

与国外接轨》丛书

Orbit with world economies" series

# 时代造就华夏人

THE TIMES BRINGS UP THE CHINESE TALENTS

西安科教探索事例篇

Exploration Section of Xi'an Science-Education



- 西安科教创业事例篇
- 西安科教探索事例篇
- 共和国卫士忠诚篇
- 交大校友航空挚情篇

光明日报出版社  
GUANGMING DAILY PUBLIC

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# 与国外接轨

王光英



全国人大常委会王光英副委员长为丛书题名

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中国共刊

造就人才無限科技  
發展無界人類文明  
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李溪溥

原中共陕西省委书记李溪溥题词

编好公司与国外接轨，有益于  
启迪读者的世界眼光，创造  
思维，因而是很有意义的。

郑培民

二〇〇一年七月十日

原中共湖南省委副书记郑培民题词

## 时代强音的呼唤（代前言）

21 世纪是大变革、大发展的新时代，也是一个全球多元、多变、多危的时期。大变革、大发展在给人类创造物质财富与精神财富的同时，又滋生了物欲横流、道德缺失，蔓延了认识歧化，反过来破坏精神文明、制约大发展。

以材料技术、信息技术、能源技术为支撑的高科技在推动大发展的同时带来了高污染，高污染带来生物赖以产生和发展的地球环境——水圈、大气圈、土壤圈、生物圈的破坏。

人类生存的自然环境加速恶化：

全球人口达 10 亿时，整整用了 200 多万年，从 10 亿到 60 亿时，用了不到 200 年，预测控制发展，达来去平衡零增长时还需 50 年，那时将过 100 亿。人口剧增，意味着粮食、能源、住宅等一切生存要素需求量的剧增，而提供这些生存要素的地球资源（淡水、森林、各种地下矿产）不仅没有增加，反而加速减少，人均占有量越来越少。

人类生存靠淡水，而地球上的淡水只占地球总水量的 2.5%（97.5% 是咸水）。仅有的淡水中 69% 冻在两极地带，30% 储存在地下含水层和永久性的冻土中，湖泊、河流、土壤中所容纳的淡水只占淡水总量的 0.33%，而且，愈来愈污染严重。

人类生存离不开空气，受污染的空气流动无国界。空气污染、火山爆发、闪电影响导致酸雨区扩大、增多，使得土壤酸化、养分流失、能力下降；使得水酸化，危害人体、腐蚀建筑物、金属制品等；

环境污染导致保护人类身体消灾减病的臭氧层破坏严重，加剧“温室效应”，引发全球气候变暖，给气候变化、海平面稳定、农业、

林业、生态平衡、人类健康带来了巨大影响。

还有能源危机、沙漠蔓延、水土流失、土壤侵蚀、野生物种濒临灭绝等。

在光明和阴暗、健康与腐朽的博弈中，防不胜防的自然“杀手”、变态隐蔽的“金钱杀手”，不时在危害人民、危害社会，我们的国家、民族乃至人类正在这个环境中抑恶扬善、趋利避害、弘扬正气，实现经济社会大发展。

1992年6月全球首脑会议通过的“21世纪议程”和1992年7月我国政府及时编制的“中国21世纪议程”旨在改进人类生活质量不超过支持发展的生态系统负荷能力，既满足当代人的需要，又不对后代人满足需要的能力构成危害，实现经济社会可持续发展。用科学发展观统领可持续发展，其本质是人的自由而全面的发展，提高整体素质，培养德、智、体、美全面发展的建设者和接班人，造就数以亿计的高素质劳动者、数以千万计的专门人才和一大批拔尖的创新人才，自主创新，参与国际合作、竞争，实现民族屹立和经济社会全面发展。

生存环境的变化必然导致人类求生存实践中的开拓创新。继承发展，借助信息传递，继承前人、同仁有关实践的经验与成果，囊扩不断实践活动的科学总结，丰富知识宝库，创新科学体系，力显21世纪信息化、知识化、科学化时代特征，造就人才的特点深深打上了时代标记。

首书《风雨路上梦成真》的前言“触发心灵的思考”集中说明了在民族屹立、植根千秋的伟业中，精神品格在人才成长中的作用。面对21世纪信息化、知识化、科学化社会的需要，其人才要在品格精神的驱动下，适应需要，逆止污染，揭露变态，遏制丑陋，博古通今，不断进取，成功地解决各种自然、社会问题。

《时代造就华夏人》在通篇贯穿精神品格的同时，闪射了知识、科学的亮点：中国第一架双发动机木质机身机翼运输飞机“中运1号”，中国第一支日光灯、显象管，中国电力电容器无毒介质硅油的



