

「你我他語錄」

我：「生命何來？」

你：「上帝(*1)固然是萬物的創造者，也是一切生命的源頭。一切生物的生命，也由上帝所保存。」

他："Today some scientists support a heterotroph hypothesis (*2) for the origin of life based on the concept of a gradual development or evolution of organic material_s from inorganic material_s present on the earth."

"The age of the earth is estimated at approximately 5 billion (i.e. 5,000 million) years. The last 1½ billion years have witnessed the evolution of complex organism_s from simple unicellular ones, documented by both direct and indirect evidence. The heterotroph hypothesis attempts to reconstruct what could have taken place in these first 3½ billion years, in view of the materials and conditions then present on this planet ..."

"The earth atmosphere consists mainly of nitrogen, oxygen and carbon dioxide. It then contains methane, ammonia, hydrogen and water vapor. Beneath this atmosphere lays the earth's cooling crust, with the same complement of minerals as exists today and with seas formed by condensation of the atmospheric vapor."

"The first step in the heterotroph hypothesis assumes the transformation of the methane-ammonia-hydrogen-water mixture into amino acids; the precursors of proteins. The amino acids could have been formed by electric discharges in the atmosphere, ultra-violet radiation, or gamma radiation. (This has been proved in the laboratory.)

Deposited in the seas, the amino-acids could link together to form protein molecules. Thus the earth was supplied with the necessary proteins, essential before life as we know it could occur..."

"A second step assumes appearance of more complex molecules and energy transformations, together with the accumulation of proteins into aggregates within a membrane formed by water molecules. Such aggregates, known as coacervates, exhibit superficially some of the earliest features of cells."

"A third step assumes the appearance of self-replication abilities within the coacervate. By the time, the organic 'soap' of the primitive seas, which had furnished the raw material for the preceding steps in the chemical evolution, was used up. Resynthesis of amino acids and proteins from the original atmosphere was not sufficient to satisfy the appetites of the hungry coacervates. At this point it is therefore necessary to assume the appearance of a new protein or combination of proteins, capable of tapping new energy sources..."

"Thus a fourth step, and perhaps the most significant step, was the appearance of chlorophyll, with its ability to recharge the energy

cycle

by utilizing solar energy. This revitalized the biochemical community, producing the organic molecules (carbohydrates, fats, & proteins) required for the heterotrophic pattern of energy transfer. At the same time, it released oxygen which accumulated in the atmosphere, and made respiration possible as a more efficient way of recharging the energy cycle. The attendant accumulation of carbon dioxide in the atmosphere became a source of carbon atoms in the basic fuel, glucose. At this point biochemical evolution and organic evolution merged ... "

"According to the heterotroph hypothesis, a cellular unit had arrived" From here on, autotrophic and heterotrophic organisms evolved along their separate pathways to form the existing plant & animal kingdoms."

我：「生命是甚麼？」

他："Of all the wonders of the universe, the most striking, perhaps, is the spectacle of life itself—life in a tiny insect; in a lumbering elephant, in a giant sequoia tree, & in man. Just what is life? There is no direct answer. The most constant feature of every kind of life is its ability to do things, in turn involves a number of correlated activities: self-maintenance, movement, growth and differentiation, self-duplication through reproduction and adjustment to the environment through response and adaptability."

你：「依柏格森(Bergson)(*3)說來，生命是以發育的有機體為媒介物，從一個萌芽的移轉於別個萌芽的，一切有機體不過是這偉大潮流中底一份子。生命為主，個體為從。生命是從一個體移到他一個體，繼續其新發展繼續其創造的。生命底中心是意識(*4a)，因而為意識本質的純粹持續(*4b)，就是與生命底純粹持續本身同一意義。因此，從一個體移到他一個體流轉而前生命，並非是區別的生命之連續，却是被繼續的生命。這生命便是唯一的實在(*5)；所以純粹持續不但是意識和生物底本質，更為實在本身的本質。」

我：「生命何價？」

你：「上帝說：『地要生出活物來，各從其類。牲畜、昆蟲、野獸、各從其類。』上帝又說：『我們要照着我們的形象，按着我們的樣式造人，使他們管理海裡的魚、空中的鳥、地上的牲畜和全地，並

