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编者按：2024浦江创新论坛——创新文化论坛以“格物穷理，推动文化与科技双向奔赴”为主题，邀请匈牙利、美国、英国和中国等各领域专家，就什么是创新文化、如何培育创新文化和谁来培育创新文化等议题展开深入探讨。本期专报对创新文化论坛的嘉宾观点进行梳理，供参考。

Editor's note: With the theme of “Delve into the Essence, and Develop Culture and Technology Synergy”, the Innovation Culture Forum under the 2024 Pujiang Innovation Forum invited experts from various fields in Hungary, the U.S., the UK, China and other countries to conduct in-depth discussions on what innovation culture is, how to develop innovation culture, and who will develop innovation culture. This special report summarizes the viewpoints of the guests at the Innovation Culture Forum for your reference.

2024 浦江创新论坛专报之五

Special Report 5 of the 2024 Pujiang Innovation Forum

格物穷理 推动文化与科技双向奔赴

Delve into the Essence, and Develop Culture and Technology Synergy

文化与科技琴瑟和鸣，相辅相成。优质的文化环境是一国科技创新的沃土，科技不断地突破创新也在持续丰富和重塑社会文化。如何在理解科技发展规律的基础上，发现并培育驱动科技创新的文化，已成为全球各领域关注的热点话题。与会嘉宾一致认为，文化是科技创新的“拱顶石”，文化多样性和学科交叉性已成为创新文化的时代特征，需要持续讲好科技创新故事，加强新时代科学普及，营造开放、包容、耐心且善于倾听的创新氛围，促进文化与科技双向深度融合。

Culture and technology complement each other in harmony. A high-quality cultural environment is fertile land for scientific and technological innovation in a country, and constant scientific and technological innovation is also enriching and reshaping social culture constantly. How to discover and develop a culture that drives scientific and technological innovation based on the understanding of the pattern of science and technology development has become a hot topic of concern to all fields around the world. **The guests**

present agreed unanimously that culture is the “keystone” of scientific and technological innovation, and cultural diversity and interdisciplinary nature have become current characteristics of innovation culture. We should plan scientific and technological innovation properly, strengthen science popularization in the new era, create an open, inclusive, patient and willing-to-listen innovation atmosphere, and promote the two-way deep integration of culture and technology.

一、融合现状：创新文化引领科技发展的共识性话语体系逐步形成

1. Current status of integration: A consensual discourse system for technological development led by innovation culture is taking form.

一方面，创新文化引领科技发展已成为全球共识。清华大学教授李正风指出，科学研究已逐步融入企业创新系统、社会创新网络和国家创新体系中，推动科学文化与创新文化的交织融合，共同塑造了新时代的科技文化形态。英国谢菲尔德大学教授汤姆·斯塔福德提到，科研的透明度、资源分配的公平性，都是当今科技文化的核心议题，科技文化的进步不仅依赖技术的创新，还要通过公平的制度保障和更加开放的科研组织来推动。上海交通大学媒体与传播学院副院长徐剑表示，城市的创新文化是塑造

城市科创 IP 的重要力量，以开放思想和协同创新为核心的上海创新文化推动了城市创新精神发展。

On the one hand, it has become a global consensus that technological development is led by innovation culture. Li Zhengfeng, professor at Tsinghua University, pointed out that scientific research is integrating into the corporate innovation system, the social innovation network and the national innovation system gradually, and promoting the integration of science and innovation cultures, shaping what science and technology culture looks like in the new era jointly. **Tom Stafford, professor at the University of Sheffield in the UK,** mentioned that transparency in scientific research and fairness in resource allocation are core topics in today's science and technology culture, and the progress of science and technology culture not only relies on technological innovation, but also has to be driven through fair institutional support and more open scientific research organizations. **Xu Jian, Vice Dean of the School of Media and Communication, Shanghai Jiao Tong University,** said that the innovation culture of a city is an important force that shapes the city's scientific and technological innovation IP, and Shanghai's innovation culture centered on open thinking and collaborative innovation has promoted the development of the city's innovation spirit.