发明，中国第一本《燃汽轮机》专著，首创中国火箭用计算机，首创中国离心机法取代前苏联高柱法测定沙性土最大分子吸水量，首创全息谱理论，提高设备故障确诊率，揭示黄土工程性质恶化的规律，纳入国家标准，达到世界水平，发明多异多重复合变形新型长丝——军港纶装备全军，走向民用，高温合金凝固理论的新概念、新构思、新手段及实用效果国际领先，中国人胶体界面力学研究成果列在了美国表面活性剂研究成果的前列，创记录青藏公路（冻土上）、京津塘高速公路（软土上）地基处理，遥感 3S 技术应用于公路选线效益巨大，破译人类基因研究使我国法科学鉴定进入 DNA 水平，石油管材成果震动美国石油学会，六项成果被采纳修改标准，达尔文进化论科考中国人逮住人类“第一鱼”，土工力学研究献策抢救世界瑰宝意大利比萨斜塔，卫星大地测量监测地壳运动造福人类……。这些成就代表了一代人的智慧、心血和汗水的凝聚，是继承发展的基础，也是攀登颠峰的阶梯。

百年耻辱逼出来的革命志士，枪林弹雨，出生入死，忘我奋斗，赢得了民族的尊严；新中国建设唤起的奉献一代，日以继夜，风雨无阻，舍小家为大家，实现了民族的自立；改革开放时期的时代先锋，锐意创新、开拓前进，为盛世伟业谱写了新的历史篇章。相信青年朋友们能承先启后，感悟精神，透识特点，继往开来，为民族复兴、人类幸福做出自己的贡献。

《时代造就华夏人》的面世，除了作者、编者的辛勤劳动外，还有每一位策划者的竭诚努力，陕西省老科技教育工作者协会的有力支持，特别是各个有关分会负责人的支持、参与、贡献，还应该提出的是原陕西省人大常委会副主任、民革陕西省委主委马大谋老师的大力支持，在此一并致谢。

# **The Most Powerful Voice of Our Time**

( A Substitute for the Preface )

The 21st century is a strong transforming and developing age. It is also a pluralistic, changeful and more dangerous era in the whole world. While the great transformation and the big development are creating materials and spiritual wealth for the mankind, the man's overflowing desire for the materials is multiplying, the people's morals are running off and the differences of knowledge are spreading. In turn, these factors are all wrecking the man's spiritual civilization and restricting the great development.

High - grade science and technology based on the materials, information and energy techniques are promoting the great development, they also give rise to serious pollution which does damage to the earth's environment, that is, to the hydrosphere, the soilsphere, the biosphere and the atmosphere.

The natural living environment of the mankind is becoming deteriorative more quickly:

Fully more two millions years had gone over before the population of the whole world came up to billion. While this number amounted to 6 billions, only 200 years use less that. According to the calculation on controlled development, the balance between death and birth or zero - increase of the population would still at least need 50 years. At that time, it would reach 10 billions. The sharp increase of the population means severely increasing all living demanding qualities, such as food grain, residence, energy, and so on. Then, the global resources which supply these living factors including

fresh water, forests, and various underground minerals will be not only reduced, but also the reducing rate will be sped up. The average per person's own quantity will become less and less.

The man's living depends on fresh water, but the fresh water on the whole earth only makes up 2.5 per cent of the total number of water (97.5% salt water). 69% of the mere fresh water is frozen in the two polar zones of the earth. 30% of it is laid in the underground water - bearing stratum and the permafrost layers. The fresh water contained in lakes, rivers and soil only amounts to 0.33% of the total fresh water on the earth. Moreover, its pollution becomes worse and worse.

People can't live without air, and the polluted air flows without national boundaries. The polluted air, volcanic eruption and lightning influence not only lead to the expansion of the acid - rain zones, but also make soil acidized, its nutrient lost, and its capacity decreased. They are able to cause water to be acidized, endanger the man's body, erode buildings, metallic products and so forth.

Pollution of the environment results the severe damage to the ozone-sphere which can protect the man's body, eliminate natural disasters and decrease diseases of people. It is also capable of aggravating "greenhouse effect", making the global weather become warmer, and causing great effect on the weather change, the stability of seas and oceans levels, forestry, agriculture, ecological balance, and the people's health.

Still have, energy crisis, desert stretched and expanded, water and soil eroded, the wild species on the verge of extinction, and so on.

In the violent struggle between the light and the darkness, health and corruption, the natural "killers" impossible to defend effectively and the "money killers" hiding their abnormality do harm to the people and the society at any time. Our country, our nations and even the whole mankind are restraining the evils and praising the good, tending towards benefits and a-

voiding being harmed, expanding and encouraging the healthy trends, and bringing about the great development of the economic society in such an environment.