地上所爬的一切昆蟲。你且問走獸，走獸必指教你。又問空中的飛鳥，飛鳥必告訴你。或與地說話，地必指教你。海中的魚，也必向你說明。看這一切，誰不知道是耶和華的手作成的呢。一切自然界的飛、潛、動、植，都無聲地證明着上帝的創造，強調着上帝的權能。這是天父世界：祂愛普及萬千；風吹之草將祂表現，天父充滿世間。」

他：「在實際上看來，我們是依觀念(*6)或概念(*7)底力，把複雜的經驗簡單處理，統一，組織，以構成一切學問的知識，而謀生活上底利益——把改造經驗，活動想像力，而順應於實際生活的理想描寫出來，依着這個理想指導吾人的生活，使他發展向上。但是這些觀念、概念，理想，學問等，其自身是沒有絕對底價值的，乃依其表現於實際經驗的效果——價值——而決定的，價值越多，越是真理，越是實在。所謂真理，不過是價值。真理並非獨立自存於我們實際生活之外，而絕對不變的，乃從吾人實行底要求上而肯定的，就是相對的。真理也是順應吾人生活的進化而進化的。」

我：「生命之道極奇，我今篤信不疑。敢問兩位：生物存在於一個怎樣的時空裡？這時空又有怎樣的性質呢？」
你：「起初上帝創造天地，地是空虛混沌。淵面黑暗。上帝的靈運行在水面上。上帝說：『要有光。』就有了光。上帝看光是好的，就把光暗分開了。上帝稱光為晝，稱暗為夜。有晚上，有早晨。亞里士多德(Aristotle)(*8)以神為究竟原因，以因果關係為生成原因；說：『各個現象底變化，雖必由因果，但神是常依其所目的的地方而定變化底方向的。』萊布尼茲(Leibniz, 1646-1716)(*9)繼承亞里士多德，說：『神之意志為因果律，神對於為萬有主體之單子(Monad)(*10)，在創造時候既已預定他們開發底順序，而這順序是確乎其不可動的。就是，由甲之狀態繼續生乙之狀態，甲沒有生，乙也決不會生的。前之狀態為原因，後之狀態為結果。』

他: "Space and motion were shown to be relative. It was shown to be impossible for any person in a system that moved with constant velocity to determine the motion of the system or whether it was in motion at all. Furthermore, if 2 viewers were in uniform motion relative to each other, then any length or distance measured by one observer would contract as demonstrated by measurements made by the other observer..."

"Time, too, was shown to be relative. If a man on earth timed the journey of a rocket to a distant star and back, he might say that the trip lasted for several years. The passenger aboard the rocket, using an identical clock, might insist that he had gone only several months. However, since he was in motion relative to the earth-bounded observer, not only did the clock of the rocket passenger slow down but also his entire biological system. He aged much more slowly..."

"Surely the various space and time observation could be combined in some way so as to be meaningful. As long as time and space were considered to be independent entities, this combination could not occur. Albert Einstein succeeded brilliantly in creating the necessary harmony. He combined space and time by adding to the three co-ordinates of space, a fourth co-ordinate representing time. The time co-ordinate was not the simple "old fashioned" time, but was modified by the velocity of light and the purely mathematical quantity $\sqrt{-1}$. The result was no longer simple time and space, but a different stratum called space-time. An event is located by its position in space-time and is meaningful to all observers. Space-time is not absolute but is dependent on the matter in the universe..."

"What are the characteristics of this four-dimensional space-time? It is not uniform (a flat surface is uniformly flat all over) It conforms to one of the geometries of curved space. It primarily is flat when far away from matter but is curved near large masses, such as the earth, sun and stars. This curvature of space explains many things. Light rays had always been assumed to travel in straight lines. In space-time they travel in straight lines when far away from large masses. When they are near such a mass, however, their paths were curved. Light is simply following a path called a world line, because that world line is a characteristic of space. Gravitation had long been considered to be a force acting between two masses. In Einstein's space-time the concept of a force is no longer necessary. Gravitation is simply the natural result of the curvature of space itself near a mass. Time, being only one of the co-ordinate of space, the curvature of space-time results in a slowing up of time in the vicinity of extremely large masses..."

"Space, in the 20th century viewpoint, is finite, unbounded and expanding. Whether it will continue to expand until all bodies cool down and life ceases is not certain. Likewise it is possible that this four dimensional curved space may be embedded in a space of five or more dimensions."

我: 「死亡有甚麼意義呢？」

他: "Death, the ceasing of life."

