PROJECTIONS

INFORMATION-THEORETIC INTERPRETATIONS OF QUANTUM MECHANICS

ROTMAN INSTITUTE OF PHILOSOPHY WESTERN UNIVERSITY LONDON, ON, CANADA JUNE 11-12, 2016



KAĆA BRADONJIĆ

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PROJECTIONS

An academic talk and the subsequent discussion is a public display of an otherwise mostly closed-door affair, and it exposes the complex nature of the creation of knowledge. *Projections* is a series of artworks aiming to give visual representation to academic talks, mostly on the topics of physics and philosophy of physics. In a way, each *Projection* is a field report of my experience of a talk, which itself is a multidimensional beast existing in a space that exceeds the four-dimensional confines of a conference room. The talk is diffracted by my own sensibilities and projected onto the paper in real time. Some pieces are the projections of the abstract conceptual world of our models of reality and their symbolic representations: String, Loop, Set; Zero, Asymptotic, Infinity; State, Superposition, Entanglement. Others capture the emotional and the social dimensions of the talk: Enthusiasm, Self-doubt, Bravado; Camaraderie, Conflict, Agreement; Confusion, Insight, Understanding. Most of the *Projections*, however, are half-profiles: Confinement, Freedom, Exclusion; Interaction, Interference, Perturbation; Uncertainty, Confidence, Safety.

CONFERENCE INFORMATION

Information-Theoretic Interpretations of Quantum Mechanics: 2016 Annual Philosophy of Physics Conference Rotman Institute of Philosophy London, ON, Canada June 10-12, 2016

Information-Theoretic Interpretations of Quantum Mechanics (#ITIQM) is a two day workshop taking place June 11-12, 2016 at Western University in London, Ontario, Canada. This is the 20th annual UWO philosophy of physics conference. The workshop is inspired by Jeffrey Bub's forthcoming book *Bananaworld: Quantum Mechanics for Primates* (Oxford University Press). The workshop will bring together diverse views on issues raised by and related to Professor Bub's work on developing an information-theoretic interpretation of quantum theory.

The workshop will consist of six sessions, one of which will be a special session dedicated to Professor Bub's new book. After leading off this special session with a summary of his book, Professor Bub will then yield the floor to a distinguished panel of commentators: Leah Henderson (Groningen), Allen Stairs (Maryland), and Matthew Leifer (Chapman), who will present their views on Professor Bub's interpretation. In addition to the special session, the workshop will include other sessions dedicated to further topics related to information theoretic interpretations of quantum mechanics.

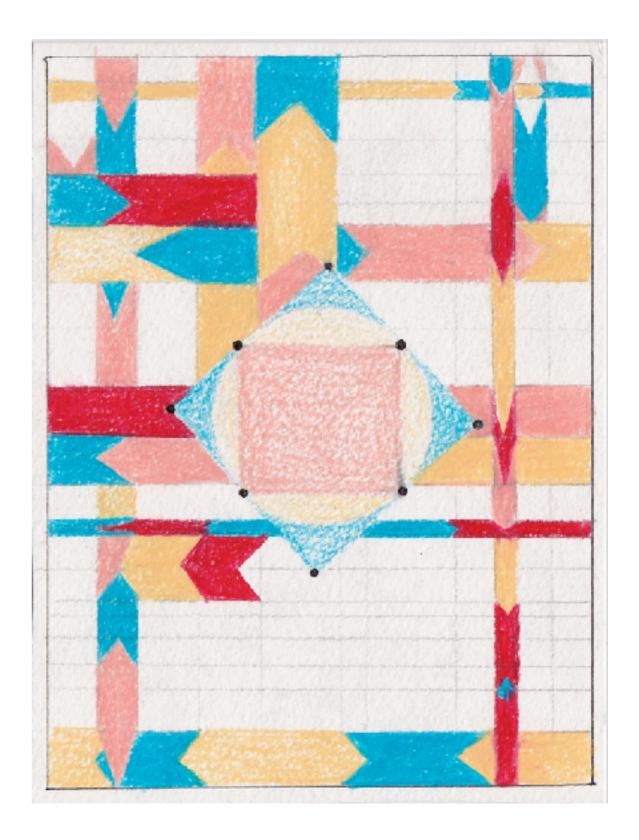
Conference Website: https://www.rotman.uwo.ca/event/information-theoretic-interpretations-quantum-mechanics-2016-annual-philosophy-physics-conference/

