

# Shamelessness Shouldn't Be Anyone's Nature

## —An Open Letter to *Nature* (Part XXXIV)

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### The Fangansters (IV): He Zuoxiu, a Shameless Party Man (II)

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Notes

According to He Zuoxiu's memoir, what he did during the 10-years Cultural Revolution, from 1966 to 1976, was nothing but building his "quantized theory of composite particles."<sup>[1]</sup> Of course it was a plain lie - he had the capacity of doing a lot more, and indeed, he didn't waste his talent during that difficult time. In this part, I will tell a story about his attack on Mr. Tang Xiaowei in the 1970s, which shows vividly how bad money drives out good money in China's physics community.



Academicians Tang Xiaowei and He Zuoxiu

## 1. Background: A Henchman of the Gang of Four

After [Lin Biao Incident](#) which occurred in September 1971, and before the “[Criticize Lin, Criticize Confucius](#)” movement which started in the second half of 1973, there was a brief renaissance in China. In 1972, a magazine named *Physics* (物理, wùlǐ) was initiated, and it was only one of two scientific periodicals published at that time. In the first two years, the magazine published 7 issues, about 60 articles, all related to physics, none of them involved politics or ideology. Among the important papers published during its first two years were *Studies on Crystal Structure of Insulin at 2.5Å*<sup>[2]</sup>, *Evidence for the Possible Existence of a Charged Particle with Large Mass*<sup>[3]</sup>, and, more importantly, Fang Lizhi’s *On a Solution of the Cosmological Equations with Matter and Blackbody Radiation in Scalar-Tensor Theory*<sup>[4]</sup>, which has been regarded as the first paper on modern cosmology in China<sup>[5]</sup>.

Then, year 1974 came. The first 3 articles in the first issue of that magazine were all about politics. As a matter of fact, for the next 3 years, politics and ideology were the main theme of the magazine: except for one issue, every issue else contained some articles about “Criticize Lin, Criticize Confucius,” about Marxism, about proletarian dictatorship, and of course, natural dialectics (see the table below).

Examples of political and ideological articles published in the <i>Physics</i> magazine between 1974 and 1976 <sup>[6]</sup>			
Title	Year	Issue	Pages
<i>Deepen the Criticism against Lin and Confucius, Carry out the Revolution in Superstructure to the End</i>	1974	1	1-2
<i>Study (Lenin’s) “Materialism and Empirio-Criticism”</i>	1974	1	3-6
<i>How to Run a Socialist Natural Scientific Journal?</i>	1974	1	6
<i>Actively Join in the Great Struggle of Criticize Lin and Criticize Confucius</i>	1974	2	65-66, 73
<i>An Idealist Specimen of contemporary “physics”: Comment on Heisenberg’s “Physics and Philosophy”</i>	1974	2	87-90, 99
<i>Confucius and Mencius Is a Stumbling Block to the Development of Science and Technology</i>	1974	5	261-263
<i>Opposite Routes and Opposite Effects: On the Relationship between the Struggles between Confucianism and Legalism and the Development of Science and Technology in Ancient China</i>	1974	6	321-326
<i>Improve Boilers with Materialist Dialectics</i>	1974	6	334-337, 347
<i>How to Make Physics Magazine a Real Socialist Periodical?</i>	1974	6	382-366
<i>The Impediment of Confucianism to the Development of Natural Sciences in China</i>	1975	1	1-4
<i>The Bourgeois Viewpoints in the Relativity Theory Studies Must Criticized</i>	1975	2	127-128, 90
<i>The Struggles between Confucianism and Legalism on Cosmology in the Pre-Qin Period</i>	1975	3	133-135, 140
<i>How to Make Physics Magazine a Service Tool to Consolidate Proletarian Dictatorship</i>	1975	3	189-192, 188
<i>The Theoretical Positions in Natural Sciences Must be Occupied by the Dialectical Materialism</i>	1975	3	318-320
<i>Research Must Adhere to Marxism-Leninism Direction</i>	1975	6	374-376
<i>Use Materialist Dialectics to Guide the Practice of Welding Low-temperature Steels</i>	1976	2	77-79
<i>Use Materialist Dialectics to Analyze the Problem of Mono-crystalline Furnace Thermal Field</i>	1976	2	83-85
<i>Struggle for the Occupation of the Natural Science Positions with Marxism: Commemorating the Centenary of Engels’ Introduction to Dialectics of Nature</i>	1976	3	147-150
<i>Natural Science Must Be Guided by Marxism</i>	1976	3	151-152
<i>Marxism-Leninism-Mao Zedong Thought Is the Guiding Ideology for Scientific Research: The Development of Metal Ultra-high Vacuum Detection System</i>	1976	4	193-196
<i>Research Work Must Consciously Accept the Guidance of Dialectical Materialism: The Development of Blasting Bulldozers</i>	1976	4	223-225
<i>Attention Must Be Paid to the Criticism against Copenhagen Interpretation of Quantum Mechanics</i>	1976	5	291-295
<i>About the Criticism, Transformation, and Popularization of Modern Physics Theories</i>	1976	5	307-312

So, exactly what happened to the magazine? Sure, the power struggle between the two wings of the CCP leaders played a critical role; however, the more direct reason was that in 1974, He Zuoxiu became the magazine's first editor-in-chief. During his long career, He Zuoxiu has been bragging about many things, however, he rarely mentioned his experience as the head of one of China's top science magazines for nearly 4 years<sup>[7]</sup>. Why? Because the people to whom he had sworn allegiance, [the Gang of Four](#), were overthrown in 1976, and mixing politics with science was no longer in fashion after 1978. In 2012, the magazine compiled a book with 40 articles it had published in the past 40 years, and only one of them was published during He's era, and that article was published right before He left his office<sup>[8]</sup>. In 1992, He Zuoxiu admitted that under his leadership, the magazine's sales declined continuously, however, he blamed the magazine's policy, rather than himself, for the failure<sup>[9]</sup>.

The fact is, He Zuoxiu in the 1970s was the same person in the 1950s and 1960s, who hated "bourgeois sciences," so under his leadership, the *Physics* magazine became a major battleground to criticize Albert Einstein's theory of relativity. Here is the survey, conducted by Dr. Hu Danian, of the second wave of attacks on the theory:

"The debate in *Wuli* [*Physics* magazine] began in early 1975 and did not end until the summer of 1977. The last group of the debating papers appeared in June 1977, eight months after the arrest of the Gang of Four, which indicates that the debate was not directly controlled by the radical leaders. Ever since, it has been difficult, if not impossible, to publish anything in mainstream professional scientific journals in China challenging the theory of relativity."<sup>[10]</sup>

The strange thing is, during the period when He was the editor-in-chief of the *Physics*, he didn't publish any article in the magazine, at least not with his real name. However, in a memoir written in late 1980s or early 1990s, He wrote:

"In 1970, I wrote an article entitled *On the Special Theory of Relativity* to oppose some people who wanted to bring down the theory of relativity and Einstein. In 1974, I wrote articles entitled *Can Mass transform to Energy?* and *The Theory of 'Continuous Creation of Mass' Must Be Criticized*. These three articles were written to defend the law of mass conservation, thereby to defend the principle of indestructibility of matter."<sup>[11]</sup>

He's *On the Special Theory of Relativity* could not be found anywhere, which is weird because He, like Fang, has the habit of republishing his own articles in books, and the article was not in any of He's books. Therefore, it is safe to say that the article was the basis of his talk in the CAS meeting held in October 1969, in which "He supported the criticism of Einstein,.....Nevertheless, He disagreed with members of the CRSC on many arguments in their paper."<sup>[12]</sup>

Like *On the Special Theory of Relativity*, He's *Can Mass Transform to Energy?* couldn't be found anywhere either. However, in the third issue of the *Physics* published in 1974, there is an article with the exact title and by an apparent fictitious author, Ren Qing (任青. Please note that name of Chairman Mao's wife, and the head of the Gang of Four, was Jiang Qing). Furthermore, both the tone revealed, and the viewpoints expressed in the article resemble those of He's, so that article must be He's second article "to defend the law of mass conservation." Let's take a look at its first paragraph:

"The Science Press published in December 1973 a booklet, *Time and Space*, about time and space theories in special theory of relativity. The booklet goes so far as to repeat again the mistakes of energetics, i. e. believing that mass could be transformed into energy, which had been criticized a long time ago. The so called energetics is an idealist school in modern physics, invented by

Ostwald. The school claimed that there exist movements without mass, believing that it is unnecessary to answer the question of the undertaker of movement, it is enough to say ‘moving.’ ……Since the discovery of special theory of relativity, some people, citing the formula concerning energy and mass,  $E=mc^2$ , where E is energy, m is mass, and c is the speed of light, believe that mass could be transformed into energy, therefore, leading to the conclusion that mass could be reduced to energy. Idealist Cohen actually claimed that the transformation of matter into force is the biggest victory for idealism. To the idealist thoughts in physics, Lenin used to criticize sharply.”<sup>[13]</sup>

In other words, the author tried to refute Wilhelm Ostwald, Albert Einstein, and Hermann Cohen by citing Vladimir Ilyich Lenin, apparently believing Lenin was the ultimate authority in physics.

However, the more important thing to remember is the fact that He Zuoxiu, as the editor-in-chief of *Physics*, published an article in his own magazine with a fake name. Please be reminded that Fang Zhouzi has used dozens of fake names to post on his own New Threads. An old Chinese saying goes: people wouldn’t enter the same house if they do not belong together (不是一家人，不进一个门). You have to admire the wisdom of ancient Chinese.

## 2. A Sudden Attack

According to He, his third article for defending the law of mass conservation was entitled *The Theory of ‘Continuous Creation of Mass’ Must Be Criticized*. The article deserves detailed analysis, because it revealed many aspects of He’s, his writing, his thinking, his stealing, and his ignorance, among other things, so I separate this part from the last one.

In 1973, Mr. Tang Xiaowei (唐孝威), a research scientist in the Institute of Atomic Energy at CAS, the same institute where He was affiliated at the time, published a short paper in the *Journal of Fudan University*, proposing to explain the redshift phenomenon with a hypothesis of elementary particle evolution<sup>[14]</sup>. According to Mr. Tang’s hypothesis, the mass of electron is not constant; rather, it evolves with time according to the following formula, during a certain period of time:

$$m=m_0e^{-gt}$$

where  $m$  is the rest mass of electron in the celestial bodies far away from the earth (in the past),  $m_0$  is the rest mass of electron on the earth at current time,  $t$  is the time needed for the light to travel from celestial bodies to the earth, and  $g$  is the evolutionary constant of electron. Unfortunately, Mr. Tang cited a paper by Drs. Fred Hoyle published in *Nature* in 1971<sup>[15]</sup>, as a support for his hypothesis, which became his primary crime.

Mr. Tang’s paper was published at the end of 1973, and it attracted little attention until May 1974 when *Chinese Science Bulletin* re-published it<sup>[16]</sup>, followed by He’s “great criticism” article: *The Theory of ‘Continuous Creation of Mass’ Must Be Criticized*. Here is He’s first paragraph:

“For many years, F. Hoyle has been preaching the theory of ‘continuous creation of material.’ In 1940s, Hoyle threw out a so called ‘steady state cosmology,’ advocating that material could be created from nothingness, and having calculated that the creation rate was one atom per year in a volume equal to St. Paul’s Cathedral<sup>[1]</sup>. From time to time he preached that the rest mass of particles, such as electron, in different celestial bodies can be different<sup>[2]</sup>, that various interaction constants can vary with time, thus resulting in the rest mass of electron varies with time<sup>[3]</sup>. In summary, according to Hoyle, material can be both created and eliminated, and the laws of mass

and energy conservation, which have been fully proven by social practice, are dispensable. For many years, the ‘science’ preached by Hoyle by covering it up with a coat of science has not been accepted by the science community. On the contrary, these absurd theories have been frequently criticized by the natural scientists and philosophers who adhere to the materialism, pointing out that the basic purpose of these theories was to serve the theology<sup>[4]</sup>. However, such a theory, which is absurd scientifically and idealistic philosophically, received response in our country. For example, in recent year, Comrade Tang Xiaowei wrote a paper to interpret the astronomical phenomenon of cosmic redshift by citing Hoyle’s theory of continuous increase in particles’ rest mass<sup>[5]</sup>. The incident makes us feel that the criticism against idealism in natural science front must be enhanced. Here, I discuss with Comrade Tang Xiaowei.”<sup>[17]</sup>

He’s “discussion” was conducted in two ways: first, he tried to demonstrate scientifically that Tang’s hypothesis was invalid; then, he tried to demonstrate ideologically that Tang’s hypothesis was anti-dialectical materialism or materialist dialectics.