"In biological speaking, the death of some organisms is necessary for the life of other organisms. Animals destroy and eat plants or other animals; and dead plants and animals supply much of the nitrogen, through bacterial action, that sustains the life of other plants. Death of all life on this planet is virtually a scientific certainty,

as a result of currently accepted laws and theories of physics and astronomy. Total death on earth will probably occur in a few billion years."

你：「亞當夏娃，為着因犯罪而引起之不愉快的事情，無
限悲傷，為凋殘黃落的紅花綠葉，而感難過。然而
公義的主，不得不向他們宣佈，因他們之背逆，死
亡便要臨到他們，和一切人類。他們為面臨的悲慘
命運，不覺酸淚交流，但上帝在他們愁若絕望中，
發出具有大愛的應許。祂的愛在耶穌基督，將為人
類而死，為他們開一條又新又活的路，使他們能再
進天國，與上帝同住。不過上帝和祂兒子所救贖的
計劃，必須經過相當長遠的時期，方可實現。亞當
婦，不得不離開伊甸園那可愛之家。伊甸園外的地
方，本來也很美麗可愛。但不久之後，荊棘和蔓草小
，逐漸生長。好花凋謝，草木黃落。歌聲清脆的走
鳥，也見牠死亡。生性馴服，聽人呼喚的牲畜
，已變為兇惡。」

他：「你對於人生的見解若何？」

你：「願聽人文主義者一言。」

我：「我相信人生是值得活的，但我不能以為人生一定要
有意義，祇是對大多數人而言，他們可以使我下人獲這
有意義。在研究這些問題之間，逐漸受我予在界上享有
種生活哲學引導，那便是社會共信。最單純的感官流
慾望，去尋求如何悲劇的存——從最智慧的事物，我
起互相殘殺的體系。美的感受，以為它東西產物或標
或價值的體滿足、美的感受，以為它東西產物或標
的成果和賦予的絕對的、超越的影響、道德或標準而
神類天性與外對的界真理、美、善、美的存在，而且
上有所謂的絕對力量所形成、善、美的存在，而且
是我相信人間有真、善、美的存在，而且

的動人的力量與價值，是值得人們做永恆的追求。這樣充分運用人的聰明智慧來尋求真理，來控制自然，來變化物質以供人的身體，來免除不必倍要的辛勞痛苦，來把人的力量增加幾千倍幾十萬倍，來使人的精神從愚昧、迷信裡解放出來，來革新再造人類的種種制度以謀多數的最大幸福——這樣的文明是高度理想主義的文明，是真正精神的文明。」

—全文完—

——略釋：

*1—上帝的名是「耶和華」，是「自有永有」的意思。

*2—The Russian biochemist A.I. Oparin formulated the essence of this hypothesis in about 1923 and presented them in "The Origin of Life" (1936).

*3—法國現代的大哲學家(1859—?)他注重生命，是和尼采(Nietzsche)接近，其承認自由意志，又和康德相同。

*4a—依柏格森說來：吾人底意識——自感覺底強弱以至於感情底深淺——都是質的(quality)，不是量的(quantity)。意識背着無限的過去和記憶而行，過去和記憶底所有積累，溶化其中。某瞬間底意識含有這一瞬間以前的一切記憶在內，其次一瞬間底意識，又加了其前一瞬間的記憶在內。意識總是在增大，過去常由現在供給，積累不絕下去，而更加入於新的現在。這樣看來，可知意識常常變化，常常進展，但現在的意識並不是過去的意識，乃全然嶄新的狀態，即是嶄新的創造。

*4b—這所謂持續，又如上面所說，是有變化的；並不像一樣東西，單從甲方向移到乙方向。

*5—萬有之本體(Reality)。

*6—觀念是動態的，表示主體對於外物的反應或聯想，由之引起指點未來的行動。譬如見橘子引起可以吃的觀念；見筆引起可以寫的觀念等。

- *7—概念則表示外物「是甚麼的確定認識，它是靜態的，它表示認識的對象，是客觀的義理。譬如：這顏色是紅的，這圖形是「方的，人是「有理性的，「可死亡的」等等。
- *8—希臘大哲學家(384-322 B.C.)，他起初是拜柏拉圖(Plato)做師傅的，後來統一他先生和德謨利圖斯(Democritos)底學說自成一家。希臘哲學到他算是發達到絕頂了。
- *9—德國哲學家，其博學與獨創之才，稱為亞里士多德以下的第一人。
- *10—依來布尼疵說來，物體有延長性，所以可以分割為無窮；原子有延長性，所以並非如原子論所說一般，為分割的極限。而物體非單純的，乃是複合的，所以若沒有單元，便不能實在。物體如果是實在的，那不能不認有組成物體的實在之單元。這單元是不能延長的東西。因而真實的實體，必須是非延長的，非物質的東西。來布尼疵稱這單元做單子，為真實的原子。