JUNE 11, 2016

JEFFREY BUB, "YES! WE HAVE NO BANANAS"

Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 11, 2016





<u>RÜDIGER SCHACK,</u> <u>"PARTICIPATORY REALISM"</u>

Color pencil on paper 4 $^{1/2}$ \times 5 $^{7/8}$ in (11.51 \times 15.1 cm) June 11, 2016

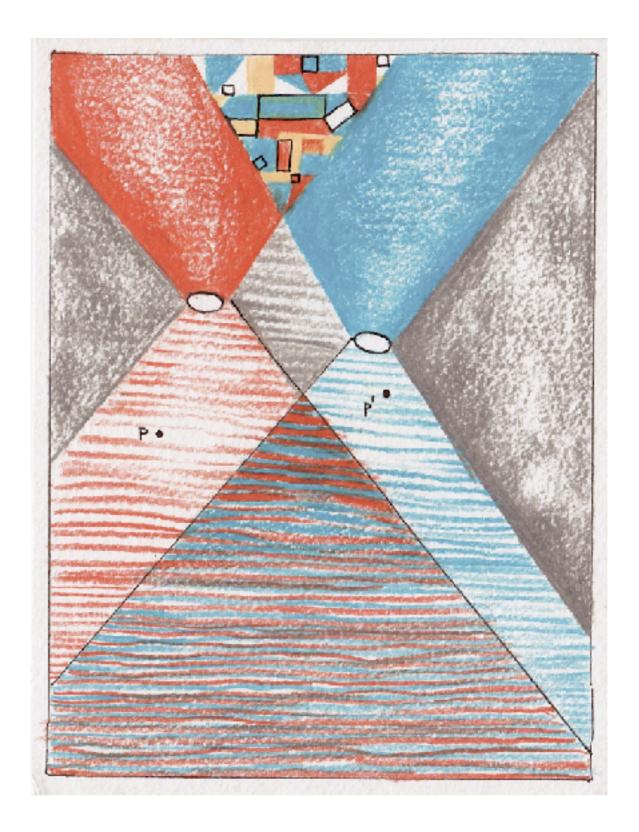


Video recording: https://youtu.be/lhbK-_mGJs8

RICHARD HEALEY "CORRELATIONS, PROBABILITIES AND QUANTUM STATES"

Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 11, 2016

Video recording: https://youtu.be/PXz9c5R6Kbw



ROBERT SPEKKENS, "LEIBNIZ'S PRINCIPLE OF THE IDENTITY OF INDISCERNIBLES AS A FOUNDATIONAL PRINCIPLE OF QUANTUM THEORY"

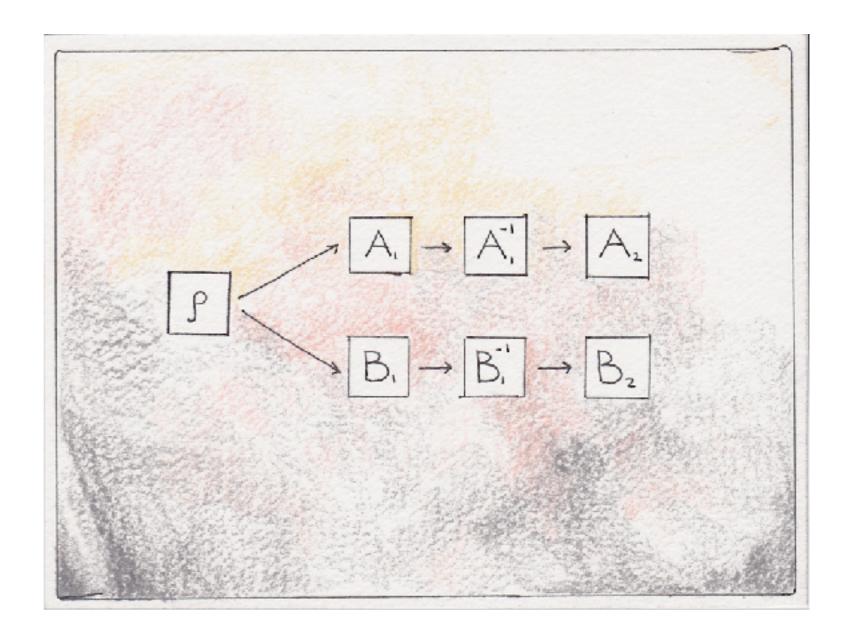
Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 11, 2016





MATTHEW PUSEY, "IS QBISM 80% COMPLETE, OR 20%?"

