



印象

· 李政道

Profile · Tsung-Dao Lee

上海交通大学李政道图书馆 编



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内容提要

本书以简洁洗练的笔触、珍贵精美的图片再现了李政道先生的传奇人生。全书分为“跬步千里”、“突破守恒”及“赤子情怀”三个篇章，通过不同历史时空的照片连缀，描摹出一位科学巨匠的成长足迹、卓越贡献和赤子情怀，大师风范跃然纸上。

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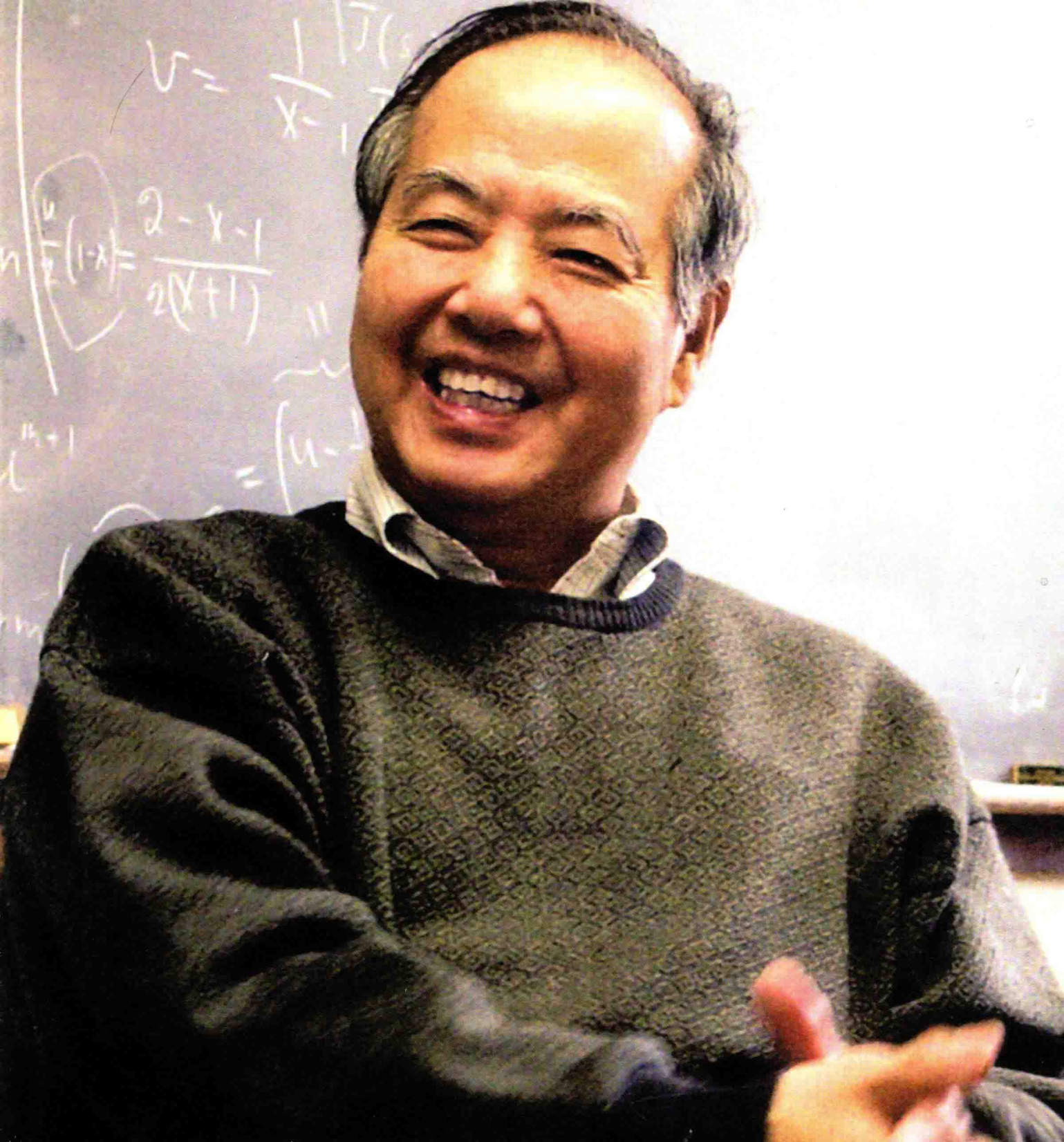
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1957年12月10日，
李政道接受瑞典国王
阿道夫·古斯塔夫六
世（Gustaf VI Adolf）
颁发的诺贝尔物理学
奖奖章及证书。