——備考：

人物：①亞里士多德(Aristotle)，②柏格森(Bergson)，③胡適，④羅素(Bertrand Russell)，⑤朱利安·黎(科學人生主義者)，⑥威廉占姆士(William James)，⑦來布尼疵(Leibniz)，⑧愛因斯坦(Einstern)。

思想：①一神論(Monotheism)，②基督教(Christianity)，③科學(Science)，④生物學(Biology)，⑤進化論(Evolutionism)，⑥單子論(Monadism)，⑦原子論(Atomism)，⑧機械論(Mechanism)，⑨本體論(Ontology)，⑩實在論(Realism)，⑪相對論(Theory of Relativity)，⑫自然主義(Naturalism)，⑬人文主義(Humanism)，⑭概念論(Conceptualism)。

——資料來源：(鈔自)

①理則學—牟宗三，②新文化辭書—唐敬泉，③ENCYCLOPEDIA INTERNATIONAL VOL. 10 & VOL. 17—GROLIER，④香港時兆聖經函授學校初級課，⑤聖經，⑥THE BOOK OF POPULAR SCIENCE VOL.1—GROLIER，⑦香港大學學生會學苑雙週刊 ⑧聖詩。

——探索：

人物：①釋迦牟尼(Sakya-muni)，②培根(Baun)，③柏拉圖(Plato)，④蘇格拉底(Socrates)，⑤孔子(Confucius)，⑥康德(Kant)，⑦泰哥爾(Tagoie)，⑧託爾斯泰(Tolstoy)，⑨笛卡兒(Desiartes)，⑩莊子。

思想：①經驗論(Empiricism)，②目的論(Teleology)，③民主主義(Democracy)，④形上學(Metaphysics)，⑤認識論(Epistemology)。

旁，但他們是不會看見我的。
 「莉莉、珊珊，你們為甚麼哭呢？你們忘記了我以前是你们的死對頭嗎？明明，妳為甚麼也哭呢？你愛的是不是忘記了妳已少了一個和妳競爭的人呢？我最疼邊我的妹妹啊！為甚麼妳只顧在哭而不會站在你旁邊的我呢？」

「這是我平生最多，人注視的一次了。我竟然能成為這許多人中的主角，我能不能驕傲嗎？但是對着這與我相處了十多年的軀體，一陣莫名的難過湧上心頭……」

我靜靜的坐上了靈車，和那木無表情的五鬢相對了半小時有多，終於來到了我將長眠的地方——墳場。經過簡單的儀式後，那載着我底身軀的棺木徐徐下降。從此，它便長埋黃土了。

各人也相繼黯然離去，我隨着妹妹登上車子。又回到了家中。我看見爸媽坐着，我走近他們，但我毫無反應，他們根本不知道我在他們的左右的在，爸媽，你們知不知道你們底女兒在你們身旁呢？爸、媽，你們知不知道你們底女兒在飲泣呢？

我的精靈漸漸被時間的過去而分裂。我想抓着甚麼，令我能夠在這家園中多留戀一刻——珍貴的一刻。然而……

****完****

L.L./L.S.W.