### (1) He’s Stolen and Crooked Science

He’s scientific demonstration contained no originality at all: his argument was based entirely on the work done by western scientists. For example, He stole Dr. Freeman J. Dyson’s argument, from the perspective of nuclear systematics and presented against Dr. George Gamow’s hypothesis that “the elementary unit  $e$  of charge should increase with time”<sup>[18, 19]</sup>, to refute Mr. Tang’s hypothesis: based on the rest mass of an electron, 510 keV, and Tang’s formula, He calculated that the electron rest mass 4 billion years ago was 418 keV, a difference of 92 keV. Then, He adopted Dyson’s  $\beta$ -decay theory and got the half-life of  $\text{Re}^{187}$  4 billion years ago was  $2.8 \times 10^6$  years. Then He concluded by using three sentences ended by exclamation marks:

“[The calculated number] is at least 1,400 fold less than the crust age currently known! And it means that there would be no such an isotope at all or only a tiny amount in the present crust! Obviously, the theory that electron rest mass automatically increases according to formulas (1) and (2) is in complete conflict with the isotopic abundance experiment!”<sup>[20]</sup>

And here is Dr. Dyson’s reasoning:

“The  $\text{Re}^{187}$  on the earth would not have survived if the half-life for its decay had been as short as  $2 \times 10^8$  y during the early history of the earth, say  $3 \times 10^9$  y ago. But the half-life for  $\beta$  decay between given nuclear states decreases at least as fast as  $\Delta^{-2.835}$  as  $\Delta$  increases.<sup>7</sup> Therefore, the value of  $\Delta$   $3 \times 10^9$  y ago cannot have been greater than  $(200)^{0.353} = 6.50 \times$  its present value. …… The growth of  $e^2$  according to (8) has been at least 300 times slower than Gamow’s proposal (1).”<sup>[18]</sup>

者却是不稳定的  $\beta^-$  放射的同位素,但半寿命长达  $4 \times 10^{10}$  年\*。由于地球上地壳的年龄才约是  $4 \times 10^9$  年,因而这一放射性同位素在地壳上仍有较大的含量,即约占了全部 Re 含量的 63%。我们知道,目前实验测出的电子静质量是 510 keV,如果电子静质量确实存在着如式(1)和(2)的变化,即可算出在 40 亿年前电子的静质量是 418 keV,即比目前静质量少 92 keV。由于目前实验上测到的  $\text{Re}^{187}$  的  $\beta^-$  电子的最大能量是 2.6 keV,如果在 40 亿年前电子静质量要比现在小 92 keV,那末由质量-能量守恒定律可知 40 亿年前  $\text{Re}^{187}$  的  $\beta^-$  电子的最大能量  $\Delta = 92.0 + 2.6 = 94.6$  keV,由  $\beta$  衰变的理论<sup>[6]</sup>,可知  $\text{Re}^{187}$  一类同位素的半寿命将至少有

$$\tau \propto \Delta^{-2.835**}, \quad (3)$$

因此,在 40 亿年前的  $\text{Re}^{187}$  的寿命将是

$$\tau < 6.6 \times 10^{10} \times \left(\frac{2.60}{94.6}\right)^{2.835} = 2.8 \times 10^6 \text{ 年}. \quad (4)$$

即至少要比目前已知地壳年龄小了 1,400 倍以上! 这意味着在目前的地壳上将找不到这种同位素或只有极微小的含量! 显然,所谓电子静质量如式(1)和(2)而自动增长的理论同  $\text{Re}^{187}$  同位素丰度测定的实验完全相冲突!

#### **Imitation is the sincerest form of flattery**

In the attack on Mr. Tang's hypothesis, He Zuoxiu's argument and calculation were completely based on Dr. Dyson's paper<sup>[18]</sup>. He did change a few parameters.

After imitating American Professor Dyson, He turned his eyes to South Asian subcontinent. Here is what He wrote in 1974:

“At present, there are two basic methods for determining the age of fossils in the crust, one is uranium-lead method, the other is potassium-argon method. The former utilizes the phenomena of  $\alpha$ -decay or spontaneous fission of  $\text{U}^{238}$ , with a decay constant about  $\sim 1.54 \times 10^{-10} \text{ yr}^{-1}$ ; the latter utilizes the phenomenon that  $\text{K}^{40}$  changes to  $\text{Ar}^{40}$  after its nucleus capturing a  $K$ -electron, and the decay constant is  $\sim 0.58 \times 10^{-10} \text{ yr}^{-1}$ . Both methods have been used to measure meteoritic samples, and the results show that they agree with each other very well<sup>[7]</sup>. If the rest mass of an electron ‘evolves,’ the changes in the two results would differ greatly.”<sup>[21]</sup>

And here is what Indian physicists S. M. Chitre and Yash Pal wrote in 1968:

“Two well-known methods for geological dating are the uranium-lead method and the potassium-argon method. In the former the time scale is provided essentially by the  $\alpha$ -decay rate of  $\text{U}^{238}$ , which is  $\sim 1.54 \times 10^{-10} \text{ yr}^{-1}$ , while in the latter it is given by the  $K$ -capture rate in  $\text{K}^{40}$ , which is  $\sim 0.58 \times 10^{-10} \text{ yr}^{-1}$ . Both these methods have been used to date stony meteoritic samples and they yield ages which are in essential agreement. Since the rates of  $\alpha$ -decay of uranium and  $K$  capture in  $\text{K}^{40}$  differ significantly in their sensitivity to a change in  $e^2$ , the measured spread in the ages obtained by the two methods can be used to put a limit on the variation of  $e^2$ .”<sup>[22]</sup>

In his “great criticism” article, He gave 15 endnotes, citing a total of 24 references. However, based upon my estimate, He at most read 10 of them, including the above two. The fact is, the papers by Dyson and Chitre and Pal were discussing the hypothesis proposed by G. Gamow, who was trying to rescue the hypothesis proposed by Paul Dirac in 1937 that certain physical constants, such as gravitational constant, vary with time<sup>[23]</sup>. In 1948, Edward Teller made a calculation showing that had it been the case, the sun would have been hotter than it is now and the temperature on the surface of the earth, in about 200 or 300 million years ago, would have been “near the boiling point of water.”<sup>[24]</sup> And then Gamow proposed that

instead of changing gravitational constant, the electron charge could vary with time. In his paper, Gamow introduced Teller's calculation first, then he wrote:

“Since Teller's original article was published, the astronomically estimated age of the universe has been brought up to about 10 eons (9.25 eons to be exact),<sup>3</sup> so that the time period separating us from the Cambrian era became a smaller fraction of the total age of the universe. Correspondingly, the ‘age of boiling oceans’ moved back in time, making the Cambrian and pre-Cambrian eras safe for marine life. On the other hand, still more recently, paleontologists have found the remainder of bacteria and algae in the deposits the age of which is estimated to be 3.1 eons by radioactivity-dating method.<sup>4</sup> And, even though Teller's argument makes life safe for the inhabitants of the Cambrian ocean, it certainly threatens the life of organisms living a few eons ago.”<sup>[19]</sup>

Obviously based on Gamow's description and discussion, He wrote:

“Gamow pointed out that Teller made a calculation in 1948<sup>[11]</sup> .....estimating that  $5 \times 10^8$  years ago, the temperature on the earth would have been more than  $100^\circ\text{C}$ , oceans would have been boiling, and before that time, there would have been no oceans, the earth would have been covered by superheated vapor. Thus, there would have been an ocean boiling period on the earth and the organisms with life would have not existed. However, Schopf, Banghoorm and other paleontologists have found by using radioactivity-dating method that the remainder of bacteria and algae have existed for about  $3.1 \times 10^9$  years<sup>[12][25]</sup>

Has anyone noticed that He changed Gamow's uncertain guess into an affirmative conclusion? The fact is, Teller never mentioned “superheated vapor” in the pre-Cambrian era in his paper - it was Gamow's invention -, and Teller stated explicitly that “our present discussion cannot disprove completely the suggestion of Dirac.” Why? Because Dirac had suggested that “the number of protons and neutrons in the universe must be increasing proportionally to  $t^2$ ”<sup>[23]</sup>, and if that was the case, Teller reasoned, “changes in the opacity of the sun due to changing chemical composition may materially influence the results obtained.”<sup>[24]</sup>

He not only manipulated Gamow's words, he also stole them. The fact is, as early as 1964, Pochoda and Schwarzschild of Princeton University had already pointed out that Teller's projected higher average temperature on the earth in the pre-Cambrian period was based on the old knowledge of the age of the universe:

“However, with the newer, rather long estimates for the age of the Universe, the time elapsed since the Pre-Cambrian appears only a rather modest fraction of the total time scale, so that the excess of  $G$  in the Pre-Cambrian over its present value and the consequence excess in the solar luminosity would be quite small according to any of the proposed theories.”<sup>[26]</sup>

And the funny thing is, He did cite Pochoda and Schwarzschild's paper in his article:

“Pochoda et al. even have calculated that if the gravitational constant decreases with time, and if the sun was burning  $2 \times 10^9$  years ago, then it would have by now burned up all its hydrogen energy, and turning into a red giant star<sup>[10]</sup>.”<sup>[27]</sup>

He's reference [10] is the paper by Pochoda and Schwarzschild published in 1964<sup>[26]</sup>. The fact is, that paper was based almost entirely on Teller's calculation. According to Teller, a greater gravitational constant  $G$  in the past could lead to two consequences: it would overheat the earth, and

it would exhaust the energy supply in the Sun sooner. Pochoda and Schwarzschild dismissed the first possibility, and focused their study on the second one. Therefore, had He read their paper, he would have definitely read the paragraph I just quoted above, which was actually the second paragraph in the original paper. The question is, whether He's oversight of the paragraph was intentional, or he didn't read the paper at all?

In their paper, Pochoda and Schwarzschild stated clearly, in both the abstract and conclusion sessions, that their calculated results do not exclude the possibility of mild variation of  $G$ :

“It was found that a mild variation of  $G$ , corresponding to  $n = 0.2$ , produces no difficulty for the representation of the observed Sun as the end product of an evolution starting with the initial main-sequence state and lasting for 4.5 billion years. In contrast, a strong variation of  $G$ , corresponding to  $n = 1.0$ , permits a satisfactory representation of the present Sun only if the age of the Universe is about 15 billion years or more.”

“We may then conclude that a mild variation of  $G$ , as represented by the exponent  $n = 0.2$ , does not lead to any difficulty in the representation of the observed present Sun, but that the assumption of a strong variation of  $G$  corresponding to  $n = 1.0$  permit a fitting of the observed Sun only if simultaneously the age of the Universe is assumed to be about 15 billion years or longer, an uncomfortable condition in view of the most recent estimates for the Hubble constant.”<sup>[26]</sup>

Also, in the entire paper, the authors didn't mention the number “2 billion” ( $2 \times 10^9$ ). Then, where did He get his number? The answer is, not only the number, but his entire sentence was stolen from Gamow. Here is what Gamow wrote in 1967:

“Also, a new approach has been developed to check the possibility of the brighter sun without any reference to the life on the surface of the earth. Pochoda and Schwarzschild<sup>5</sup> have shown, by using an electronic computer, that the original nuclear resources of the sun simply could not last long enough at such high energy expenditures, and that if the sun was burning **two eons** ago it would have by now burned up all its central hydrogen supply, turning into a red giant star.”<sup>[19]</sup>

In other words, He never read his reference [10], he simply copied Gamow's summary of his reference 5.

The fact is, He Zuoxiu didn't read his reference [12] either: what he wrote was completely based on what Gamow wrote about his reference 4, and that's why he misspelt the name of the senior author, “[the father of Pre-Cambrian palaeontology](#),” E. S. Barghoorn, as “Banghoorm,” because Dr. Gamow made a similar misspelling before He (see images below).

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<sup>4</sup>I. W. Schopf and E. S. Banghoorn, *Science* **156**, 508 (1967).

<sup>5</sup>P. Pochoda and M. Schwarzschild, *Astrophys. J.* **139**, 587 (1964).

有一个海洋沸腾的时期，生物体的生命将不能存在。但是，Schopf, Banghoorm 等古生物学家却用放射性方法测出细菌和藻类的残骸已存在了约有  $3.1 \times 10^9$  年<sup>[12]</sup>！Pochoda 等人更计算出如果重力常数随时间衰减，那末太阳如在  $2 \times 10^9$  年前还在燃烧，到现在即行耗尽它的氢的能量，并转变成为一个红巨星<sup>[10]</sup>。所有这些结果都和观察事实不符，因为太阳仍在缓慢而稳定地



### The stolen goods

Upper left: the page image of Gamow's reference 4 and He's reference [12], showing the authentic name of the senior author; Top right: the page image of a portion of the reference list of Dr. Gamow's paper<sup>[19]</sup>, in which he misspelt E. S. Barghoorn's name as Banghoorn; Lower panel: the page image of a portion of He Zuoxiu's article<sup>[17]</sup> (p.221), in which he translated Dr. Gamow's reiterations of his reference 4 manipulatively and his reference 5 faithfully, and pretended that his own reiterations were based on reading the original papers [12] and [10], respectively. He also misspelt Dr. Barghoorn's name, like Dr. Gamow did, but he changed the last letter n into m, apparently due to either the fine font of *Physical Review Letters*, or the poor quality of the photocopy of the paper.

## (2) He's Political Stick

Of course He's attack on Mr. Tang's hypothesis was not merely because of its lack of scientific evidence. As it was revealed in his first paragraph, the reason for his fierce attack on Mr. Tang was that Mr. Tang cited Fred Hoyle's paper as his support. The questions are, how come He Zuoxiu knew Dr. Hoyle so well, and how come he hated Dr. Hoyle so much? The keys to the questions are in He's reference [4].

According to He, Fred Hoyle's "absurd theories have been frequently criticized by the natural scientists and philosophers who adhere to the materialism, pointing out that the basic purpose of these theories was to serve the theology<sup>[4]</sup>." However, unlike his many other endnotes which contained multiple citations, He's note [4] gave only a half citation:

"Hollitscher, W. *Die Natur im Weltbild der Wissenschaft*."

He knows English and Russian, however, he has never showed his ability of reading German, to the best of my knowledge. Also, the citation gave no information about the publisher, about the year it was published, let alone page numbers, indicating that it was another piece of stolen goods. And indeed it was. However, before we examine He's stealing, let's take a look at the reference itself first.