另一方面，科技为全球创新文化互通发展深度赋能。中国科技馆馆长郭哲提出，秉持共生共荣理念，最大限度实现人类福祉，通过探寻中华文脉，探索东西方科学文化之道，搭建跨国家地区的科技交流桥梁，破解古今中西科学文化差异，将为促进全球科学繁荣、开创科技新文明提供不竭动力。世界工业技术研究组织协会秘书长保罗·博若思强调，文化的多样性本身就是一种创新优势，汇集了全球各地的不同观点和专业知识，既具有全球相关性，又能解决当地实际问题。匈牙利塞格德大学技术转让公司业务开发部部长布尔丘·格德里认为，技术与文化不应对立，应该实现无缝融合，共同推动有意义且可持续的发展。

On the other hand, technology empowers the development of global exchanges in innovation culture deeply. Guo Zhe, Director of the China Science and Technology Museum, proposed to maximize human well-being by adhering to the philosophy of coexistence and co-prosperity, and explore the ways of science culture in the East and the West, build a bridge of scientific and technological exchanges across countries and regions, and address science culture differences between ancient and modern times, and between China and the West by finding out the Chinese cultural context. This will provide inexhaustible impetus to global scientific prosperity and new technological civilization. Paul Burrows, Secretary-General of the World Association of Industrial and Technological Research Organizations, emphasized that cultural

diversity itself is an innovative advantage that brings together different perspectives and expertise from around the world, and is both globally relevant and able to solve local practical problems. **Bulcsu Gödri, Director of Business Development of the Technology Transfer Company, University of Szeged in Hungary,** thought that technology and culture should not be opposed, but be integrated seamlessly to promote meaningful and sustainable development jointly.

二、融合趋势：未来产业强烈呼唤创新文化

2. Fusion trend: Future industries call for innovation culture strongly.

一是“脚踏实地”的科技产业需要“仰望星空”的创新文化。国务院发展研究中心产业经济部部长田杰棠指出，未来产业的三大稀缺要素分别是：具有前瞻性、持续性的“非共识”研究投入，贯通科学发现到产业创新的潜心研究人才，以及具有前瞻战略眼光的投资人。顶尖综合性大学不应只关注短期的“卡脖子”问题，更需立足于国家长期发展战略，重视“捅破天”需求，积极培育能够适应未来产业的创新文化。**保罗·博若思**认为，创新不仅是科技进步的推动力，更是产业可持续发展的命脉，创新文化成为企业和社会应对全球环境和社会挑战的核心策略。

First, the down-to-earth technology industry needs an unrestrained innovation culture. Tian Jietang, Head of the

Industry Economy Department, Development Research Center of the State Council, pointed out that the three rare factors for future industries are forward-looking and sustained “non-consensual” research investment, dedicated research talents run from scientific discoveries through industry innovation, and investors with a forward-looking strategic vision. Top comprehensive universities should not only focus on the short-term “stranglehold” issue, but also attach importance to future-oriented needs, and develop an innovation culture that adapts to future industries actively based on the national long-term development strategy. **Paul Burrows** thought that innovation is not only the driving force of scientific and technological progress, but also the lifeline of sustainable industry development, and innovation culture has become a core strategy for enterprises and society to address global environmental and social challenges.

二是包容开放文化氛围催生创新火花。硅谷知名投资人、**Founders Space** 创始人史蒂文·霍夫曼指出，企业营造创新文化的关键在于为人才提供自由表达和试错的空间，创新团队过于庞大容易滋生官僚作风，扼杀创新。心理安全感是创新的基础，只有在充满信任和支持的环境中，建立彼此信任的文化氛围，创新者才能大胆提出创想。**布尔丘·格德里**强调，最具变革性的创新往往源自跨学科和多元视角的交汇，鼓励团队在开放、包容的环境中自由探索，有助于打破常规思维，对于现代企业应对复杂挑

战至关重要。企业领导层应营造信任与尊重的环境，支持团队敢于承担创造性风险，突破固有界限。

Second, an inclusive and open cultural atmosphere sparks innovation. Steven Hoffman, well-known investor in Silicon Valley and Founder of Founders Space, pointed out that the key for enterprises to create an innovation culture is to provide a space for free expression, and trial and error to talents, because an innovation team that is too big is likely to become bureaucratic and stifle innovation. Psychological security is the foundation of innovation. Only by creating an environment full of trust and support, and establishing a culture of mutual trust can innovators put forward creative ideas boldly. **Bulcsu Gödri** emphasized that the most transformative innovations often stem from the convergence of interdisciplinary and diverse perspectives, and encouraging teams to explore freely in an open and inclusive environment helps break conventional thinking and is crucial for modern enterprises to address complex challenges. The corporate leadership should create a trustful and respectful environment, and support teams to take creative risks and break inherent boundaries boldly.