"The 21st century Agenda" adopted by the conference of the global heads in June, 1992 and "The China's 21st century Agenda" promptly drawn up by our government in July, 1992 are for the purpose of controlling the improvement of the mankind's living quality under the load capacity of the ecosystem supporting the economic development. They means that we should make our development not only satisfy the needs of the present people, but also realize the possibly continued development of the economic society and unharmed the ability of the future generations so as to satisfy their own needs. The continued development led by scientific developing viewpoint lies essentially in the full growth of the people's freedom to raise the whole people's quality and foster the builders and successors growing up with moral, intellectual and physical qualities and the viewpoints about beauty in all round. As a result, the people with professional skills whose number is counted as ten million and a large number of new outstanding creators will be brought up. They will participate in the international cooperation, and competition, standing firmly in development.

The change of the people's living surroundings leads inevitably to opening-up and bringing forth new ideas in searching for the man's living practice. The modern people should inheritly develop their economy, carry out the forefathers' causes with the help of information-transmitting means, enrich their treasure-house of knowledge, create new scientific systems, try to display the times' manifestation features in information, mastering knowledge and adoption of a scientific style so as to make the timed symbols put in the feature of training talented persons.

The preface "Soul-touching thought" of the first edition of the book "long Cherished Dream Become A Reality Through Arduousness" has con-

centrately explained which role one's spiritual quality will play in training talents for the great cause of our nation standing like a giant and in planting roots throughout the ages. Facing the social needs for informalizing, mastering knowledge and adopting a scientific style, the talents should suit them, prevent pollution, expose abnormal cases, fight against ugly things, conversant with things past and present – erudite and informed, keep forging ahead constantly, and solve different natural and social problems successfully.

The book “The Times Brings up the Chinese Talents” glimmers the bright points of science and knowledge while it runs through the people's spiritual qualities entirely. Their bright scientific points are as follows:

China's first two – engined aircraft with wooden haul and wing transport plane “C – 0101”;

The first China's fluorescent lamp and kinescope;

The invention of the nonpoisonous medium silicon oil of the China's electric capacitors;

The first China's monograph “Gas Turbine”;

The computers used in the rockets invented by the Chinese people;

The first China's centrifugal machine method used for determining the absorbed water quantity of the maximum elements in the sandy soil instead of the Soviet Union's high pillar method;

The first invented full – breathing theory to increase the definite diagnosis rate for the troubles in equipments;

Revealing the rules on deterioration of the loess engineering quality, brought into the state standards and reaching the world levels;

Inventing a new type of filament waried, multicoincide plasmodium – synthetic fibre for the naval port to equip the whole army and go forward to civil use;

The solidifying theory on high – temperature alloys, new concept, new imagination, new method and the practical effect in the head of the whole

world;

The researched results on mechanics in the Chinese body's colloid lined up before those of the American surface active preparation;

Setting a record on the Qinghai - Tibet Road ( on the frozen earth ), the foundation treatment of the Beijing - Tianjing Dyke Road ( embankment ) ;

3S remote sensing technique being used in the line - selection to gain a great benefit;

Uncovering the man's gene research so as to make our law - appraisal reach the DNA levels;

The results of oil - pipe materials to shake the American oil society; The six results adopted to revise standards;

The scientific investigation on the Darwin's theory of evolution to make the Chinese catch the mankind's "first fish" ;

The researching work on soil mechanics to contribute a tactics to rescuing the world treasure - Italy Pisa Oblique Tower;

The geodesy surveying work with satellites monitoring crustal movement to bring benefits, to the mankind..... These achievements embody the accumulation of the intelligence, painstaking care and sweat of a generation. They are not only the foundation of inheritance and development, but also the ladder for scaling the heights in science and technology.

The revolutionary patriots who were driven to join the struggle by the disgrace during a hundred years charged under a hail of bullets, went through fire and water, and fought selflessly to win the nation's dignity. The "offering" generation aroused by the new China's construction are working night and day, rain or shine, willing to abandon their own small families for the communities to realize the nation's independence. The vanguards of the times during the reforming and opening period bring forth new ideas energetically, open up a road to go forward so as to compose a new section and

chapter for the great heyday's cause. It is believed that the young friends are able to inherit the past and usher in the future, carry forward the cause and forge ahead into the future, response and sense spirits, realize the features deeply, and make a great contribution to the national rejuvenation and the man's well-being.

The publication of the book "The Times Brings up the Chinese Talents" lies not only in the hard work of the writers and editors, but also in the powerful support of the SPASSTE, and particularly, in the support, participation and contribution from the persons in charge of different branches concerning. We should still put forward the energetic support of the former vice-director the standing committee of Shaanxi National People's Congress and the chairman of the Shaanxi Revolutionary Committee of the KMT Mr. Ma Damou. Here, thanks will be given to him together with all similar cases.

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