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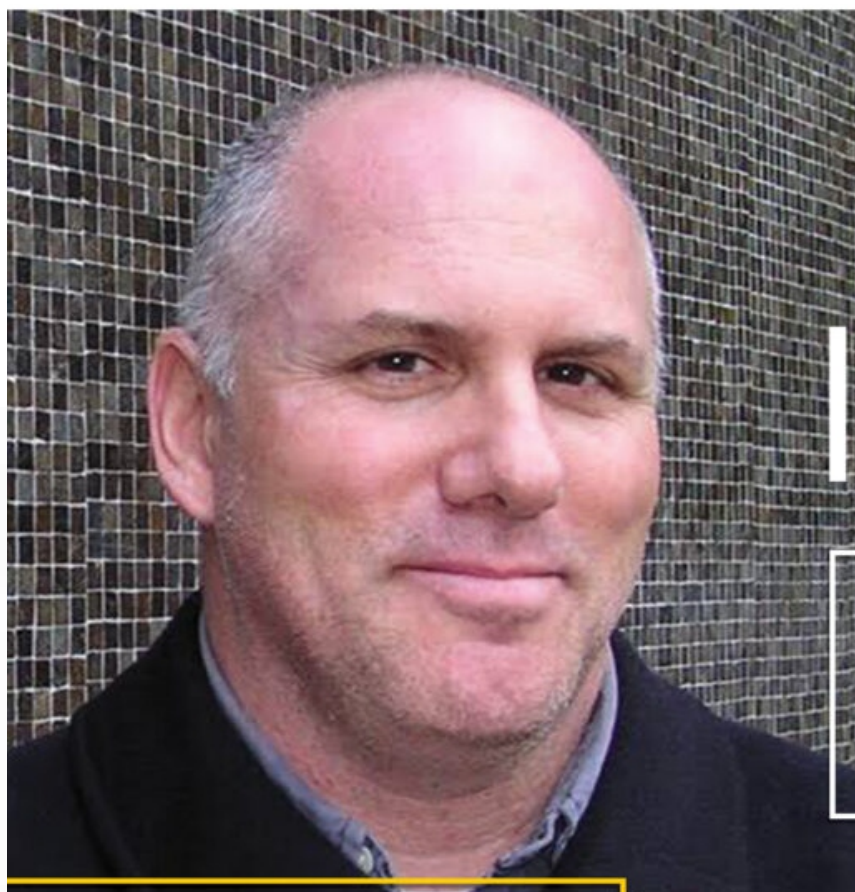
Brief 83:2021



# TECHNOLOGY AND DEVELOPMENT



**Pakistan Institute of Development Economics**



## Gregg Pascal Zachary

Writer, Teacher, Historian and Scholar

**02<sup>ND</sup> NOV  
2021**

**START 8:00 PM PST**

**LIVE ON ZOOM  
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## MODERATOR

**Dr. Nadeem Ul Haque**

Vice Chancellor,  
Pakistan Institute of  
Development Economics



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## Webinar Brief: Technology and Development

The Pakistan Institute of Development Economics hosted a webinar titled "Technology and Development" in which Dr Nadeem-Ul-Haque served as a moderator and speaker of webinar was Gregg Pascal Zachary; who is a writer, teacher, historian and scholar. The major objective of webinar is know what development actually is and how can we learn from the history of development.

### Key Points by Gregg Pascal Zachary:

- The real question about technology and development is, what exactly is technology, and what constitutes an efficient technological system? Is it possible to define development as technological progress leading to development? And who will set the development agenda?
- The major questions under discussion are: Are Development challenges more about technical issues of engineering, science, invention and markets? Or are ultimately development questions about values, philosophy, and how a society views the meaning and purpose of human life?
- Unequal outcomes are the primary focus of development; the processes of creative destruction and innovation can produce unequal outcomes; however, what happens when the outcomes are neither desirable nor beneficial to some members of society? If the outcomes are not beneficial to all, how should grievances and disappointments be handled in such a situation?
- The typical solution to this problem is to use more technology for development. However, the question of how to do so without halting technological advancement arises again, as some members of society wish to preserve traditional values.



- The technical issues of engineering, science, invention, and markets were addressed in Development Challenges. Aside from that, the question of development is linked to values, tradition, philosophy, and how to choose between technological demands and societal traditions and values.
- The central idea is that society's state and technological capacity co-evolve over time. The state expands its power in order to support technological advances, and these advances are the strength of the state's capacity.
- State and society co-evolved over time as the world transitioned from an innovative to an entrepreneurial state, and economies such as China and Russia led a great age of state support for technological innovations in the name of national prestige and security.
- The pre-modern histories of Germany, France, England show that states increased their power partly in order to support technological gains and that those gains in turn strengthened the State's capacity to govern effectively. In the 19<sup>th</sup> century, U.S government deeply involved in creating new infrastructure and farming techniques to support agricultural output. The First automation revolution came in food production and the US government provided many of the “enabling technologies” free to producers.
- The development phase is clearly defined by the end of colonialism, migrations, and the independence movement before and after WWII. Following WWII, all states sought to propel development through big science and applied technology. By the end of the 1990s, nearly all states desired technological progress. Phone development is a classic example of this scenario.
- *The rise of mobile phones and mobile finance in east and West Africa:* In the year 2000, Nigeria had about 100,000 working phone lines for a nation more than 100 million people. Imported technologies and managers built telephony and text messaging systems that revolutionized daily life. In Nigeria and elsewhere in East and West Africa, massive investments in technological capacity resulted in vast increases in the quality of life arise from spread of inexpensive mobile communication.
- Nation-States everywhere seek to derive development through “big science” and applied technology such as Nasser in Egypt, Nkrumah in Ghana, MNC-led development in East Asia, by the end of the 1990s, nearly all States want “our Nokia”.
- Development with politics is very limited because the state only invests in taxes, for example, there is a limited role of government control in the mobile market. By focusing on resources, knowledge, and promoting efficiency, the state plays a unique role in setting targets, development goals, and technological targets.
- The presence of threats is also linked to development, particularly in terms of climate change, hunger, and conflict. These threats are simple to recognize but difficult to manage. What is required to address this issue is to adhere to the linear model of development.
- The linear model of development is simple and appealing in that it focuses on scientific discovery, which capitalists finance, and then produces output that is distributed throughout the economy.
- The simple beauty of linear model is simplicity and enduring appeal: Science Discovers, Engineers and inventors Apply, Capitalist finance, produce and Distribute.
- However, there are some doubts about the linear model like growing doubts that is spending more on basic research essential. The government of South Korea, whose national champions moved from “imitation to innovation” spends little on basic science choosing instead to draw on widely available research in English, paid for by others.
- Evidence shows that pursuing clear engineering goals also creates new knowledge.



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