On December 10, 1957,
T. D. Lee received the
Medal and Diploma of
Nobel Prize in Physics
presented by the Swedish
King, Gustaf VI Adolf.

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序

李政道先生是一位伟大的物理学家，他在高能物理、粒子物理、天体物理等研究领域学术成就斐然，31岁就获得诺贝尔物理学奖，为中华民族赢得至高荣誉。同时先生作为炎黄子孙，心系中华，满腔赤子情怀，为中国的科技、教育事业作出了很多开拓性的贡献。我国多位党和国家领导人都高度赞扬李政道先生作为一位优秀科学家的“献身精神、求实精神、进取精神和爱国精神”。

《印象·李政道》以简洁洗练的笔触、珍贵精美的图片再现了李政道先生的传奇人生。全书分为“跬步千里”、“突破守恒”及“赤子情怀”三个篇章，通过不同历史时空的照片连缀，描摹出一位科学巨匠的成长足迹、卓越贡献和赤子情怀，大师风范跃然纸上。先生用杜甫的“细推物理须行乐，何用浮名绊此身”的诗句来鞭策自己并激励后辈；他说“做学问、研究自然界规律，是我一生的追求，像呼吸一样不可缺少”；他“以天之语，解物之道”，以智者的语言阐释宇宙万物的玄妙；他指出“科学与艺术是不可分割的，就像一枚硬币的两面”。这些治学之道和人生感悟对今天的中国青年学子来说尤其值得珍视和推崇。

大学精神是科学精神与人文情怀的有机结合。李政道先生就是高尚的科学精神和深厚的人文情怀结合的典范。他一生执著追求科学真理，求真、务实、质疑、创新是他一贯秉承的科学精神；超凡的科学天赋和持之以恒的不懈追求，使他成为当代名震寰宇的物理巨擘；同时他对祖国历史文化与艺术充满热爱和兴趣，在哲学与人文艺术领域另有独到见解。科学和艺术的融会贯通，铸就了他成为华夏儿女科艺双馨的典范。先生身上有青年学子最需要具备的品质，这就是远大的胸襟抱负、独立的人格思想、严谨的治学态度和浓郁的人文情怀。他完美诠释了大学精神。从这个意义上说，《印象·李政道》的出版意义非凡。

李政道先生和上海交通大学渊源深厚。早在1987年，先生就受

聘上海交通大学名誉教授，多年来，和学校一直保持着友好学术往来。其创立的“中国高等科学技术中心”，曾聘任上海交通大学多位教授为中心特别成员、一般成员或协联成员。我本人也被聘为中心顾问委员。从我童年时起，李政道先生就是我崇拜的偶像。自2003年我担任中美高能物理合作会谈中方团长以来，我有幸能经常向先生当面请教，在治学、处事和为人方面均得到先生的多方指导和教诲。2010年6月，李政道先生向我表达了将其毕生积累和收藏的各类科学文献、研究和讲义手稿、交往信件、“科·艺”作品、诺贝尔奖章、爱因斯坦奖章和其他各类获奖证书等珍贵资料捐赠给上海交通大学的意愿，以期惠益后人。先生的高尚情怀，令我们高山仰止，感动不已。为了更好地展示李政道先生的科学精神和爱国情怀，我们呈报国家批准并在国家和上海市的支持下在上海交通大学建立李政道图书馆。