三是跨学科深度融合激发创新性变革。史蒂文·霍夫曼指出，当前创新的关键点往往不在于发明新事物，而是发现已有资源之间的新链接，不同学科的交汇点往往是创意和创新的源泉。当不同背景的人才汇聚在一起时，思维碰撞能够激发新想法，有助于

企业和团队持续创新变革。布尔丘·格德里认为，有意识地引入跨学科“战略+”理念，有助于打破技术孤岛，推动各领域专家从多角度发现问题、提出解决方案。农行上海分行投资银行部副总经理刘超指出，科技创新为金融行业带来了前所未有的变革，推动了金融产品和服务的创新，金融与科技的耦合共生，证实了创新文化在跨学科、跨行业合作中的关键作用。

Third, deep interdisciplinary integration stimulates innovative changes. Steven Hoffman pointed out that the key to innovation today often lies in discovering new links among existing resources other than inventing new things, and meeting points of different disciplines are often the source of creativity and innovation. When talents from different backgrounds come together, the clash of thoughts can inspire new ideas, and help enterprises and teams keep innovating and changing. **Bulcsu Gödri** thought that introducing the interdisciplinary “strategy+” philosophy consciously can help break technological silos, and drive experts in various fields to discover problems and propose solutions from multiple perspectives. **Liu Chao, Deputy General Manager of the Investment Banking Department, Agricultural Bank of China Shanghai Branch,** pointed out that scientific and technological innovation has brought unprecedented changes to the financial sector, and promoted innovation in financial products and services. The coupled symbiosis of finance and technology confirms the key role of innovation

culture in interdisciplinary and cross-industry cooperation.

三、融合路径：开辟文化软实力赋能硬科技新局面

3. Integration path: Opening up a new landscape of hard technology empowered by cultural soft power

一是提升公众科学素质，培育创新文化根基。中国科技日报社社长、中华人民共和国科学技术部党组成员张碧涌指出，创新文化在国家创新体系中的地位日益重要，科学普及发挥着不可替代的作用，要充分利用新媒体优势，提高公众的科学素养，形成广泛的社会基础。郭哲提到，现阶段我国的科普工作主要侧重在青少年，而农民、产业工人等人群的科普工作则做得不充分，需进一步系统谋划。

First, improve public scientific literacy and create a foundation for innovation culture. Zhang Biyong, President of Science and Technology Daily, and Member of the CPC Leading Group of the Ministry of Science and Technology of the People's Republic of China, pointed out that innovation culture holds an increasingly important position in the national innovation system, and science popularization plays an irreplaceable role. We should fully leverage the advantages of new media to improve public scientific literacy and create a broad social foundation. **Guo Zhe** mentioned that China's current science popularization focuses mainly on young people, but is inadequate for farmers, industrial

workers and other groups, which requires further systematic planning.

二是传播创新典范，彰显中华文化底蕴。张碧涌指出，创新文化不是空中楼阁，需要具体的事务和鲜活的案例展现，读者不仅能看到科技工作者的思辨与创新、专注与勤奋，还能感受到新时代创新文化的内涵与特点。创新过程要结合中华优秀传统文化，彰显其深厚底蕴。田杰棠表示，中华文化的创新传统源远流长，传统文化的深厚积淀也为科技创新提供了灵感。

Second, communicate innovation models to highlight the cultural legacy of China. Zhang Biyong pointed out that innovation culture is not ungrounded, but should be displayed through specific matters and live cases. Readers will not only see the thinking, innovation, dedication and diligence of scientific and technological workers, but also feel the connotations and characteristics of innovation culture in the new era. The innovation process should be combined with excellent traditional Chinese culture to highlight its profound legacy. **Tian Jietang** said that the innovation tradition of Chinese culture has a long history, and the profound legacy of traditional culture has also inspired scientific and technological innovation.

三是倡导科技向善，开展负责任创新。郭哲指出，科技发展不应只依赖“大力出奇迹”，而应树立有信仰、有敬畏的科研精神，

推动科技向善。科技工作者必须树立负责任的创新理念，承担相应社会责任，避免技术带来的潜在风险。**汤姆·斯塔福德**认为，英国科研文化面临透明度不足和不当评价标准等问题，需要强化开放式研究、调整国家评估机制、制定负责任的科研标准等。同时，科研机构也应该鼓励多元化，确保科研不只服务于经济利益，更要为公众利益和社会可持续发展做出贡献。

Third, advocate technology for good and carry out responsible innovation. Guo Zhe pointed out that technological development should not rely simply on hard work, and instead, a scientific research spirit with faith and reverence should be built to promote technology for good. Scientific and technological workers must build up the philosophy of responsible innovation, assume appropriate social responsibilities, and avoid potential risks arising from technology. **Tom Stafford** thought that research culture in the UK is facing problems such as insufficient transparency and inappropriate evaluation criteria, and to this end, open research should be strengthened, the national evaluation mechanism adjusted, a responsible research standard formulated, etc. In addition, research institutions should also encourage diversification to ensure that scientific research not only serves economic interests, but also contributes to public interests and sustainable social development.

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