"Hollitscher, W" was Walter Hollitscher (1911-1986) who received his doctoral degree from the University of Vienna in 1933, and became an active communist from that time on. The German Wikipedia identified him as "a philosopher, Marxist, educational worker, journalist and psychoanalyst."<sup>[28]</sup> His book, *Die Natur im Weltbild der Wissenschaft*, (*The Nature in the World of Science*), was published in 1960 by Globus Verlag in Vienna, Austria. Here is the review of the book by the great Theodosius Dobzhansky:

"This is a concise and well-rounded presentation of the fundamentals of natural science, written by a faithful Marxian for faithful Marxians. The book will also be interesting and useful to those non-Marxians who wish to study this perplexing phenomenon—Marxist science on this side of Iron Curtain."

"The tone of the book is set in the opening chapter by quotations from these great *scientific* authorities-Marx, Lenin, Mao Tse-Tung, and Engels."

"But, after all, the value of the book is in the light it throws on Marxist science, not on science in general."<sup>[29]</sup>

Enough said.

Almost immediately after its publication in Vienna, Hollitscher's book was translated into Russian and published in Moscow, and hailed as a major milestone in the history of natural dialectics by the famous Russian natural dialectician M.E. Omel'yanovskii ([М. Э. Омеляновский](#), 1904-1979):

“Science has long been looking for a book depicting the natural landscape from the dialectical materialist points of view. It is philosophically important to write such a book, and it requires the book’s author to do a lot of work, to have the ability of thinking, a broad knowledge in sciences, and the ability of philosophically generalizing the huge amount of scientific data. Such a task, even a person who has mastered every piece of necessary scientific material might not be able to accomplish. It is difficult to predict how to write such a book and when the book will be finished. However, it should be pointed out that Professor W. Hollitscher’s *The Nature in the World of Science* has accomplished such mission to a great extent. Such an accomplishment has immeasurable significance to modern natural sciences, especially to philosophy.”<sup>[30]</sup>

In 1965, the Chinese version of Hollitscher’s book, translated from Russian by Gong Yuzhi’s wife Sun Xiaoli and her colleagues, was published for internal circulation. Obviously, He knew the book from very beginning: in 1960, he was in the Joint Institute for Nuclear Research at Dubna, Russia, and in 1965, he was a red hot philosopher of science in China. And based on his writings, it can be said with absolute certainty that He had been reading Hollitscher’s book like a devout Christian reading the Bible. For example, the book wrote:

“Therefore, the formula  $E=mc^2$  should not be interpreted as ‘mass is transformed to energy.’  
‘There is no mass without energy, and there is no energy without mass: the two characters of the matter are connected inseparably.’”<sup>[31]</sup>

It must be based on this doctrine that He wrote his *Can Mass Transform to Energy?* in 1974 under the fake name Ren Qin (see above). And the second part of He’s article attacking Mr. Tang was also based on the book. The second chapter of Hollitscher’s book was entitled “Matter in Motion,” and the first section was to preach the basic doctrines of materialist dialectics: matter could neither be created nor eliminated. And in the article attacking Mr. Tang’s hypothesis, the first two sentences of He’s second part are:

“However, the problem in the hypothesis of the automatic increase in electron mass is not only that it lacks sufficient scientific evidence, but also that it brutally undermines the laws of mass and energy conservation. These two laws are the natural scientific foundation of the two important laws in dialectical materialism: matter conservation and motion conservation.”<sup>[32]</sup>

Why are the two conservation laws so important? Because Engels said so: He cited 4 quotations from Engels’ books to demonstrate this point. Then, he wrote:

“Therefore, the philosophical laws of matter and motion conservation are inevitably to be linked tightly with the laws of mass and energy conservation. The formers are the philosophical generalization of the latters, and the latters are the scientific foundation of the formers. Conversely, if one discards mass conservation, discards energy conservation, he is bound to support idealism, and oppose dialectical materialism.”<sup>[33]</sup>

Of course, pro-idealism and anti-materialism were two of the most fearful labels at the time. Of course Mr. Tang’s direct link to idealism was evidenced by his citing of Fred Hoyle. Therefore, He quoted Hoyle repeatedly to demonstrate that the British physicist was an idealist, and the bizarre thing was, every word He quoted also appeared in Hollitscher’s book. Yes, in Hollitscher’s, Fred Hoyle was picked on as one of the major representatives of metaphysical and idealist “philosophers or philosophized physicists.” Here is what Hollitscher wrote against Hoyle by citing his *The Nature of Universe*:

“Hoyle claims: ‘new material appears to compensate for the background material that is constantly being condensed into galaxies……The most obvious question to ask about continuous

creation is this: Where does the created material come from? It does not come from anywhere. Material simply appears—it is created. At one time the various atoms composing the material do not exist, and at a later time they do. . . . It is certainly a new hypothesis, but it only replaces a hypothesis that lies concealed in the older theories, which assume, as I have said before, that the whole of the matter in the Universe was created in one big bang at a particular time in the remote past. On scientific grounds this big bang assumption is much the less palatable of the two.”<sup>[34]</sup>

“Indeed, Hoyle’s continuous creation just pointed out: ‘The new material does not appear in a concentrated form in small localized regions but is spread throughout the whole of space. The average rate of appearance of matter amounts to no more than the creation of one atom in the course of about a year in a volume equal to that of St. Paul’s Cathedral.’ Like this, the density in a defined region with Hoyle’s phenomenon is disappointingly small. ‘It would be quite impossible to detect such a rate of creation by direct experiment.’”<sup>[35]</sup>

And He’s quoted exactly the same contents, and all of them, as what Hollitscher quoted, including the suspension points, and including the reference to “St. Paul’s Cathedral.”<sup>[36]</sup>

The fact is, the “St. Paul’s Cathedral” metaphor was only used by Fred Hoyle in his BBC broadcasting, and in this book’s first British edition: it was not present in the book’s American edition published by Harper and Row in 1950, neither in its revised edition published by Basil Blackwell of UK in 1960. In these two books, Hoyle used “a moderate-sized skyscraper” (1950 edition, p.125), or “a skyscraper” (1960 edition, p.112), respectively. According to the Chinese translation of Hollitscher’s book, Hollitscher’s citation was Hoyle’s book published by Basil Blackwell in 1950. It is extremely unlikely that He Zuoxiu had the access to that early edition in 1974. In other words, it is very likely that He stole Hollitscher when he was attacking Mr. Tang.

spread throughout the whole of space. The average rate of appearance of matter amounts to no more than the creation of one atom in the course of about a year in a volume equal to that of a moderate-sized skyscraper. As you will realize, it would be quite impossible to detect such a rate

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throughout the whole of space. The average rate of appearance of matter amounts to no more than the creation of one atom in the course of about a year in a volume equal to that of a skyscraper. As you will

Where did He Zuoxiu’s “St. Paul’s Cathedral” come from?

Hoyle's quotations provided by He Zuoxiu were exactly the same as those appeared in Hollitscher's book, including the reference to "St. Paul's Cathedral." However, the term is not present in the book's more popular and more recent editions. Upper panel: Hoyle's *The Nature of the Universe* published by Harper and Row in 1950; Lower panel: the book's 1960 edition published Basil Blackwell of UK and republished by Pelican Books in 1963.

The thing is, Hoyle's paper cited by Mr. Tang had nothing to do with that theory of continuous creation; rather, it was about "a gravitational 'constant' that is decreasing with time"<sup>[15]</sup>, which, of course, was originated by Paul Dirac – even his theory of continuous creation of matter could trace its origin to Dirac's "the number of protons and neutrons in the universe must be increasing proportionally to  $t^{2\alpha}$ "<sup>[23]</sup>. So, why didn't He Zuoxiu attack Dirac? And how did he link the variation of gravitational constant to continuous creation of matter and to idealism?

The answer to the first question is very simple: since 1930s, Paul Dirac had been considered "a sincere friend of Soviet science"<sup>[37]</sup>, and in Hollitscher's book, Dirac was praised repeatedly for his theory which predicted the existence of positrons, and his assertion of the existence of matter in "zero field" in his classic *The Principles of Quantum Mechanics*<sup>[38]</sup>. Therefore, even if He had been loaned a million guts, he would still have been too scared to attack Dirac: In his article, He did acknowledged the fact that Dirac proposed the hypothesis earlier than Hoyle in a footnote, and then he let Dirac go and continued to blast Hoyle till the end of the article, and then 3 years later.

The answer to the second question was actually revealed by He himself, first briefly in his initial attack on Mr. Tang, then, about three years later, in a more detailed form:

"If judged from the details of reference [2] [referring to Hoyle paper cited by Mr. Tang], it seems that it indeed differs in form from Hoyle's theory of 'continuous creation of material.' ..... However, if judged from the most important viewpoint of the paper, [it is obvious] that the paper is the continuation of Hoyle's consistent view. The gravitational theory deduced from conformal transformation in the paper is an example of brutal destruction of the law of conservation of mass, and the law of conservation of energy. The formula for the increase of the rest mass of electron based on the theory is:

$$m=(constant). t^2 \quad (10)$$

(in which  $t$  is cosmic time), is a figurative statement on the creation of mass from nothing. It can be seen from formula (10), the world would start from a certain cosmic time when the God likes, i. e. when  $t=0$ , the rest mass of every particle is zero. After that, the rest mass of the particles would grow with time to infinity! What fundamental difference does this theory have from Hoyle's consistent view?"<sup>[39]</sup>

And based on such reasoning, He attacked Tang's idealism and anti-dialectical materialism:

"Comrade Tang Xiaowei changed Hoyle's 'law' of mass increase with the square of time 'phenomenologically' (i. e. for no reason) into the form of exponential increase of electron rest mass! Isn't it so obvious to which world view the hypothesis provides 'scientific' support? Especially, in this hypothetical 'law,' if the time  $t$  extends to the infinite past, then from formulas (1) and (2) we could immediately know the electron mass was zero, and if the time  $t$  extends to the infinite future, then the electron's rest mass would be infinite! Isn't this an exact figurative description of the process called 'material created from nothing'!"<sup>[40]</sup>

You have to admire Mr. He's ability of infinite exaggerations. The fact is, in Hoyle's paper, it states clearly "There need be no 'origin' in the Minkowski representation"<sup>[15]</sup>, and in Tang's article, he clearly

defined the range of application of his formula: “in the scope of our observed space and time, in the process of evolution of this specific celestial body”<sup>[41]</sup> Of course they were meaningless to He, otherwise, his political stick would have been powerless, and he himself would have been worthless.

The funny thing is, by 2007, the fight between materialism and idealism was no longer important to anyone in China, and He not only accepted the theory of universe expansion, he even accepted the theory that physical constants are variable. Why? Because his old boss Peng Huanwu believed so:

“We know that in the past period, there appeared new trends in our science. In the universal space, besides the dark matter, there is possibly dark energy, and the universe is expanding at an accelerated speed. Why would the universe expand at accelerated speed? Master Peng immediately thought of Dirac’s big number law. In Dirac’s work, an important thought is that the gravitational constant could vary with time. And a natural explanation to the accelerated expansion of the universe is that the gravitational constant gradually weakens, which makes the universe look like expanding at an accelerated speed. Therefore, to explain the accelerated expansion, Master Peng especially did a research on the gravity field with a variable gravitational constant. Master Peng is already 89 years old. At this age, he is still capable of doing so much specific work, suggesting how deep and solid his theoretical physic knowledge is. I admire him very much. Such a work ethic is really worth learning by us.”<sup>[42]</sup>

However, He has never apologized to Mr. Tang, or Dr. Hoyle, or Dr. Gamow, for his attacks on them, because deep in his heart, he is still believing, or pretends to believe, that the doctrines preached by Engels are absolute truth.

### (3) He’s Knowledge in Chinese History and Philosophy

Like Yu Guangyuan and Fang Zhouzi, He Zuoxiu is extremely fond of pretending to know everything: from Chinese to Western, from natural sciences to philosophy to humanities. And when he was attacking Mr. Tang by stealing from the American and Indian physicists and the Austrian philosopher, he didn’t forget that he could also steal something from his Chinese brethren. Commenting on Hoyle’s objection to the “Big Bang” theory, He wrote:

“In the history of philosophy, quarreling with each other among various idealist schools is not a rare phenomenon. In the history of Chinese philosophy, there was a very famous ‘Swan Lake Debate.’ In 1175, in Southern Song Dynasty, Zhu Xi, an objective idealist, and Lu Jiuyuan, a subjective idealist, engaged in an epistemological debate in the Swan Lake Temple in Xin County, Jiangxi. The debate lasted for several days, but the two sides were at loggerheads. Lu Jiuyuan, from the idealist perspective, criticized Zhu Xi’s ‘knowing by studying things’ ‘could mislead people by things,’ and his theory was ‘too fragmental,’ ‘the more [you] talk, the more [I am] confused.’ Zhu Xi, on the hand, criticized Lu Jiuyuan’s ‘Mind-and-Heart Learning’ was ‘too simple,’ he also alleged that ‘Lu Jiuyuan’s theory contains many teachings of Zen.’ To the last point, Lu Jiuyuan replied: ‘I am not like some people who are in fact following Zen by dishing up the same old stuff in a new form, and concealing its source on the surface.’<sup>[15]</sup> Like that, the two sides exposed the truth that their theories are connected to Zen (a school of Buddhism).”<sup>[43]</sup>

He’s note [15] listed 3 references<sup>[44]</sup>: one was quotations of Zhu Xi (Chu His, 1130-1200), collected and edited by his disciples (*The Classified Conversations of Master Zhu*); one was *The Records of Song and Yuan Scholars*, a history book written and compiled by Huang Zongxi (Huang Tsunghsi, 1610-1695); and the last one was a booklet written by two contemporary scholars Pan Fu’en and Ou Qun, published in 1973, entitled *The Struggle Between Two Epistemologies in Ancient China*. Of course, the main idea, the

story, and the quotations presented in He's paragraph, quoted above, were almost exclusively derived from a paragraph in that last literature. As a matter of fact, He even stole a Lenin's sentence from it.