《印象·李政道》是李政道图书馆建设工程的一项成果，它让我们从视觉图景的角度管窥李政道世界之一隅，是打开丰富深邃、多姿多彩的李政道世界的一扇门窗。大音希声，大象无形，大爱无言。透过这本画传，先生温文儒雅的大家风范、谦谦君子的人格魅力、爽朗睿智的音容笑貌一定会给每一位读者留下深刻的印象。相信此画传的出版，必将在弘扬大学精神、广泛激励后学、培养优秀人才上发挥正能量，起到积极作用。衷心希望青年学子能在先生的激励和感召下，追求卓越，不懈努力，勇于担当，为建设创新型国家，实现中华民族伟大复兴的中国梦作出更大贡献。

特别让我们感到荣幸的是，第十一届全国人大常委会副委员长、中国科学院原院长路甬祥院士得知本画传的构思后，欣然为此画传题写书名。在此，我代表编辑委员会对路甬祥院士以及在此画传编辑、出版工作中提供帮助的相关机构和各界人士一并表示衷心感谢！



上海交通大学校长、中国科学院院士
2014年4月25日

Tsung-Dao Lee is a world renowned physicist with outstanding contributions to high-energy physics, particle physics, and astrophysics. Winning the Nobel Prize in Physics at the age of 31, Dr. Lee brought tremendous amount of honor to the Chinese nation. With a strong attachment to the motherland, he has done a lot of pioneering work to promote science, technology and education in China. In recognition of his efforts and achievements, many Chinese leaders have commended him for his extraordinary dedication to scientific truth and unwavering patriotism.

With lucid accounts and documentary pictures, *Profile · Tsung-Dao Lee* is an epitome of Dr. Lee's adventurous and miraculous life experience. Consisting of three chapters entitled "Thousand *Li* Begins with a Single Step", "Violation of Conservation", and "Devotion to the Mother Country", illustrated with numerous pictures taken at different times, *Profile · Tsung-Dao Lee* offers a brief outline of a master scholar's fascinating stories in different periods and various aspects. Dr. Lee often quotes Du Fu (a famous Chinese poet of the Tang Dynasty) as saying "Examining physics meticulously one must feel happy. No need to worry about recognition and honor." to inspire himself and fellow young scholars. To Dr. Lee, expanding knowledge and investigating natural laws are part of his life, as essential as breathing the air. From "the language of heaven to the rationale of matter", he was able to explain the mystery of matter in the Universe in layman's language. He believes that science and art are an integrated whole, just like the two sides of a coin. Dr. Lee's perception and philosophy are an inspiration to Chinese young students today.

The "spirit of university" is the combination of scientific mind and humanistic

heart, of which Tsung-Dao Lee is the right embodiment. Throughout his truth-seeking life, Dr. Lee has been adhering to the doctrine of truthfulness, realism, inquisitiveness, and creativity. He is naturally sensitive to natural phenomena and persistently engaged in studying natural laws. His name rings in the world of physics. He is fascinated by Chinese history, culture and art, and he develops his awareness and opinions in the field of philosophy and humanities. He is a model talent of both science and art, widely admired by the Chinese people. He possesses what young students most urgently want, to name, the quality of strong motivation, independent mind, sophisticated learning, and humanistic enthusiasm. His “spirit of university” is embodied in *Profile · Tsung-Dao Lee*.

Tsung-Dao Lee maintains a lasting and solid connection with Shanghai Jiao Tong University. In 1987, he was conferred the title of Honorary Professor of Shanghai Jiao Tong University, and he has been in regular academic communication with the university ever since. He set up China Center of Advanced Science and Technology and hired many professors from Shanghai Jiao Tong University to be special members, regular members and associated members. I am honored to be on its advisory committee. Tsung-Dao Lee was my idol in my childhood. Ever since I was appointed in 2003 Head of Chinese Delegation of China-US Cooperation Talks on High Energy Physics, I have had the chance of meeting and talking with Dr. Lee. I consult him on the matter of doing scientific research, handling social affairs and conducting myself. In June 2010, Dr. Lee expressed his willingness to donate to Shanghai Jiao Tong University his books, research and lecture notes, correspondence, drawings and paintings of scientific art, the Nobel Prize medal, Albert Einstein Commemorative Award medal, and other prize certificates. In making that decision, Dr. Lee wished that they could be of some value to young students. We truly acknowledged his generosity and philanthropy, and we wanted to demonstrate Dr. Lee’s scientific devotion and patriotic resolution. We formally applied to and obtained approval

from state agencies to set up Tsung Dao Lee Library at Shanghai Jiao Tong University. With the joint support from the state and the city administration, this library is now open.

