71 (Biol) The visual geometry designed into sexual attraction and cognition.
- 72 (Biol) The artist's eye—what it is and how to generate it.
- 73 (Biol) (Physiol) (Gender) The chief musculoskeletal sources differentiating male and female movement in  
74 humans (a clue: *pectoralis minor*).
- 75 (Biol) (Monosoma) Why yogic or kinetic instructions by Asians for Europeans, and vice versa, are often  
76 misleading.
- 77 (Biol) (Physiol) Double count relates to walking—but what about triple count? Double starts on the right side;  
78 triple on the left.
- 79 (Biol) (Graphics) The trigger and action embedded in all body movement and their cognitive role in graphics  
80 such as handwriting and calligraphy (ascenders and descenders).
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## 81 **Physiology**

- 82 (Physiol) The physiological function of alternation—a ubiquitous action of central control in biological  
83 mechanisms.
- 84 (Physiol) (Mind) (Evolution) Monosoma: all parts of body and mind constitute one physical and mental  
85 mechanism, like a clock or computer system, with numerous examples.
- 86 (Physiol) The human perception of the geomagnetic poles, never known before, can now be demonstrated.

- 87 (Physiol) (Monosoma) (Mind) The three dermatomes of the head, anterior and posterior, when isolated relate  
88 directly to three mental states: externally directed, attentional, and inwardly directed.
- 89 (Physiol) Abdominal and thoracic respiration in mind control are partially known in the West.
- 90 (Physiol) Why ascenders and descenders in lettering and print—first appearing in the Carolingian script—are  
91 important, with analogies in Asian scripts.
- 92 (Monosoma) Striking a spoon or spatula against the edge of a pot after stirring: although intended to clean the  
93 utensil, it occurs even after other movements and represents a monosomatic reaction to holding the utensil in a  
94 specific way.
- 95 (Physiol) (Language) The ontology of infant speech—supplanting the old and overworked McNeillage  
96 frame/content theory.
- 97 (Physiol) The mechanism of feeding—a detailed account previously presented only incompletely.
- 98 (Physiol) The previously unknown H, N, and M lingual nodes: three centers of mass in the tongue connecting  
99 physical and mental functions.
- 100 (Physiol) Gesticulation—why it exists and its role in speech production (cf. mouth opening in animal  
101 vocalization).
- 102 (Physiol) (Ergonomics) (Cognition) Glottoregulation and use of the geomagnetic field to ergonomically assist  
103 bodily movement.
- 104 (Physiol) Triplicities in body and mind: at least 150 organs and tissues are tripartite, an organization also  
105 appearing in cognition.
- 106 (Physiol) Why we enjoy rhymes—rooted in cognition and facial musculature.
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## 107 **Mind, Meditation**

- 108 (Mind) (Biol) Western and Eastern sciences are mutually complementary: Western science can provide  
109 experimentally supported explanations of yogic and meditative practices and enable precise bodily and mental  
110 control.
- 111 (Mind) Certain other functions appearing in this list also belong here.
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## 112 **Technology**

- 113 (History) (Technology) The accidental invention of the wheel, contrasting with the common assumption that it  
114 was a conscious act.