First of all, although the Swan Lake Debate is indeed one of the most important events in the history of Chinese philosophy, there is actually little information available about the content of the debate. As a matter of fact, except for some fragmental recollections and two poems, everything else is nothing but hearsays: people even don't know for sure for how many days the debate lasted<sup>[45]</sup>.

Secondly, based on the fragmental records, it was extremely an overstretching to say that the debate was "an epistemological debate," (Pan and Ou said it was about "apriorism"). The fact is, the main theme of the debate, and indeed the major difference between Zhu and Lu, at least around the time of the Swan Lake Debate, was the methodology of learning ("为学之方"): Zhu's emphasis was on reading the books written by the sages and saints, and Lu's was reflections and self-examinations. And it was in this context, Lu made his "fragmental" comment on Zhu's way of learning<sup>[46]</sup>. Therefore, it was not a criticism against, as both He and Pan & Ou claimed, Zhu's "knowing by studying things," which literally means getting knowledge by studying objective things in the natural world.

Thirdly, among the six quoted remarks cited by He (four of them were exactly the same as those by Pan and Ou), none of them, except for the "fragmental" comment mentioned above, was made during the "Swan Lake Debate." Rather, they were made either before or after the debate. For example, Lu's comment, "the more [you] talk, the more [I am] confused," was made in a letter he sent to Zhu, debating about *tai chi*, in 1188, 13 years after the Swan Lake Debate<sup>[47]</sup>.

Fourthly, the stupidest mistake He made was his last quotation, supposedly Lu's counter-attack on Zhu Xi, saying that Zhu's theory was based on Zen, but Zhu tried to hide his source. The fact is, these words were written by Zhu in his reply to Lu's *tai chi* letter, in 1189, and it was not only clearly marked at the beginning of the paragraph that it was Zhu's letter in *The Records of Song and Yuan Scholars*, which He listed as one of his references, it also revealed in the letter itself that it was Zhu's letter since Zhu mentioned his own name at the end of the paragraph<sup>[48]</sup>. Therefore, He either didn't read the reference he cited, which is most likely the case; or he didn't understand what he read, which is probably also true.

在哲学史上各种唯心主义者的相互争吵决不是罕见的现象。中国哲学史上有一个相当著名的“鹅湖之会”。1175年，南宋的客观唯心主义者朱熹和主观唯心主义者陆九渊在江西信州鹅湖寺就认识论问题进行了连续几天的辩论，双方相持不下。陆九渊从唯心论的角度批评朱熹的“即物穷理”的学说“给物牵了去”，说朱熹的说法太“支离”，“言来言去，转加糊涂。”朱熹却批评陆九渊的“心学”“太简”，并指责说“陆九渊的学说是胸中包含了許多禅学。”针对这一点陆九渊也就回答说，“不象有人实际上也是改头换面地因袭禅宗的学说但在表面上却隐晦它的来源。”<sup>[45]</sup>这样双方都在相互批判中而揭发了彼此学说中和禅学(佛教中的一种)相通的实质。

列宁曾指出：“**当一个唯心主义者批判另一个唯心主义者的唯心主义基础时，常常是有益于唯物主义的。**”对于“宇宙大爆炸”和“不断创造物质”这两种唯心论之间的相互批判也同样有

在这里还可说及一件有趣的事情，陆九渊和朱熹在认识论的问题上，曾发生过一场先验论之间的争吵，这就是哲学史上著名的“鹅湖之会”。一一七五年，朱、陆在江西信州鹅湖寺就认识论的问题，进行了连续几天的辩论。陆九渊从唯心论极右的角度，批评朱熹“即物穷理”的学说容易“给物牵了去”，说他唯心得不够彻底，说法太“支离”，“言来言去，转加糊涂”。朱熹则骂陆九渊的“心学”“太简”，唯心得太露骨，同佛

教的禅宗过于相似，并说他“胡叫胡喊……唯我独尊”。他们彼此喋喋(译音 dié)不休，互相叫骂，但始终环绕着先验论兜圈子。列宁曾指出：“**当一个唯心主义者批判另一个唯心主义者的唯心主义基础时，常常是有益于唯物主义的。**”(《哲学笔记》第二八九页)朱、陆之间唯心论内部的争吵，在互相揭露中更加暴露了他们哲学的唯心论本质，这对于唯物论者反对唯心论的斗争却是有利的。

#### The stolen goods, again

The upper panel shows He's text about the "Swan Lake Debate," in which the words resemble those written by Pan Fu'en and Ou Qun in their *The Struggle Between Two Epistemologies in Ancient China* ( pp.52-53, lower panel) were highlighted with red underlines. Please note that the words in bold font in both panels were a quotation from Lenin's *Philosophical Notes*, "When one idealist criticizes the foundations of idealism of another idealist, materialism is always the gainer thereby."

則于聖門有何違叛，而不肯違乎？上天之載，是就有中說無，無極而太極，是就無中說有。若實見得，即說有說無，或先或後，都無妨礙。今必如此拘泥，強生分別，曾為不尚空言，專務事實，而反如此乎！

又曰：「來書云：『夫乾至自反也。』夫太極固未嘗隱于人，然人之識太極者，則少矣。往往只是于禪學中認得箇昭昭靈靈能作用底，便謂此是太極，而不知所謂太極，乃天地萬物本然之理，亙古亙今，顛撲不破者也。『迥出常情』等語，只是俗談，即非禪家所能專有，不應儒者反當回避。況今雖偶然道著，而其所見所說，即非禪家道理，非如他人陸實祖用其說，而改頭換面，陽諱其所自來也。如曰：『私其說以自妙』，而又溢之，又曰：『寄此以神其義』，曰：『繫絆多少好氣質底學者』，則恐世間自有此人可當此語。『庶幾無狀，自省得與此語不相似也。』

又曰：「來書引書云：『有言逆于汝心，必求諸道。』此聖言也，敢不承教。但以來書求之于道而未之見，但見其詞意差舛，氣象龜半，似與聖實不甚相近。是以竊自安其淺陋之習聞，而未敢輕舍故步，以追高明之獨見耳。又記頃年嘗有『平心』之說，而前書見論曰：『甲與乙辯，方各自是其說。甲則曰：『乙平心也。』乙亦曰：『甲平心也。』平心之說，恐難明白，不若據事論理可也。』此言美矣！然庶所謂平心者，非直使甲換乙之見，乙守甲之說也，亦非謂都不論事之是非也，但欲兩家姑暫置其是非，然後可以據事論理，而終得其是非之實。如謂治疑獄者，當公其心，非謂便可改曲為直，改直者為曲也，亦非謂都不問其曲直也，但不可先以己意之向背為主；然後可以審聽兩造之辭。

宋元學案 卷之八 朱子學案 五〇八

陸曰：夫乾確然示人易矣，夫坤頤然示人簡矣，太極亦何嘗隱于人哉！尊兄兩下說無說有，不知漏洩得多少，如所謂「太極真體，不傳之秘」，「無物之前，陰陽之外」，「不應有無，不落方體」，「迥出常情，超出方外」等語，莫是曾學禪宗，所得如此？平時既私其說以自妙，及教學者，則又往往藉此，而多說文義，此「漏洩」之說所從出也。以實論之，兩頭都無著實，彼此只是葛藤。未說氣質不美者，樂寄此以神其義，不知繫絆多少好氣質底學者！既以病己，又以病人，殆非一言一行之過。兄其無以久習于此而重自反也！

朱曰：太極固未嘗隱于人，然人之識太極者則少矣。往往只是于禪學中認得箇昭昭靈靈，能作用底，便謂此是太極。而不知所謂太極乃天地萬物本然之理，亙古亙今，顛撲不破者也。『迥出常情』等語，只是俗談，即非禪家所能專有，不應儒者反當回避。況今雖偶然而道著，而其所見所說，即非禪家道理。非如他人陸實祖用其說，而改頭換面，陽諱其所自來也。如曰：『私其說以自妙』，而又溢之，又曰：『寄此以神其義』，又曰：『繫絆多少好氣質底學者』，則恐世間自有此人，可當此語。『庶幾無狀，自省得與此語不相似也。』

宗義案：宋、陸往復，幾近萬言，亦可謂無餘蘊矣。然所爭只在字義、先後之間，究竟無以大相異也。惟是朱子謂「無極即是無形，太極即是有理，在無物之前而未嘗不立于有物之後」，在陰陽之外而未嘗不行于陰陽之中」，此朱子自以理先氣後之說解周子，亦未得周子之意也。『濼濼焉困知記謂：「無極之真，二五之精，妙合而凝。」三語，不能無疑。凡物必兩面後可以言合。太極與陰陽，果二物

**The more He talks, the more He gets confused**

According to He Zuoxiu, Lu Jiuyuan refuted Zhu's accusation of his affiliation with Zen by saying "I am not like some people who are in fact following Zen by dishing up the same old stuff in a new form, and concealing its source on the surface." The fact is, the words were written by Zhu to Lu, instead of speaking by Lu to Zhu, and the text, quoted at least twice in *The Records of Song and Yuan Scholars*, which He listed as one of his references, clearly shows so: the red boxed words indicate unequivocally the quoted words were Zhu's, and the words marked by red sidelines were what He Zuoxiu quoted in contemporary Chinese. See [48].

**(4) He's Knowledge in Marxism**

One might think that since He had worked in the Propaganda Department for 5 years, and he claimed, repeated, that he is one of only a few people in China who know both science and Marxism, then his criticism of Mr. Tang's hypothesis must be based on orthodox Marxism, right? Wrong! The fact is, Mr. Tang defeated He in his own backyard.

In June 1975, 13 months after the publication of He's great criticism article, *Chinese Science Bulletin* published Mr. Tang's rebuttal. This is his first paragraph:

“*The Hypothesis of Elementary Particle Evolution and the Interpretation for Extragalactic Redshift* proposed that particles such as electron and proton have developmental history in time dimension. Last year, *Chinese Science Bulletin* published Comrade He Zuoxiu's article, which opposes the hypothesis, and its main theme is that 'elementary' particles do not have time dimensional history of development. This article is based on the fundamental principles of Marxism, 'the electron is as inexhaustible as the atom' and 'in the fields of the struggle for



**production and scientific experiment, mankind makes constant progress and nature undergoes constant change, they never remain at the same level,**’ further explains the hypothesis.”<sup>[49]</sup> (Note: The bold fonts were original.)

The so called “fundamental principles of Marxism” were from Lenin’s *Materialism and Empirio-criticism*, first published in 1909, and Chairman Mao’s comment on Premier Zhou Enlai’s *Report on the Work of the Government to the First Session of the Third National People’s Congress of the People’s Republic of China*, made in 1964.

And in the article, Mr. Tang, whose knowledge in Marxism was basically unknown to other people, and still is till this day, cited Engels and Lenin four times each, and Chairman Mao five times, to demonstrate that the hypothesis that elementary particles evolve is in line with dialectical materialism. For example, Mr. Tang managed to find the following words from one of Engels’ notes for *Anti-Dühring*, which, according to Mr. Tang, criticized the metaphysical thinking in 18<sup>th</sup> century’s natural sciences:

“Nature was not at all regarded as something that developed historically, that had a history in time; only extension in space was taken into’ account; the various forms were grouped not one after the other, but only one beside the other; natural history was valid for all periods, like the elliptical orbits of the planets. ……Natural science, at the outset revolutionary, was confronted by an out-and-out conservative nature, in which everything remained today as it was at the beginning of the world, and in which right to the end of the world everything would remain as it had been in the beginning.”<sup>[50]</sup>

And based on the above, Mr. Tang bombarded He Zuoxiu with the following questions:

“As for the view that particles remain the same, doesn’t that the natural science which has already confirmed the evolution of celestial bodies and the evolution of organisms, stand today in front of the conservative ‘elementary’ particle world again? If not regarding electrons and protons as something that developed historically, that had a history in time; if believing that electrons and protons as well as their properties are the same forever; believing that the present electrons are the same as the ancient ones, and they will be the same billions of years later; then, doesn’t it mean in the area of ‘elementary’ particles, ‘heaven changeth not, likewise *Tao* changeth not’?”<sup>[51]</sup>

The sentence “heaven changeth not, likewise *Tao* changeth not” was written by [Dong Zhongshu](#) (Tung Chung-shu, 179–104 BC), the very person who made Confucianism the official ideology in China, and in the “Criticize Lin, Criticize Confucius” and “Appraise Legalism, Criticize Confucianism” movements, the sentence was regarded as one of the most reactionary teachings in China’s history. Here is what He wrote a few months after Mr. Tang’s rebuttal about the sentence:

“In a word, the presentation of his reactionary theory was aimed politically at the justification of the ‘divine right of kings’ so as to enforce the absolute rule of feudal monarchs.”<sup>[52]</sup>

Therefore, you can imagine how scared He Zuoxiu was after reading Mr. Tang’s counter-attack. The more scaring thing is, Mr. Tang didn’t stop there. He went on:

“‘Heaven changeth not, likewise the *Tao* changeth not’ is a reactionary doctrine of Confucius and Mencius. Chairman Mao has pointed out in his *On Contradiction*: ‘It is only the reactionary ruling classes of the past and present and the metaphysicians in their service who regard opposites not as living, conditional, mobile and transforming themselves into one another, but as dead and rigid, and they propagate this fallacy everywhere to delude the masses of the people, thus seeking to perpetuate their rule.’ In the area of natural sciences, we should try hard to study Marxism,

Leninism, Mao Zedong Thought, thoroughly criticize the doctrine of Confucius and Mencius, 'Heaven changeth not, likewise the Tao changeth not.'”<sup>[53]</sup>

Mr. Tang’s above words certainly sent chills down He’s spine. In his reply to Tang’s rebuttal, which was published in 1977<sup>[39]</sup>, He’s tone was much softer and gentler than it used to be, although the importunateness was the same.