As a section of Tsung Dao Lee Library, *Profile · Tsung-Dao Lee* offers a picturesque view of Tsung-Dao Lee, his past and present, work and life, dream and fame. Just as the most pleasant sound does not sound too loud, the most beautiful shape does not shape too intricately, and the most soothing love does not show too much, Dr. Lee's elegant taste, gentle manner, and witty speech are all condensed in this book. The book will not only inspire the reader with the wonderful "spirit of university", but also stimulate intellectual enthusiasm in young students, and promote the growth of excellent talents. I sincerely hope that young students would follow Dr. Lee's example and undertake to aim higher, work harder, and stand firmer, in preparation for the construction of an enterprising country and the realization of the Chinese dream of national rejuvenation.

We feel greatly honored as Prof. Lu Yongxiang, Vice Chairman of the Standing Committee of the 11th National People's Congress and Ex-President of the Chinese Academy of Sciences, happily accepted our request to inscribe the title of the illustrated biography, *Profile · Tsung-Dao Lee*, when he heard about the conception of the book. On behalf of the editorial board, I feel obliged to express our heartfelt thanks to Lu Yongxiang and all the other people and agencies who have contributed to the preparation, editing and publication of this picture biography.



Zhang Jie
President of Shanghai Jiao Tong University,
Academician of Chinese Academy of Sciences

April 25, 2014

前言

1956年，年仅30岁的李政道与杨振宁合作，提出在弱相互作用中宇称不守恒，推翻了过去在物理学界被奉为金科玉律的宇称守恒定律，为人类探索微观世界打开了一扇新的大门。因此，他们获得了1957年诺贝尔物理学奖，成为中华民族首批诺贝尔奖获得者。50多年来，李政道先生在物理学领域作出了许多具有开创性和里程碑意义的杰出工作，他的研究领域涉及量子场论、基本粒子理论、核物理、统计力学、流体力学、天体物理、凝聚态物理和量子力学等。这位享誉世界的物理学家，至今仍然活跃在物理学研究的前沿领域。

在进行科学研究的同时，李政道先生还一直心系祖国科学技术与教育事业的发展，为促进中国科学技术与教育界的国际交流与合作、扩大国际影响以及加快培养优秀人才的步伐倾注了满腔热忱，付出了无数心血。自20世纪70年代起，他多次回国讲学，促成了中国科学技术大学少年班的建立；他创立中美联合招考物理研究生项目，为改革开放初期中国研究生赴美留学开辟了绿色通道；他倡导建立中国博士后制度、设立国家自然科学基金制度、成立中国高等科学技术中心等基础科学研究基地，为基础领域科学研究和人才培养奠定了坚实基础；在李政道先生的不懈努力下，中美两国建立了高能物理领域的双边合作，促成了北京正负电子对撞机的建造，推动了中国高能物理研究的发展；他还设立了“箬政基金”，鼓励海峡两岸年轻学子的学业分享和学术交流。这一系列举措改变并极大地推动了中国科技教育事业的发展。

李政道先生相信，天资是成功的基石，但成功绝不能缺少后天的努力。他勤奋刻苦，从不考虑工作时间的长短，“研究就是生活，生活就是研究”是他的人生格律。他认为科学家应该树立自信心，追寻宇宙的真理，只要不断努力、不怕艰苦，总会有成功的一天。李政道