談威爾森病

柳景洪

威爾森病 (Wilson's Disease) 是一種罕見的遺傳性銅代謝病，是它所以叫做威爾森病，是它在醫藥界佔的比率，大約是百分之二。在英國，威爾森病的患者，在人口中所佔的比例，在過去八年內，已達百分之五。在臺灣，威爾森病的患者，在過去八年內，已達百分之十。威爾森病的最普通症狀是震顫，肌肉張力異常，象腫大，肝臟發生硬化。威爾森病的初期症狀，通常是在八歲至十五歲之間出現，患者如果不及時治療，將導致腦、肝及腎的損壞。在中國人中，威爾森病的病因而以前，先說明銅在人體內之主要功能不詳，現僅知為血紅素合成所必需。體內大部份銅存於肝、脾與腎等處。某種無脊椎動物血液中之血青素 (hemocyanin)，其功能為其體內血紅蛋白之攜帶者。酵素如酪氨酸酶 (tyrosinase) 與抗壞血酸氧化酶 (ascorbic acid oxidase)，亦為銅蛋白質複合物。現知哺乳動物紅血球中，含有一種銅蛋白質，稱血銅質 (hemocuprin)，似與血紅素之合成有關。若以缺乏銅之食物飼動物時，可致體重減輕，甚至死亡。動物雖有貧血症狀，但貧血實非致死原因，蓋缺乏鐵而發生同程度之貧血病，不致於死。銅不易由尿中排洩，大都由腸道失去。雖然缺乏銅會導致死亡，但過多的銅對身體同樣有害。莫大的害處。威爾森病患者，是因為體內的銅量增加，雖然現在還無法知道何以有這種現象的真正原因。

，但研究人員正用化學病理以及放射性同位素的技術，對病患者進行試驗，試圖找出那些過份的銅，貯集在體內何處以及何以會發生的答案。目前的治療方法，是利用一種能夠使體內的銅由尿中排出的藥物，以減少體內銅的藏量。這種治療法，雖然不能根治，但至少能使病況不至惡化。

總結一下，Wilson's disease 雖然是一種可怕的病症，但只要及早發現和採取治療的步驟，病者是能和平常的人一同過活的。而治療之中，病者之能與醫生的充份合作更能對病情有莫大的幫助。

完

lkh/1sw
lck

Remark- Wilson's Disease is a rare disease. The body requires only trace amount of copper to maintain the proper utilization of iron in the synthesis of haemoglobin and other specific enzymes. The occurrence of Wilson's disease as a result of copper in excess is still a unexplainable fact.

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An Introduction to Immunity. (Explaining the Following passages concerning immunity) - Continue on Pg. 60

Our bodies consist of particular types of proteins and components that are familiar to the body tissues. Any foreign particles invading the body will meet resistance to an extent due to the secretion of substances from the body tissues, that neutralize the foreign invading particles. This type of protection is called immunity. It is the fundamental way of protecting the body from damage caused By invading bacteria, viruses and other living organisms.

Our ancestors had been longly exposed to many harmful organisms and the invasion of them caused many deaths, but on the other hand, the human body has acquired genetically immunity against these invading particles. This type of immunity, coming from the intructions of our ancestors' genetic message, is called 'Natural Immunity'.

The mechanism of immunity includes an 'antigen-antibody' reaction. The antigen refers to the invading particle and the substance secreted by the body tissues is called the antibody. A reaction of this type results in a substance that are not harmful to the body.

When the body is invaded by a foreign harmful protein in the first time, it is a usual fact that the body tissues will be seriously hurted, due to the inability of secreting suitable antibody against this particular antigen

T & B cells' teamwork in immunity

在免疫作用中的 T 和 B 細胞的合作

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人體內有兩種免疫反應(immune response)，就是抗體(antibody)和白血球(lymphocyte)抵抗力。一位免疫學學者最近對這兩種抵抗作用發表了一項學說，把它們之間的互相作用說明。

T-白血球細胞 (T-cell lymphocytes) 是由 thymus^(*1) 所製造的。B-白血球細胞 (B-cell lymphocyte) 則由 (Bone marrow) 骨髓中，脾臟或身體其他淋巴組織中製造。T-白血球細胞是不會分泌抗體的，但 B-白血球細胞則負責這種責任。這樣就令人覺得 T-白血球似是刺激 B-白血球分泌抗體的物體。Melbourne 的 Hall Institute of Medical Research 的

Marc Feldmann 和 Antony Basten 表示他們已擁有有力的證據去證明這兩種細胞的而且確是這樣互相作用而產生抗體的。從試管實驗中 (in vitro)，他們發現 T-白血球細胞和抗原發生作用而產生一種化學劑 (Chemical)。這種化學物跟著使 B-白血球細胞產生免疫能力，亦即使之產生抗體。

在 May 3, 的 Nature New Biology, 一篇文中的作者報導 T-白血球細胞所產生的化學物為一種獨特的抗體，這種抗體能聚集抗原入 B-白血球細胞內或其他，如 macrophage, 的白血球內。而這種化學物的分泌極有可能為抗原所導致。

完