### 3. Parallel, Intertwine, Conflict, Contrast: A Tale of Two Academicians

Surprisingly, Mr. Tang Xiaowei and He Zuoxiu have a very similar, or parallel, life experience and career path, although the end results are just the opposite: right now, Mr. Tang is one of the most respected scientists in China, while He Zuoxiu is THE most disrespected one, and among the most hateful persons in China as well.

Mr. Tang was born in 1931 in Wuxi, Jiangsu Province to a literary family<sup>[54]</sup>. His grandfather, Mr. Tang Wenzhi, was the president of Shanghai Higher Industrial School (上海高等实业学堂), the predecessor of Shanghai Jiao Tong University, from 1907-1920. He also found the Wuxi National Studies College (无锡国学专修学校) in 1920, which became one of the predecessors of Soochow University. In contrast to the lavish and extravagant life style of He Zhidao, He Zuoxiu’s great grandfather, exemplified by his He’s Garden, Mr. Tang Wenzhi was, and still is, known for his scholarship, honesty, and thrifty<sup>[55]</sup>.



Mr. Tang Wenzhi (1865-1954) and some of his works

Wuxi is about midway between Yangzhou, He Zuoxiu’s hometown, and Shanghai, He Zuoxiu’s birthplace. Like He Zuoxiu, Tang Xiaowei did grow up in Shanghai: he even went to the same high school, Shanghai Nanyang Model High School, as He Zuoxiu did, right after He Zuoxiu graduated from that school in 1945. In 1949, both Tang and He joined in CCP, Tang in Shanghai as a high school student, and He in Beijing as a college boy in Tsinghua University. As a matter of fact, they both studied physics in Tsinghua University: He Zuoxiu graduated from Tsinghua in 1951, and Tang in 1952.

After graduating from Tsinghua, Mr. Tang was assigned to the Institute of Modern Physics at CAS, starting his experimental physicist career. He Zuoxiu, on the other hand, went to the Propaganda Department and ultimately became a scholar-like politician. In September 1956, Mr. Tang was sent to the Joint Institute for Nuclear Research at Dubna, Russia. After he returned to China in April 1960, he published 14 research papers in less than three years in the prestigious *Acta Physica Sinica*. He Zuoxiu,

who went to Dubna in 1958 and returned at the end of 1960, on the other hand, published two papers in the journal between 1960 and 1966.

Since coming back from Dubna, Mr. Tang was assigned to work in China's nuclear weapons program, in charge of designing and making equipment for the detection and measurement of nuclear reaction. And except for missing the beginning few months, Mr. Tang was directly involved in the entire history of the program, from atomic bomb to hydrogen bomb. Tang's contribution to the program was well recognized. Here is a paragraph in *China Today: Nuclear Industry*, published in 1987:

“To measure pulse neutrons, Tang Xiaowei and other young researchers worked under the guidance of older scientists to complete development of monitoring systems and met the requirements for this test. The success of this experiment solved key technical problems in development of the atomic bomb and laid a reliable foundation for atomic bomb design and nuclear blast tests.”<sup>[56]</sup>

For his contribution, Mr. Tang, along with other people who had made important contributions to the atomic bomb project, was received by Premier Zhou Enlai in 1965<sup>[57]</sup>. As mentioned before, even though He Zuoxiu has been claiming that he is one of the pioneers in China's hydrogen bomb theory, his claim has not been substantiated by any reliable evidence besides his own words<sup>[58]</sup>.

From 1960 to 1973, Tang's affiliation was the Ninth Research Institution of the Ministry of Nuclear Industry. After the detonation of the hydrogen bomb in 1967, Tang's fate took a sharp turn: he was criticized, and even labeled as a counterrevolutionary and a spy, and put in “bullpen,” a term for the unofficial jails<sup>[57]</sup>.

In 1973, Mr. Tang was transferred to the Institute of Atomic Energy at CAS, and it was during that time, he wrote and published the fateful paper about electron evolution, the only paper he published from 1963 to 1974. It is unknown whether He's attack on him was out of personal reasons or not, however, there should be no doubt that He's political instinct and his contempt for experimental physicists played an important role.

In 1978, Chinese government sent a group of physicist to the Deutsches Elektronen-Synchrotron (DESY) to work in the MARK-J group under the leadership of Dr. Samuel C. C. Ting. According to Mr. Tang's biographer<sup>[54]</sup>, it was Dr. Ting who nominated Mr. Tang, and Mr. Tang was appointed the leader of the Chinese group, which contained initially 10 people, then replaced by another 17 people one year later. Tang was the leader of both groups. In 1979, MARK-J group found the gluons, and the *New York Times* reported the new on its front page, and said:

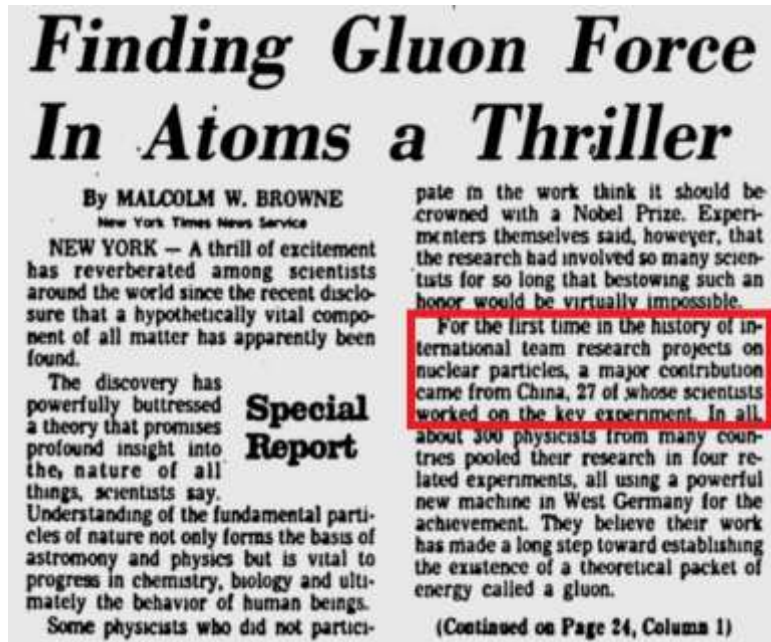
“For the first time in the history of international team research projects on nuclear particles, a major contribution came from China, 27 of whose scientists worked on the key experiment.”<sup>[59]</sup>

The 27 Chinese scientists were the combination of the two groups led by Mr. Tang. In 1984, in a preface to one of Mr. Tang's books, Dr. C. C. Ting wrote:

“Professor Tang Xiaowei, one of the authors of the book, is a physicist with much experience and great achievement. He personally participated in the electron-positron colliding experiment, and, especially, he made important contribution to the discovery of gluons in 1979.”<sup>[60]</sup>

In 1979 and 1980, Mr. Tang, as a member of the MARK-J group, published at least 11 papers, mainly in *Physical Review Letters*<sup>[61]</sup>. And before 1985, He Zuoxiu published a grand total of 4 papers in English, all in *Scientia Sinica*, including that noxious [\*The Materialistic Theory of Yuan Ch'i—One of the Brilliant\*](#)

[Philosophical Ideas of the Legalist School](#)<sup>[58]</sup>. In 1980, both Mr. Tang and He were made academicians of CAS.



The front page Special Report of *New York Times*  
As shown on the front page of *Pittsburgh Post-Gazette* on Sept. 11, 1979.

Mr. Tang returned to China from Germany in September 1979. One might think that after making such a big discovery, the road in front of him would be much smoother and brighter, right? Wrong. When Tang was in Germany, he got acquainted with Japanese physicist Dr. Masatoshi Koshiha, who was in the JADE group in CESY. Before returning to China, Mr. Tang discussed with Dr. Koshiha a collaboration proposal for detecting proton decay by building a water Cerenkov detector. According to the proposal, China would provide the location, infrastructure, and pure water, while Japan the electronic equipment. The proposal received the support of Dr. Zhang Wenyu, the director of the Institute of High Energy (originally the Institute of Atomic Energy). However, the proposal was unexpectedly rejected by CAS. Of course, Dr. Masatoshi Koshiha continued his work without the Chinese help, and he finally detected cosmic neutrinos in 1990s, for which he was awarded the Nobel Prize in Physics in 2002<sup>[61]</sup>, and Mr. Tang missed his chance of life to make similar discoveries.

Whether He Zuoxiu was involved in killing Mr. Tang's proposal is unknown. However, after Dr. Koshiha won his Nobel Prize in 2002, Mr. He Jingtang, a research scientist in the Institute of High Energy, and a colleague of both Tang Xiaowei and He Zuoxiu, revealed the story in two Chinese professional journals<sup>[62]</sup>, which generated some uproars in China. In July 2003, *Science Daily* published an article reporting Mr. He Jingtang's story<sup>[63]</sup>, however, it appears that the published article was an abridged version, its original version soon appeared on the internet, including on the New Threads, in which He Zuoxiu's attack on Mr. Tang was mentioned:

“When He Zuoxiu attacked Tang Xiaowei in *Physics* magazine saying his research on proton decay violated the conservation of energy, which was equivalent to saying that Tang Xiaowei even didn't have the basic knowledge, and of course it could influence the decision making by the leaders in charge.”<sup>[64]</sup>

Sure, the writer of the article got the basic facts wrong: the magazine which published He's articles was *Chinese Science Bulletin*, not *Physics*, and Mr. Tang's research being attacked was electron evolution, not proton decay. However, despite these factual errors, the writer's argument is still valid: He's attack could have an effect on the decision making process by the leaders of the CAS.

The fact is, the end of 1970s was probably He Zuoxiu's proudest moment in his entire life. In 1978, the Institute of Theoretical Physics of CAS was established, approved by China's paramount leader Deng Xiaoping. Although the institute was headed by the eminent Dr. Peng Huanwu, the person in charge of daily operation was no one else but He Zuoxiu: "Mr. Peng promised that he would only pay attention to two things, and take hands-off policy to the rest things." The two things were the mission of the institute, and the promotion of the senior research scientists<sup>[65]</sup>.

The question is, how could a person like He Zuoxiu find favor with two opposite camps, namely the extreme leftist Gang of Four, and their archrival Deng Xiaoping? The answer will be given in the next part of this serial letter, for now, let's finish the story about Mr. Tang.

In 1982, in the midst of preparing the construction of Beijing Electron Positron Collider, Mr. Tang, arguably the top expert in the area, suddenly met unspecified "difficulty" in his work and working condition<sup>[66]</sup>. The "difficulty" was so big that it became the major reason for his turning his eyes to biology<sup>[67]</sup>. Since the mid-1980s, Mr. Tang has been mainly conducting biological research, especially in the area of behavioral and brain sciences. It is unknown to the public whether He was involved in causing the difficulty, but my educated guess is "very likely."



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## Acupoint-specific fMRI patterns in human brain

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### **No comparison**

A paper on brain science published by Mr. Tang's lab in 2005 has been cited for 141 times. He Zuoxiu's [most influential paper](#) on physics is the one published in *Physics Letters B* in 1991. So far, it has been cited 59 times. The combined citation times of He's 32 English papers, as of today, Feb. 2, 2014, are 324, including self-citations.

So far, Mr. Tang has authored or co-authored more than 450 original scientific research papers. Although Mr. He has published about the same number of articles, more than 80% of them are unrelated to science, for example, that noxious "Three Representatives theory is the fundamental criterion of the evaluation system of scientific and technological innovation."

So far, Mr. Tang has published at least 14 books as their author, co-author, or editor, all of them are about science. Although Mr. He published about equal number of books, almost all of them are about politics and ideology (see the table below).