先生认为诺贝尔物理学奖的功名是一种荣誉，但并不是最终目标。他这样说道：“科学研究就像呼吸一样，是我生命的一部分。诺贝尔奖是对科学贡献的褒奖，而科学家本人并不能因为追求诺贝尔奖而去做学问。”

本书通过大量珍贵的图片，按照时间、专题的顺序记述了李政道先生出生至今的主要事件，旨在向世人弘扬和传承李政道先生对科学的献身精神、对祖国的拳拳之心和对科学与艺术结合的执著追求，展示李政道先生“细推物理须行乐，何用浮名绊此身”（引自唐代诗人杜甫《曲江二首》）的治学为人之道，以此激励后来者奋力求索。

此书付梓出版之时，正值李政道先生 88 岁生日，谨以书中 88 张图片向先生贺寿。

编辑委员会
2014 年 4 月

Foreword

In 1956, Tsung-Dao Lee (T. D. Lee, only aged 30) and Chen Ning Yang published their discovery of parity nonconservation in weak interactions, a subversion of the time-honored faith in parity conservation. This discovery opened up a new door for man's exploration into the micro world. In 1957, the two scholars were awarded the Nobel Prize in Physics, the first Chinese intellectuals to win that prize. More than 50 years following that event, Dr. Lee has been continuously doing his research in physics and has completed many creative and landmark projects. His research areas involve the fields of Quantum Field Theory, Elementary Particle Theory, Nuclear Physics, Statistical Mechanics, Fluid Mechanics, Astrophysics, Condensed Matter Physics and Quantum Mechanics. Until now, this world-renowned physicist is still active at the leading edge of physical research.

Apart from Tsung-Dao Lee's scientific work, he has been compassionately concerned with China's scientific, technological and educational development. He devoted much of his time and effort to the international exchange and cooperation between Chinese science, technology and education and foreign counterparts, promoting China's international reputation and influence, and China's talent training. Beginning with the 1970s, he came back to China and conducted many academic lectures for Chinese students. He contributed to set up the School of the Gifted Young at University of Science and Technology of China. He set up the China-US Physics Examination and Application which has developed more opportunities for young scholars to pursue systematic study and continuous development in the US. He proposed to establish two scientific research systems in China—the post-doctoral program and the National Natural Science Foundation of China, and to set up China Center of Advanced Science and Technology and other basic science research centers. Those events have laid a solid foundation for China's basic research and talent cultivation. Under Dr. Lee's

efforts, the cooperation in high energy physics between China and US has been established, and the Beijing Electron Positron Collider has been built. He has promoted the development of high energy physics research in China. Tsung-Dao Lee also set up “Chun-Tsung Endowment” for promoting the communications between young students of Mainland China and Taiwan. All these have greatly promoted the development of China’s scientific technology and talent cultivation.

Tsung-Dao Lee is convinced that diligence is the cornerstone of success and whether one is born smart is of secondary importance. He works hard; never complaining about the amount of time on his work. He follows the principle of “Study is life, and life is study”. He insists that a scientist must have confidence in himself to pursue truth in the Universe. In his opinion, as long as you work hard and long enough on something, you will succeed in the end. Dr. Lee regards the Nobel Prize as an honor, but not as a goal in itself. He said, “Scientific research is like breathing; part of my life. The Nobel Prize is the recognition of one’s scientific contribution. However, a scientist himself should never pursue scientific study for the sake of that prize.”

This book aims to present the major events in Tsung-Dao Lee’s life chronologically: Dr. Lee’s spirit of scientific commitment, his devotion to his mother country and his resolute pursuit of science and art. His frequent quotation by the great Tang poet Du Fu: “Examining physics meticulously one must feel happy. No need to worry about recognition and honor.” is an inspiration towards educational pursuit for the younger students and scholars.

In 2014, the publication of this book will be coincided with Tsung-Dao Lee’s 88th birthday. The 88 pictures in *Profile · Tsung-Dao Lee* would be a special gift with sincere wishes to Dr. Lee.

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Thousand *Li*
Begins with
a **Single Step**

跬步千里