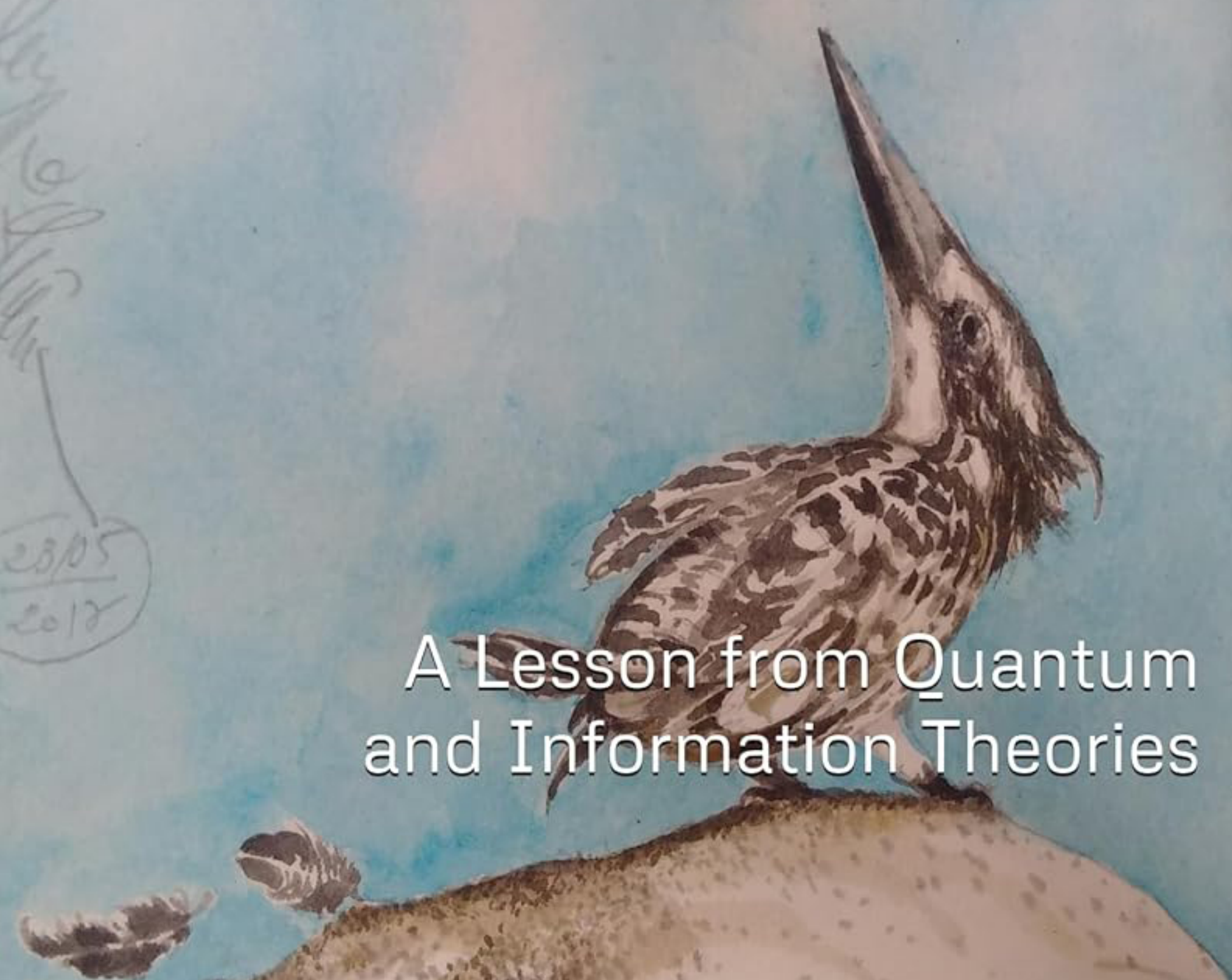


Quan-Hoang Vuong &
Minh-Hoang Nguyen

Better Economics for the Earth

A Lesson from Quantum
and Information Theories

Quan-Hoang Vuong
23/05
2018



BETTER ECONOMICS FOR THE EARTH

A Lesson from Quantum and Information Theories

Quan-Hoang Vuong
Minh-Hoang Nguyen

AISDL



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*QHV: Dedicated to the late professors André Farber and Van Nhu
Cuong.*

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PREFACE

Although the climate change crisis has been recognized as a significant issue since the late 20th century, humanity seems to have made little progress toward mitigating it. This was evident at the 2023 United Nations Climate Change Conference (COP 28), a conference addressing the urgency of combating climate change, where fossil fuel company CEOs were appointed as the conference president and invited as delegates. Ironically, the COP 28 president even declared, “There is no science out there, or no scenario out there, that says that the phase-out of fossil fuel is what’s going to achieve 1.5°C.” At the same time, incidents of vandalizing art and cultural artifacts have become more frequent to call for immediate fossil fuel reduction and phase-out, highlighting a profound polarization in society regarding climate change.

Does economics, often considered the “queen of social sciences,” have any contribution to this division?

Today, economics has an enormous influence on how society navigates and operates. Committees of economists advise the policy-making of global leaders. Economics even has its own prestigious award: The Nobel Memorial Prize in Economic Sciences. However, with such predominant influence, economists have created an illusion for the world, including readers, students, managers, and politicians, that with trading tools, outdated economic theories, and harmful ways of thinking driven by greed and profit for the past 400 years of old capitalism, they will help the world escape the climate crisis. They deliberately ignore the fact that this greed-driven economic thinking has pushed Earth’s ecosystem to the planetary

boundaries and humanity to the edge of existential crisis, just as countless species have perished due to human economic activities.

Many might hesitate to say it, but we want to assert that the current mainstream economic perspectives driving our society are devastating!

To understand how devastating it is, let's examine the carbon trading system. It is nothing more than a "normal" trading system, with traditional goods replaced by "carbon credits." This system pretends that trading "carbon credits" will offset emissions and thus reduce them! In reality, since this system started, CO₂ and other greenhouse gas emissions have only increased. The system even creates additional elements of inequality. If you doubt this, consider answering the following questions:

Who has the right to certify the value of a carbon credit? Where are they traded? Who has the authority to set prices? Who profits?

If the answer is not capitalists and those who share interests with capitalists, then who else could they be?

The economics must undergo a paradigm shift in its thinking. From a humanistic perspective, humans should be the center of everything. However, from the standpoint of physics and the universe, this is not the case. As a species, having a planet among the millions in the universe where humans can survive and thrive is already a great fortune. Through this book, we also try to answer one of our long-standing questions: why has economics learned so little from physics, the oldest and most rigorous academic discipline that studies nature?

Learning from the quantum and information theories, we also provide a new definition of value, which is expected to help economists relax assumptions and loosen established economic principles in order to change and evolve. The new definition is also expected to enable social scientists to address newly arising phenomena or events that are not accounted for by existing value systems, such as environmental crises, artificial intelligence (AI), and interdisciplinary information, more proactively and productively.

We hope that, by incorporating the quantum physics perspective into the interpretation of information and value, social scientists, particularly economists, will offer more reliable predictions and advice for societal transitions toward sustainability.

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*A Lesson from Quantum and
Information Theories*

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July 2024

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CHAPTER 1: MAINSTREAM ECONOMICS AND THE CLIMATE CRISIS'S REALITY

“Are humans in a toxic, abusive relationship with nature? Love
is strange.”

—In “Glands of Love”; *Meandering Sobriety* (1)

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