<b>The books authored or edited by the two CAS academicians</b>	
<b>Mr. Tang Xiaowei</b>	<b>Mr. He Zuoxiu</b>
Experimental Methods in Particle Physics (《粒子物理实验方法》, 1982)	Science and Technology Are the First Production Force (《科学技术是第一生产力》, 1991)
The Physics of Electron and Positron (《正负电子物理》, 1995)	Keep Our Eyes on the Disastrous Pseudo-Qi Gong (《警惕祸国殃民的伪气功》, 1996)
Brain Function Imaging (《脑功能成像》, 1999)	Exposure of Pseudoscience (《伪科学曝光》, 1996)
Principles of Cell Movement (《细胞运动原理》, 2001)	Philosophical Reflections on Composite Quantum Field Theory (《量子复合场论的哲学思考》, 1997)
Nuclear Medicine and Radiation Therapy (《核医学和放射治疗技术》, 2001)	From Yuan Qi Theory to Particle Physics (《从元气说到粒子物理》, 1999)
Principles of Brain Functions (《脑功能原理》, 2003)	He Zuoxiu and Falun Gong: A Report in the Summer of 1999 (《何祚庥与法轮功——1999年夏天的报告》, 1999)
Search for the Traces of Antimatter (《探寻反物质的踪迹》, 2004)	I'm not Scared of Evil: He Zuoxiu's Articles against Pseudoscience (《我不信邪——何祚庥反伪科学论战集》, 1999)
Molecular Imaging and Single-molecule Detection Techniques (《分子影像与单分子检测技术》, 2004)	Second Exposure of Pseudoscience (《伪科学再曝光》, 1999)
Introduction to Molecular Imaging (《分子影像学导论》, 2005)	Yuan Qi, Field, and Way of Learning (《元气、场及治学之道》, 2000)
Introduction to Brain Science (《脑科学导论》, 2006)	The Three Great Debates: The Philosophical Questions in Modern Physics Research (《3大论战: 现代物理学研究中的哲学问题》, 2000)
Brain and Mind (《脑与心智》, 2008)	Eliminate the Soil for the Regeneration of Evil Cults (《清除邪教再生的土壤》, 2000)
The Unconscious Activities of the Mind (《心智的无意识活动》, 2008)	Elementary Matter Science and Radiation Techniques (《基本物质科学和辐射技术》, 2000)
From Molecules to Behavior (《从分子到行为》, 2009)	I Am He Zuoxiu (《我是何祚庥》, 2002)
Quantitative Study of the Mind (《心智的定量研究》, 2009)	Third Exposure of Pseudoscience (《伪科学三曝光》, 2003)

In 1998, Mr. Tang declined the HLHL Foundation award, arguably one of the most influential and authoritative science awards for Chinese scientists: unlike the “John Maddox Prize,” the judges of the HLHL award are all accomplished scientists or senior officials in charge of China’s science and technology policies<sup>[68]</sup>, and its monetary value is 150,000 HKD, about \$20,000, a large sum at the time to a Chinese scientist. Therefore, being selected for the HLHL award is a true honor, instead of a shame, to a Chinese. So, why did Mr. Tang decline the award? This is what he said:

“I don’t pay much attention to any awards and prizes, and my only wish is to honestly make more contributions to my motherland!”<sup>[69]</sup>

As far as I know, no one has ever doubted Mr. Tang’s honesty and sincerity in these words, because he literally practices these words every day, till today: He bring his own lunch to work, he doesn’t accept extra compensations for his extra work - lectures, seminars, and consultations -, and he even refuses to take the transportation provided to him by the institutions he works for<sup>[70]</sup>.

In 2013, He Zuoxiu accepted the so called “New Threads Scientific Spirit Prize” from Fang Zhouzi<sup>[71]</sup>. The Prize is worth 10,000 Swiss francs, provided by a Swiss mercenary profiteer MDPI AG, an open

access publisher founded and controlled by a Fangangster named Lin Shu-kun, who was dismissed from the University of Louisville in 1989 for various reasons, including stealing<sup>[72]</sup>. Except for Fang and Lin, it seems no one in this world knows how the selection for the prize was made; however, everyone knows for sure the reason for He's being selected: because he "always supports Fang Zhouzi." The event was not reported by any mainstream news media in China until [a news release by kaiwind.com](#), a website controlled secretly and solely by the spooky [610 Office](#), to which both Fang and He have secret ties. In exchange, He might have arranged the connection between China Association for Science and Technology and MDPI AG<sup>[73]</sup>. The Swiss merchant Lin did get his money's worth.



### Exchanges

U. S. permanent resident Fang Shi-min has built a Science Nazi Mafia empire headquartered in Beijing by using terrorist means as his weapons, anti-pseudoscience and anti-fraud as his camouflages, and government agents, such as He Zuoxiu, as his backstage manipulators. Profiteers like Swiss merchant Lin Shu-kun, who relies upon China's market for survival, could get the U.S.-Sino Mafia's protection and promotion by paying a fee.

### Notes

All internet links provided below are active as of Feb. 2, 2014.

[1] He Zuoxiu. *I and Natural Dialectics*. In Dong Juxiang and Dong Xiangwei (eds.) *Memoirs by Philosophers*. China Youth Press, 1999. pp.258-292. (何祚庥: 《我与自然辩证法》, 见: 董驹翔、董翔薇编《哲人忆往》, 中国青年出版社 1999 年版 258-292 页。) Note: the same article also appeared in He's *Philosophical Reflections on Composite Quantum Field Theory* (Beijing Normal University Press, 1997. pp.384-420) under the title of *How Did I learn and Study Natural Dialectics*. (何祚庥: 《我怎样学习和研究自然辩证法》, 见: 何祚庥《量子复合场论的哲学思考》, 北京师范大学出版社 1997 年版 384-420 页。)

[2] 胰岛素结构研究组：《2.5 埃分辨率胰岛素晶体结构的研究》，《物理》1972 年 1 期 1-18 页。

[3] 原子能研究所云南站：《一个可能的重质量荷电粒子事例》，《物理》1972 年 2 期 57-61 页。

[4] 方励之：《关于标量-张量理论中含物质及黑体辐射的宇宙解》，《物理》1972 年 3 期 163-166 页。

[5] Wu, G. Fang Lizhi: 1987. *The Republic Needs This Kind of Scholar*. Chinese Studies in Philosophy 19(4):88-108.

[6] The data was collected from [China National Knowledge Infrastructure](#). The original Chinese citations are as following:

作者	标题	年份-期	页码
	《深入批林批孔 把上层建筑领域里的革命进行到底》	1974-1	1-2
柳树滋	《学习〈唯物主义和经验批判主义〉》	1974-1	3-6
	《社会主义自然科学期刊怎么办?》	1974-1	6
武犁	《积极投入批林批孔的伟大斗争》	1974-2	65-66+73
代山	《当代“物理学的”唯心论的一个标本——试评海森堡的〈物理学和哲学〉》	1974-2	87-90+99
张世杰	《孔孟之道是科技事业发展的绊脚石》	1974-5	261-263
北京师范大学物理系自然辩证法小组	《对立的路线 相反的影响——谈儒法斗争与古代科学技术发展的关系》	1974-6	321-326
李国才	《用唯物辩证法改造锅炉》	1974-6	334-337+347
周石	《〈物理〉杂志怎样办成为一个名副其实的社会主义期刊?(读者来信摘登)》	1974-6	382-366
中科院物理所理论学习小组	《儒家思想对我国自然科学发展的阻碍作用》	1975-1	1-4
董俊	《相对论研究领域中的资产阶级观点必须批判》	1975-2	127-128+90
孙显元	《先秦时期宇宙理论上的儒法斗争》	1975-3	133-135+140
	《〈物理〉杂志怎样成为为巩固无产阶级专政服务的工具》	1975-3	189-192+188
王兴举	《必须用辩证唯物主义占领自然科学理论阵地》	1975-3	318-320
杨忠	《必须坚持马列主义的科研路线——评〈等速条件下的空时对称理论〉》	1975-6	374-376
清华大学机械系低温焊接毕业实践小组	《运用唯物辩证法指导低温钢的焊接实践》	1976-2	77-79
崔津申	《用唯物辩证法分析单晶炉热场问题——下厂实践总结》	1976-2	83-85
北京师范大学物理系理论小组	《为用马克思主义占领自然科学阵地而奋斗——纪念恩格斯〈自然辩证法·导言〉写作一百周年》	1976-3	147-150



梁宁康	《自然科学必须以马克思主义作指导》	1976-3	151-152
天津市计量所真空研究组	《马列主义毛泽东思想是科学研究的指导思想——金属超高真空检定系统的研制》	1976-4	193-196
郝承文	《科研工作必须自觉接受辩证唯物主义的指导——记爆破推土机的研制》	1976-4	223-225
钱国新	《必须重视对量子力学的哥本哈根解释的批判》	1976-5	291-295
薛丕友,王树茗,廖廓,程飞	《关于现代物理学理论(相对论、量子力学、基本粒子理论)的批判、改造和通俗化问题(座谈会发言摘要)》	1976-5	307-312

[7] He Zuoxiu was the editor-in-chief of the *Physics* from 1974 to November 1977. (See: *Sixty Years of Chinese Physical Society: 1932-1992*. Hunan Education Press, 1992. pp.306-307. (《中国物理学会六十年 1932-1992》, 湖南教育出版社 1992 年版 306-307 页。))

[8] The book, *The Finest of the Physics Magazine in the Past 40 Years* (《岁月留痕——〈物理〉四十年集粹》), was published by USTC Press in 2012. The only article published during He Zuoxiu's era and selected into the book was the one authored by Huang Zuqia, *What Is Neutron Bomb*, published in the 5<sup>th</sup> issue of the *Physics* in 1977. (黄祖洽: 《中子弹是怎么回事?》, 《物理》, 1977 年 5 期 293-296 页。)

[9] Original Chinese: “《物理》的办刊方针曾几经摇摆。《物理》创刊是在‘文化大革命’期间, 当时是为了发表正式的科学论文。但不久由于《物理学报》复刊, 就不得不改弦更辙, 我任主编的时候, 其方针是折衷的, 即一方面发表某些‘创造性’科学论文, 一方面又介绍物理学的成就, 又要开展学术争论。但其实, 这里所谓的‘创造性’, 是带引号的, 因为实际上刊出的是水平不甚高但又需要刊出的论文。而且, 这种水平不甚高的文风还反映在某些介绍性的文章上。于是《物理》就成了高不成、低不就。当时的《物理》有一定的销量, 因为那时几乎没有别的刊物。然而那种折衷式的所谓中级读物的方针, 并不是一个好的方针, 因而销量也就不断下降, 内容也就不得不改。” (See: He Zuoxiu. 1992. *About Physics Magazine*. *Physics* 21(6):332-333. 何祚庥: 《关于〈物理〉》, 《物理》1992 年 21 卷 6 期 332-333 页。)

[10] Hu Danian. *China and Albert Einstein: The Reception of the Physicist and His Theory in China, 1917-1979*. Harvard University Press, 2005. p.177.

[11] Original Chinese: “1970 年, 我写过一篇《评狭义相对论》, 那是反对一些人要打倒相对论, 打倒爱因斯坦的。1974 年, 写过一篇《质量能转化为能量吗?》和《‘不断创造物质’的学说必须批判》的文章, 这是为捍卫质量守恒定律, 从而捍卫物质不灭原理的三篇文章。” (See: [1]).

[12] See [10], p.159.

[13] Original Chinese: “科学出版社于 1973 年 12 月出版了一本有关狭义相对论时间和空间理论的一个小册子——《空间与时间》。这一小册子竟然又重复了过去早就批判过的唯能论的错误, 即认为质量可以转变为能量。所谓唯能论是近代物理学中的一个唯心主义的流派, 其发明人是奥斯特瓦尔德。这一流派宣称存在着没有物质的运动, 认为不需要回答运动的承担者的问题, 是‘在运动着’, 这就够了。其‘科学根据’是: 认为世界上一切外在现象都可以说是能量之间的过程, 各种物理的、化学的甚至意识的过程也是能量的过程, 自然界中的一切都是能量, 物质也是能量。奥斯特瓦尔德就问道, 为什么能量应该有承担者? 难道自然界一定要由主语和谓语构成吗? 自从狭义相对论发现以后, 一些人又利用狭义相对论中质量和能量相联系的公式  $E=mc^2$  (其中  $E$  是能量,  $m$  是质量,  $c$  是光速), 认为质量可以转化为能量, 从而导致物质可以归结为能量。唯心主义者柯亨甚而宣称: 物质之转化为力是唯心主义的最大胜利。对于物理学中唯能主义思潮, 列宁曾给予尖锐批判。” (See: Ren Qing. 1974. *Can Mass transform to Energy?* *Physics* 3(3):180-181. 任青: 《质量能转化为能量吗?——兼评〈空间与时间〉一书的一个错误观点》, 《物理》1974 年第 3 卷 3 期 180-181 页。)

[14] Tang Xiaowei. *The Hypothesis of Elementary Particle Evolution and the Interpretation for Extragalactic Redshift*. Journal of Fudan University (Natural Science) 1973(3):68-71. (唐孝威: 《基本粒子演化假说和河外星系红移解释》, 《复旦大学学报(自然科学)》1973年3期68-71页。)

[15] Hoyle, F. and Narlikar, J.V. 1971. [On the Nature of Mass](#). Nature 233:41-44.

[16] Tang Xiaowei. 1974. *The Hypothesis of Elementary Particle Evolution and the Interpretation for Extragalactic Redshift*. Chinese Science Bulletin 19(5):215-218. (唐孝威: 《基本粒子演化假说和河外星系红移解释》, 《科学通报》1974年19卷5期219-225页。)

[17] See: He Zuoxiu. 1974. *The Theory of 'Continuous Creation of Material' Must Be Criticized*. Chinese Science Bulletin 19(5):219-225. (何祚麻: 《“不断创造物质”的学说必须批判——兼评唐孝威同志的“基本粒子演化假说和河外星系红移解释”一文》, 《科学通报》1974年5期219-225页。) Original Chinese: “多年来, F. Hoyle 一直在鼓吹唯心主义‘不断创造物质’的学说。从四十年代起, Hoyle 就抛出一个所谓恒稳态宇宙学, 鼓吹物质可以从虚空中产生, 并计算出宇宙中物质产生的速率是每年在象圣保罗教堂一样大的体积内产生一个原子<sup>[1]</sup>。他时而鼓吹不同天体上的粒子如电子的静质量可以不同<sup>[2]</sup>, 时而鼓吹各种相互作用常数会随时间而变化, 从而就导致电子静质量随时间而变化<sup>[3]</sup>。总之, 在 Hoyle 看来, 物质是既可以创造又可以消灭的, 为社会实践所充分证明的质量守恒定律、能量守恒定律是可有可无的。多年来, Hoyle 所鼓吹的这种披上科学外衣的‘科学’一直也没有得到科学界的承认。相反, 这些荒谬的学说却经常遭到坚持唯物主义的自然科学家和哲学家的批判, 指出这种学说的基本目的是为神学效劳<sup>[4]</sup>。可是, 这样一种科学上是荒诞的, 哲学上是唯心主义的学说竟然在我国也得到了响应, 例如, 近年来唐孝威同志援引 Hoyle 所提出的粒子静质量会不断增长的学说, 写了一篇文章, 用来解释天文学中宇宙红移的现象<sup>[5]</sup>。这使我们感到在自然科学战线上必须加强对于唯心主义学说的批判。这里提出来和唐孝威同志商讨。”

[18] Dyson, F.J. 1967. *Time Variation of the Charge of the Proton*. Physics Review Letters 19:1291-1293.

