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

## 6 Language

7 Currently, linguistics has not introduced a single significant addition to the most  
8 elementary facts of speech, but the field can now be brought up to date.

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

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

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

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

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

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

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

23 (Lg) The remarkable mechanism that produces all other phonemes from three essential  
24 phonemes by permutation using a  $3 \times 3$  lingual matrix.

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

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

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

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

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

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### 37 Physics

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

41 Fundamental differences between the behaviors of the right and left bodies, thus far unknown.

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

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

### 49 Biology

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

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

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

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

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

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

63 (Biol) (Respiration) Breathing occurs in a three-zone cycle previously unknown.

64 Inhalation and exhalation do not simply alternate but perform distinct actions that require explanation; the yoga master Sri Narayanananda notes that in nasal breathing, left–right dominance alternates.

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

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

71 (Biol) An original and confirmable uniformitarian hypothesis accounting for human bipedality, whose sources still exist in two human and ape functions.

73 (Biol) (Mind) Music and art—the synesthetic process: how sounds and sights engender sensations in body and mind.

75 (Biol) (Cognit) The tongue is divided both horizontally and axially into three parts, each reaching differently into articulation, the mind, and cognition.

77 (Biol) (Mind) (Pysiol) The Upper Visceral Body—a previously unrecognized organ system arising from vertebrate evolution.

79 (Biol) (Pysiol) How talking that sounds normal can be taught to the deaf.

80 (Biol) Unexpected behaviors in the conceptualization and lingual articulation of the numbers 3, 6, and 9, otherwise claimed by N. Tesla to be the key to the universe.

82 (Biol) (Mind) The geometrical structure of the mind–body: geometry built into human and animal bodies and minds (cf. sports, billiards, archery, and notably the archer fish).

84 (Biol) The visual geometry designed into sexual attraction and cognition.

85 (Biol) The artist's eye—what it is and how to generate it.

86 (Biol) (Pysiol) (Gender) The chief musculoskeletal sources differentiating male and female movement in humans (a clue: pectoralis minor).

88 (Biol) (Monosoma) Why yogic or kinetic instructions by Asians for Europeans, and vice versa, are often misleading.

90 (Biol) (Pysiol) Double count relates to walking—but what about triple count? Double starts on the right side; triple on the left.

92 (Biol) (Graphics) The trigger and action embedded in all body movement and their cognitive role in graphics such as handwriting and calligraphy (ascenders and descenders).

## 95 Physiology

96 (Pysiol) The physiological function of alternation—a ubiquitous action of central control in biological mechanisms.

98 (Pysiol) (Mind) (Evolution) Monosoma: all parts of body and mind constitute one physical and mental mechanism, like a clock or computer system, with numerous examples.

101 (Pysiol) The human perception of the geomagnetic poles, never known before, can now be demonstrated.

103 (Pysiol) (Monosoma) (Mind) The three dermatomes of the head, anterior and posterior, when isolated relate directly to three mental states: externally directed, attentional, and inwardly directed.

106 (Pysiol) Abdominal and thoracic respiration in mind control are partially known in the West.

108 (Pysiol) Why ascenders and descenders in lettering and print—first appearing in the  
109 Carolingian script—are important, with analogies in Asian scripts.

110 (Monosoma) Striking a spoon or spatula against the edge of a pot after stirring: although  
111 intended to clean the utensil, it occurs even after other movements and represents a  
112 monosomatic reaction to holding the utensil in a specific way.

113 (Pysiol) (Language) The ontology of infant speech—supplanting the old and overworked  
114 McNeilage frame/content theory.

115 (Pysiol) The mechanism of feeding—a detailed account previously presented only  
116 incompletely.

117 (Pysiol) The previously unknown H, N, and M lingual nodes: three centers of mass in the  
118 tongue connecting physical and mental functions.

119 (Pysiol) Gesticulation—why it exists and its role in speech production (cf. mouth opening  
120 in animal vocalization).

121 (Pysiol) (Ergonomics) (Cognition) Glottoregulation and use of the geomagnetic field to  
122 ergonomically assist bodily movement.

123 (Pysiol) Triplicities in body and mind: at least 150 organs and tissues are tripartite, an  
124 organization also appearing in cognition.

125 (Pysiol) Why we enjoy rhymes—rooted in cognition and facial musculature.

## 126 **Mind, Meditation**

127 (Mind) (Biol) Western and Eastern sciences are mutually complementary: Western  
128 science can provide experimentally supported explanations of yogic and meditative  
129 practices and enable precise bodily and mental control.

130 (Mind) Other functions appearing in this list also belong here.

## 131 **Technology**

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

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