[19] Gamow, G. 1967. *Electricity, Gravity, and Cosmology*. Physics Review Letters 19:759-761.

[20] Original Chinese: “即至少要比目前已知地壳年龄小了1,400倍以上! 这意味着在目前的地壳上将找不到这种同位素或只有极微小的含量! 显然, 所谓电子静质量如式(1)和(2)而自动增长的理论同Re<sup>187</sup>同位素丰度测定的实验完全相冲突!” (See: <sup>[17]</sup>).

[21] Original Chinese: “目前地质学上测定地壳中化石年龄有两种基本的办法, 一种是铀-铅法, 另一种是钾-氩法。前者是利用 U<sup>238</sup> 的 $\alpha$ 衰变或自发裂变, 其 $\alpha$ 衰减常数约是  $1.54 \times 10^{-10}$ /年; 后者利用 K<sup>40</sup> 的原子核在俘获一个 K 层电子后转化为 Ar<sup>40</sup> 的现象, 其衰减常数是  $0.58 \times 10^{-10}$ /年。这两种方法曾经用来测定陨石的样品, 结果表明它们有很好的符合<sup>[7]</sup>。但如果电子的静质量要‘演化’, 这两者的变化将有很大的不同。” (See: <sup>[17]</sup>).

[22] Chitre, S.M. And Pal, Y. 1968. [Limit on Variation of  \$e^2\$  with Time](#). Physics Review Letters 20:278-279.

[23] Dirac, P.A.M. 1937. *The Cosmological Constants*. Nature 139:323.

[24] Teller, E. 1948. *On the Change of Physical Constants*. Physical Review 73:801-802.

[25] Original Chinese: “Gamow 指出, Teller 曾在 1948 年做过一个计算<sup>[11]</sup>, .....把这两个因素联系起来, 可估计出在  $5 \times 10^8$  年前地球的温度将要超过 100°C, 大海都要沸腾, 在此以前整个大洋将不存在, 地球上都是过热的蒸汽。这样, 地球上将有一个海洋沸腾的时期, 生物体的生命将不能存在。但是, Schopf, Banghoorm 等古生物学家却用放射性方法测出细菌和藻类的残骸已存在于约  $3.1 \times 10^9$  年<sup>[12]</sup>!” (See: <sup>[17]</sup>).

[26] Pochoda, P. and Schwarzschild, M. 1964. [Variation of the Gravitational Constant and the Evolution of the Sun](#). Astrophysical Journal 139:587-593.

[27] Original Chinese: “Pochoda 等人更计算出如果重力常数随时间衰减，那末太阳如在  $2 \times 10^9$  年前还在燃烧，到现在即行耗尽它的氢的能量，并转变成为一个巨红星<sup>[10]</sup>。” (See: <sup>[17]</sup>).

[28] See: [http://de.wikipedia.org/wiki/Walter\\_Hollitscher](http://de.wikipedia.org/wiki/Walter_Hollitscher).

[29] Dobzhansky, T. 1960. *Die Natur im Weltbild der Wissenschaft Walter Hollitscher*. Science 132:346.

[30] The paragraph was a preface to the Russian version of Hollitscher's book, published by the Foreign Languages Publishing House in Moscow in 1960. My English translated was based on its Chinese translation, from the Russian version, made by Ms. Sun Xiaoli, first published in 1965, second in 1987, by Shanghai People's Publishing House, p.546. (瓦尔特·霍利切尔：《世界科学图景中的自然界》，上海人民出版社 1987 年版 546 页。) Original Chinese: “科学早就期待着一部从辩证唯物主义立场描绘自然图景的著作。创作这样一部著作的任务是一件有重大哲学意义的事情，并要求它的作者化费不少劳动，要有思考能力，多方面的科学教养，对自然科学所积累的大量事实材料进行哲学概括，对于这样的任务，靠一个人的力量，即使他具有切必须的科学材料，也未必能完成。关于这部著作怎样完成和何时完成的问题是不好预言的，不过应该指出，W. 霍利切尔教授的《科学世界图景中的自然界》在很大程度上完成了这个任务。这个任务对于现代自然科学，尤其是哲学具有难以估量的意义。”

[31] Original Chinese: “因此，不能把关系式  $E=mc^2$  解释成似乎‘质量转化为能量’。‘不存在没有能量的质量，也不存在没有质量的能量：物质的这两个特性彼此不可分割地联系着’。” (See: <sup>[30]</sup>, p.143.) Note: the words between the quotation marks were from a Russian article published in 1952.

[32] Original Chinese: “但是，电子质量自动增长假说所蕴含的问题还不仅在于缺乏足够的科学根据，问题还在于这一学说粗暴地破坏了质量和能量守恒定律。这二者是辩证唯物主义的两个重要定律——物质不灭定律和运动不灭定律的自然科学基础。” (See: <sup>[17]</sup>).

[33] Original Chinese: “因此，哲学上的物质不灭定律、运动不灭定律是必然要和质量、能量守恒定律相紧密联系起来。前者是后者在哲学上的概括，后者是前者的科学基础。反之，抛弃质量守恒，抛弃能量守恒，就必然要支持唯心主义，反对辩证唯物主义。” (See: <sup>[17]</sup>).

[34] The Chinese translation of these words is: “霍义尔声称：‘新的物质经常地被创造，所以（宇宙的——引者）弥散的物质有着不变的密度……如果人们有时问起，被创造的物质从哪儿出来的，那么，应该回答：它不从何处出来。物质就是简单地出现了，它被创造了。在某一时刻各种组成物质的原子并不存在，而是在某一个比较晚的时刻它们才存在……。在更古老的理论中宇宙的一切实物应该在一瞬间出现，而且创造的过程是巨大的爆炸(one big bang) 的形式。从我的见解来看，我认为这种思想比起不断创造的思想更古怪’。<sup>①</sup>” (See: <sup>[30]</sup>, pp.145-146). Please note that in my translation, Hoyle's words were not a translation directly from Chinese, rather, they were restored by me from Hoyle's original writing (Hoyle, F. *The Nature of the Universe*. Harper and Row, 1950), except for the term “St. Paul's Cathedral,” which was present in the Chinese translation, but not in Hoyle's book. In the 1950 and 1960 editions, the term was replaced by Hoyle with “a moderate-sized skyscraper” (1950 edition, p.125), or “a skyscraper,” (1960 edition, Pelican Books, 1963. p.112), respectively.

[35] The Chinese translation of these words is: “的确，霍义耳的‘不断的创造’刚好指出：‘新的实物不是在狭小的有限范围以密集的形式出现的，而是分布在整个空间。它出现的平均速度不超过一年之内创造像圣保罗教堂那么大的一个原子。’<sup>②</sup>这样一来，霍义耳所说的现象的定域密度简直小得令人失望。‘这样大小的创造用实验证明是完全不可能的’。<sup>③</sup>” (See: <sup>[30]</sup>, p.146).

[36] He's original Chinese: “1950 年，Hoyle 在他所写的《宇宙的本性》一书中曾荒谬地宣称，‘新的物质经常地被创造，所以弥散的物质有不变的密度，……如果人们问起，被创造的物质从那里出来？那么，它应该回答：它不从什么地方出来，物质就是简单地出现了，它被创造了。在某一时刻各种组成物质的原子并不存在，而是在某一时刻之后它们才存在。’<sup>[1]</sup>” “Hoyle 曾经写道，‘在较古老的理论中宇宙的一切实物应该在一

瞬间出现，而且创造的过程是巨大的爆炸形式。从我来看来，我认为这种思想比起不断创造的思想更古怪。<sup>[17]</sup> (See: <sup>[17]</sup>). Note: He's Chinese words do have a few slight differences from the Chinese translation of Hollitscher's book. However, all these variations are editorial type, involving wording and phrasing, and He does have the ability to make these changes without reading the original English book.

<sup>[37]</sup> Graham, F. *The Strangest Man: The Hidden Life of Paul Dirac, Mystic of the Atom*. Basic Books, 2009. p.200.

<sup>[38]</sup> The Chinese translation of these words is: “正电子的存在是在狄拉克电子理论的基础上被预言的。”“狄拉克指出，对于未激发的所谓‘零场’，也应当赋予某种实在的物理性质。” (See: <sup>[30]</sup>, p.200 and p.205).

<sup>[39]</sup> He Zuoxiu. 1977. *Second Comment of the Hypothesis of Continuous Increase in the Rest Mass of Electron*. Chinese Science Bulletin 22(3):114-120. (何祚庥:《再评电子静质量不断增长假说》，《科学通报》1977年22卷3期114-120页。) Original Chinese: “如果从资料<sup>[2]</sup>所涉及的一些细节来看，可以认为和 Hoyle 的‘不断创造物质’的学说在形式上确实有所不同，.....但如果从这一论文最主要论点来看，这一论文仍是 Hoyle 一贯观点的继续。Hoyle 在这一论文中所给出的共形变换下的引力理论就是粗暴破坏质量守恒定律、能量守恒定律的一个范例。由这一理论导出的粒子静质量增长的公式

$$m = \text{常数} \cdot t^2 \quad (10)$$

(其中  $t$  是宇宙时间)，就更是物质从无到有的一个形象化的表述。从式 (10) 来看，世界将从上帝某个感兴趣的宇宙时间开始，即在  $t=0$  时，所有粒子的静质量是零，其后，粒子的静质量将随着时间  $t$  的增长而趋向于无穷大！这样的理论和 Hoyle 的一贯观点又有什么原则区别？”

<sup>[40]</sup> He's original Chinese: “唐孝威同志就又进一步把 Hoyle 论文中质量随时间的平方而增长的‘规律’‘唯象’地（按：即没有原因地\*）改换成电子静质量按指数增长的形式！那么这一假说究竟是为那一种世界观提供‘科学’根据，这不是很明显的事情吗？特别是这一假想‘规律’中，如果时间  $t$  向前延伸到无限大的过去，那末由式 (1) 和 (2) 就立刻可以算出电子的质量是零，如果时间  $t$  向后延伸到无限远的未来，那么电子的静质量就成为无穷大！这岂不正是所谓‘物质从无到有’过程的一个相当形象化的表述！” (See: <sup>[17]</sup>).

<sup>[41]</sup> Tang's original Chinese: “为了定量比较起见，下面具体假设，在我们观测的空间和时间范围内，在这一天体演化的特点过程中，电子的静质量的时间变化.....” (See: <sup>[16]</sup>).

<sup>[42]</sup> Original Chinese: “大家知道前一时期，我们科学上出现了新的动向。在宇宙空间当中除了有暗物质以外，很可能还有暗能量，而且宇宙是在加速膨胀。为什么宇宙会加速膨胀？彭先生立刻想到早年狄拉克曾做过的工作，大数定理。在狄拉克工作中的一个重要思想，就是引力常数会随时间的发展而演化。为什么宇宙会加速膨胀呢？一个很自然的解释是引力常数慢慢变弱一点，弱了一点，看起来象加速膨胀。所以彭先生为了解释这个加速膨胀就专门做了一篇引力常数不断变化下的相应的重力场的理论。这个理论当然有很多具体的计算。彭先生已经八十九岁了高龄了。到了八十九岁了，还能做大量具体的工作，可见彭先生理论物理的功底是何等深厚。让我十分佩服。这样的工作精神实在值得我们学习。” (See: He Zuoxiu. 2007. *Deeply Mourning Teacher Peng Huanwu*. Journal of Beijing Normal University (Natural Science) 43(3):367. 何祚庥:《[深切悼念彭桓武老师](#)》，《北京师范大学学报(自然科学版)》2007年3期367页。)

<sup>[43]</sup> Original Chinese: “在哲学史上各种唯心主义的相互争吵决不是罕见的现象。中国哲学史上有一个相当著名的‘鹅湖之会’。1175年，南宋的客观唯心主义者朱熹和主观唯心主义者陆九渊在江西信州鹅湖寺就认识论问题进行了连续几天的辩论，双方相持不下。陆九渊从唯心论的角度批评朱熹的‘即物穷理’的学说会‘给物牵了去’，说朱熹的说法太‘支离’，‘言来言去，转加糊涂。’朱熹却批评陆九渊的‘心学’太‘简’，并指责说‘陆九渊的学说是胸中包含了禅学。’针对这一点陆九渊也就回答说，‘不象有人实际上也是改头换面地因袭禅宗的学说但在表面上却隐晦它的来源。’<sup>[15]</sup> 这样双方都在相互批判中而揭发了彼此学说中和禅宗（佛教中的一种）相通的实质。” (See: <sup>[17]</sup>).

[44] He's original Chinese: “朱熹，《朱子语类》，卷 124；黄宗羲，《宋元学案》，卷 58，象山学案；并参看潘富恩、甌群，《中国古代两种认识论的斗争》，上海人民出版社，52-53。” (See: [17]).

[45] For detailed information about the debate, please see: Wing-tsit Chan. *The Supplementary Facts about the Meeting between Zhu Xi and Lu Jiuyuan in Swan Lake*. In *Collected Works on Zhu Xi*. Taiwan Student Book Store, 1982. pp.233-249 (陈荣捷：《朱陆鹅湖之会补述》，见陈荣捷《朱学论集》，台湾学生书局 1982 年版 233-249 页。) Also see: Gao Quanxi. *Between Li and Mind: The Li of Zhu Xi and Lu Jiuyuan*. SDX Joint Publishing Company, 1992. pp.100-114 (高全喜：《理心之间：朱熹和陆九渊的理学》，三联书店 1992 年版 100-114 页); Qi Ruanxing. *A Critical Biography of Lu Jiuyuan*. Nanjing University Press, 1998. pp.100-107 (祁润兴：《陆九渊评传》，南京大学出版社 1998 年版 100-107 页); Gu Chun. *Origins, Debates, Characters: Lu Jiuyuan's Educational Thoughts*. Educational Science Press, 2003. pp.64-83 (顾春：《来源·争论·特性——陆九渊教育思想三论》，教育科学出版社 2003 年版 64-83 页。)

[46] Lu made the comment on his way to the Swan Lake Debate in a poem, in which he wrote: “The simple and easy way of study will prosper and long-lasting, while the fragmental cause will fall and drift.” (“易简功夫终久大，支离事业竟浮沉”). See: [45].

[47] The original words were: “尊兄只管言来言去，转加糊涂，此真所谓轻于立论，徒为多说，而未必果当于理也。” (See: *Collection of Lu Jiuyuan's Works*. Zhonghua Book Company, 1980. p.23. 《陆九渊集》卷二，中华书局 1980 年版 23 页。) According to the Chronicle in the book (p.504), the letter was written in April of Chunxi Year 15 (1188). (据该书《年谱》(504 页)，该信作于淳熙十五年(1188)四月。亦见陈来：《朱子书信编年考证（增订本）》，三联书店 2007 年版 281 页。)

[48] The original words were: “况今虽偶然道著，而其所见所说，即非禅家道理，非如他人阴实祖用其说，而改头换面，阳讳其所自来也。……熹虽无状，自省得与此语不相似也。” (见《宋元学案》卷十二《濂溪学案》、卷五十八《象山学案》，中华书局 1982 年版第一册 508 页、第三册 1911 页。)

[49] See: Tang Xiaowei. 1975. *On the Hypothesis of “Elementary” Particle Evolution (II): Reply to Comrade He Zuoxiu*. *Chinese Science Bulletin* 20 (6):262-266. (唐孝威：《再论“基本”粒子演化假说——兼答何祚庠同志》，《科学通报》1975 年 20 卷 6 期 262-266 页。) Original Chinese: “《基本粒子演化假说和河外星系红移解释》一文提出电子、质子等粒子在时间上有发展的历史的历史的看法。去年《科学通报》发表了何祚庠同志的文章，何文反对‘基本’粒子演化假说，其中心思想是认为‘基本’粒子在时间上没有发展的历史。本文根据‘电子和原子一样，也是不可穷尽的’和‘在生产斗争和科学实验范围内，人类总是不断发展的，自然界也总是不断发展的，永远不会停止在一个水平上。’这些马克思主义的根本原理，对‘基本’粒子演化假说作进一步的说明。” Please note that the English translation of words between the quotation marks was from “[Materialism and Empiricriticism](#)” and “[Quotations from Mao Tse Tung](#).”

[50] Engels' original Chinese: “自然界根本不被看作某种历史地发展着的、在时间上具有自己的历史的东西；注意考察的仅仅是它在空间的广延性；各种不同的形态不是前后相继地而只是并排地被组合在一起；自然史对一切时代都是适用的，正如行星的椭圆形轨道适用于一切时代一样。……开始时那样革命的自然科学，站在一个彻头彻尾地保守的自然界面前，在这个自然界中，今天的一切还是和世界开始时一样，并且直到世界末日，一切都将和开始的时候一样。” Note: The English translation was from this webpage: [Engels. Dialectics of Nature. Notes and Fragments. Notes for Anti-Dühring](#).

[51] Tang's original Chinese: “对于粒子不变观点来说，岂不是这个已然肯定天体演化、生物进化的自然科学，今天又站在一个保守的‘基本’粒子世界面前吗？如果根本不把电子、质子看作某种历史地发展着的、在时间上具有自己历史的东西；如果认为电子、质子和它们的属性从来就是如此，现今的电子还是和古老的电子一样，并且亿万年后还是一样；那么在‘基本’粒子领域中，岂不是‘天不变，道亦不变’吗？” (See: [49]).

[52] Ho Tso-Hsiu. 1975. [\*The Materialistic Theory of Yuan Ch'i—One of the Brilliant Philosophical Ideas of the Legalist School\*](#). SCIENCE CHINA Mathematics 18(6): 695-713. (何祚麻: 《我国法家的光辉哲学思想——唯物主义的“元气”学说》, 《中国科学·数学》1975年5期。)

[53] Tang's original Chinese: “天不变, 道亦不变”是孔孟之道的反动观点。毛主席在《矛盾论》中指出: ‘只有现在的和历史上的反动的统治阶级以及为他们服务的形而上学, 不是把对立的事物看作生动的、有条件的、可变动的、互相转化的东西去看, 而是当着死的、凝固的东西去看, 并且把这种错误的看法到处宣传, 迷惑人民群众, 以达其继续统治的目的。’在自然科学领域中, 我们应当努力学习马克思主义、列宁主义、毛泽东思想, 彻底批判‘天不变, 道亦不变’的孔孟之道。” (See: [49]). Note: the English translation of Chairman Mao's *On Contradiction* was from *Selected Works of Mao Tse-tung*, Volume I. Foreign Languages Press, 1965. p.340.

[54] Unless otherwise specified, all the information about Mr. Tang Xiaowei was from this book: Zhou Faqin. *Tang Xiaowei: 40 Years of His Scientific Research*. The USTC Press, 1997. (周发勤: 《唐孝威科学实验四十年》, 中国科学技术大学出版社 1997 年版。)

[55] The Propaganda Department of Taicang City. *Tang Wenzhi*. Xiling Seal Engraver's Society Publishing House, 2008. (中共太仓市委宣传部: 《唐文治》, 西泠印社出版社 2008 年版。) Yu Zixia. *Pioneer in Engineering Education, Great Master of National Studies: Tang Wenzhi, The President of Nanyang University*. Sandong Education Press, 2004. (余子侠: 《工科先驱, 国学大师: 南洋大学校长唐文治》, 山东教育出版社 2004 年版。)

[56] Original Chinese: “为了测量脉冲中子, 唐孝威等青年研究人员在老科学家的指导下, 完成了探测系统的研制, 满足了这次试验的需要。这次试验的成功, 解决了研制原子弹的关键技术问题, 为原子弹设计和核爆炸试验打下了可靠的基础。” (See: *China Today: Nuclear Industry*. China Social Sciences Press, 1987. p.271. 《当代中国的核工业》, 中国社会科学出版社 1987 年版 271 页。) Note: the English translation was adopted from The Joint Publications Research Service: *China Today: Nuclear Industry*: [IPRS-CST-88-002](#), released on Jan. 15, 1988.

[57] Xu Jiuwu. *On the Road to the Micro World: Physicist Tang Xiaowei*. In Red Flag magazine. *The Paeans to the Researchers*. Red Flag Press, 1983. pp.32-44. (徐九武: 《在通向微观世界的路上——记物理学家唐孝威》, 见红旗杂志社科教文编辑室: 《攻关者的赞歌》, 红旗出版社 1983 年版 32-44 页。)

[58] Ge Xin. [\*Shamelessness Shouldn't Be Anyone's Nature—An Open Letter to Nature, Part XXXII: The Fangansters \(II\): He Zuoxiu, a Shameless Party Man \(I\)\*](#). [China Academic Integrity Review](#), Nov. 15, 2013.

[59] Browne, MW. *Detection of the Elusive 'Gluon' Exciting Scientists; Team Leader From M.I.T.* New York Times, Sept. 2, 1979.

[60] Ting's original Chinese: “本书作者之一唐孝威教授是很有经验、很有成就的物理学家。他亲自参加过正负电子对撞的实验, 尤其对 1979 年胶子的发现作出了重要的贡献。” (See: Ting, CC. Preface. In Tang Xiaowei et al. *The Physics of Electron and Positron*. Science Press, 1995. p.iii. 丁肇中: 《〈正负电子物理〉序》, 见: 唐孝威等: 《正负电子物理》, 科学出版社 1995 年版 iii 页。)

[61] See: [54], pp.220-221.

[61] See: [http://en.wikipedia.org/wiki/Masatoshi\\_Koshihba](http://en.wikipedia.org/wiki/Masatoshi_Koshihba);  
[http://www.nobelprize.org/nobel\\_prizes/physics/laureates/2002/koshihba-facts.html](http://www.nobelprize.org/nobel_prizes/physics/laureates/2002/koshihba-facts.html).

[62] He Jingtang. 2003. *The Nobel Prize for Physics in 2002 Brushed past China*. Science and Technology Review 2003(5):33-36 (何景棠: 《2002 年诺贝尔物理学奖与中国人擦肩而过》, 《科技导报》2003 年 5 期 33-

36 页); He Jingtang. 2003. *What Can We Learn From the Nobel Prize in 2002?* Progress in Physics 23(3):299-311 (何景棠: 《2002 年诺贝尔物理奖的启示》, 《物理学进展》2003 年 23 卷 3 期 299-311 页。)

[63] Liu Dongfeng. *He Jingtang: The Nobel Prize for Physics in 2002 Brushed past China*. Science Times, July 1, 2003. (刘东峰: 《[何景棠: 2002 年诺贝尔物理学奖与中国人擦肩而过](#)》, 2003 年 7 月 1 日《科学时报》。)

[64] Original Chinese: “当年何祚庥在《物理》杂志上攻击唐孝威的质子衰变研究, 是违反了能量守恒, 无意[疑]是说唐孝威连起码的常识也不懂。这当然会影响有关部门领导不支持实验的决策。” (See: Zeng Fu. *He Zuoxiu's Attack on Tang Xiaowei*. 曾富: 《[何祚庥对唐孝威的论战](#)》。) Note: the post appeared on the internet in early July 2003. Also see: 《[何祚庥对唐孝威的论战](#)》。

[65] Original Chinese: “彭先生的科学威望很高, 做所长当之无愧。我只是协助彭先生做一些具体工作。彭先生并不喜欢管很多事情, 所以彭先生把大小事务交给我来办。但是彭先生对研究所, 并不是放任不管。我和彭先生商量定, 理论物理所的建设上, 有二件大事彭先生是要过问的。第一件, 是所的方针, 这件事彭先生是过问的。彭先生认为理论物理所该怎样发展, 应该说现在我们理论物理所定的方针还是当年彭先生所定的方针。第二件, 是所长要关注研究员的提升。我们所里很多人研究员的提升, 彭先生都仔细审阅过材料, 严格把关。当领导的重要职责, 一个是出主意, 一个是用干部。大的主意是所长拿, 那些人可以当研究员, 是所长决定的。彭先生承诺理论物理所其它的事情一概不管, 但这两件大事他管, 而且真管。” (See: He Zuoxiu. 2007. *Deeply Mourning Teacher Peng Huanwu*. Journal of Beijing Normal University (Natural Science) 43(3):367. 何祚庥: 《[深切悼念彭桓武老师](#)》, 《北京师范大学学报(自然科学版)》2007 年 3 期 367 页。)

[66] Original Chinese: “但是从 1982 年起, 唐在北京高能所的工作遇到困难, 工作条件受到限制, 组里工作难以进行。” (See: [54], p.94.)

[67] Original Chinese: “如前所述, 1982 年起一段时期中他原来的研究工作条件十分困难, 但是这种情况反倒激励他去从头学习和思考生物学的问题。” (See: [54], p.161.)

[68] See the official website of HLHL Foundation: [Selection Committees](#).

[69] Original Chinese: “我对一切奖励和奖金都看得很淡, 只愿意老老实实为祖国多作贡献!” (See: Zhou Jinpin. *Tang Xiaowei, the Unsung Hero of the Two-Nuclear-Bombs*. China Talents, March 1, 1999. 周金品: 《[“两弹”核爆的幕后英雄-唐孝威](#)》, 《中华英才》209 期, 1999 年 3 月 1 日。)

[70] For the stories, see: [54].

[71] Anonymous. *CAS Academician He Zuoxiu Received the Inaugural New Threads Scientific Spirit Prize*. XYS20130113. (匿名: 《[中国科学院院士何祚庥获得首届新语丝科学精神奖](#)》, 新语丝 2013 年 1 月 13 日新到资料。) Also see: Multidisciplinary Digital Publishing Institute website: [MDPI Sponsoring the Scientific Spirit Prize in China](#).

[72] Ge Xin. [Shamelessness Shouldn't Be Anyone's Nature—An Open Letter to Nature. Part XXXIII: The Fangangers \(III\): Shu-Kun Lin and His Predatory MDPI Journals](#). *China Academic Integrity Review*, January 19, 2014.

[73] Anonymous. [MDPI CEO visits CAST](#). CAST, December 31, 2013. Note: He has been one of the deputy directors of the CAST's Committee for Two-Sciences Alliance.