Color pencil on paper 4 $^{1/2}$ \times 5 $^{7/8}$ in (11.51 \times 15.1 cm) June 11, 2016

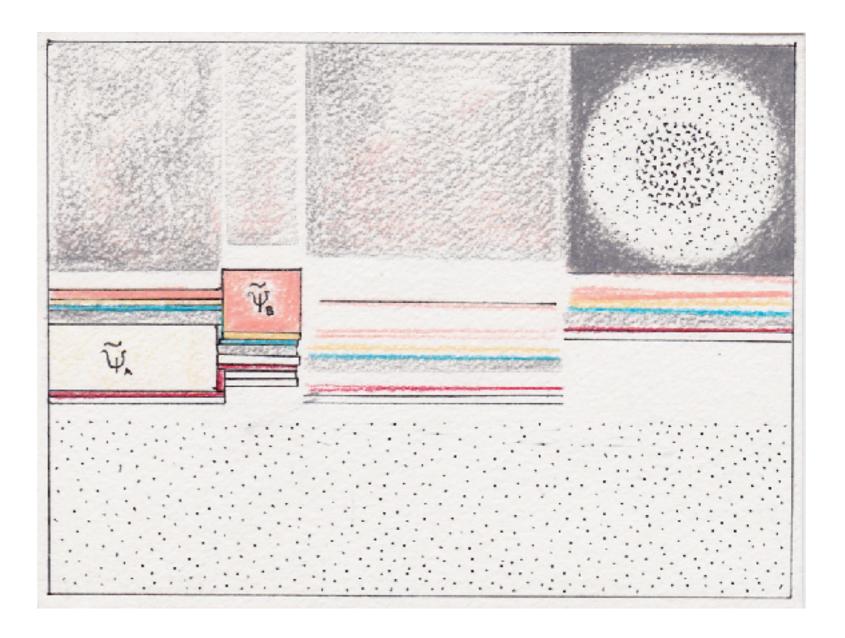


Video recording: https://youtu.be/_9Rs61l8MyY

JUNE 12, 2016

LUCIEN HARDY, "OPERATIONAL ROAD TO QUANTUM GRAVITY"

Color pencil on paper 4 $^{1/2}$ \times 5 $^{7/8}$ in (11.51 \times 15.1 cm) June 12, 2016

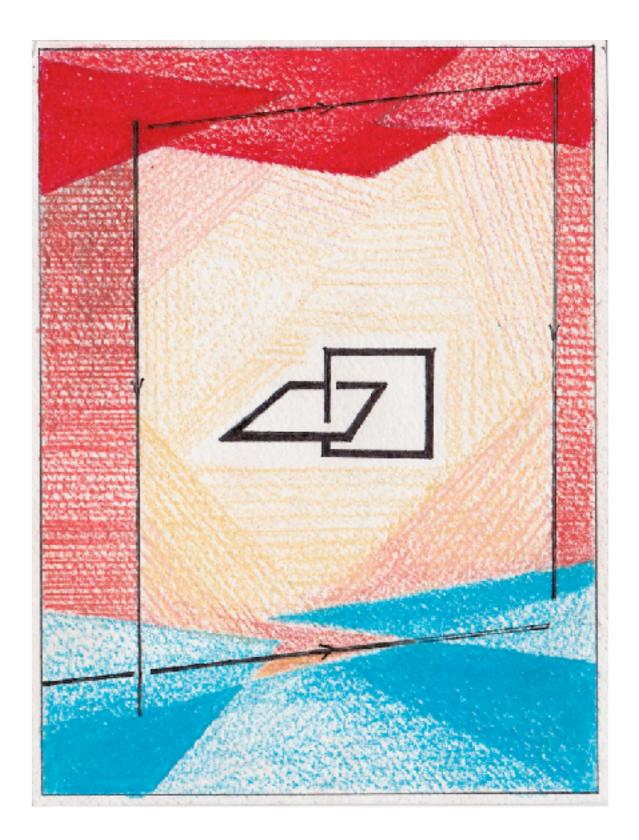


Video recording: https://youtu.be/dlDTPX5Vb5s

GILLES BRASSARD, "INFORMATION IS THE KEY!"

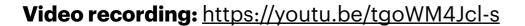
Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 12, 2016





MARISSA GIUSTINA, "SIGNIFICANT LOOPHOLE-FREE TEST OF BELL'S THEOREM WITH ENTANGLED PHOTONS"

Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 12, 2016

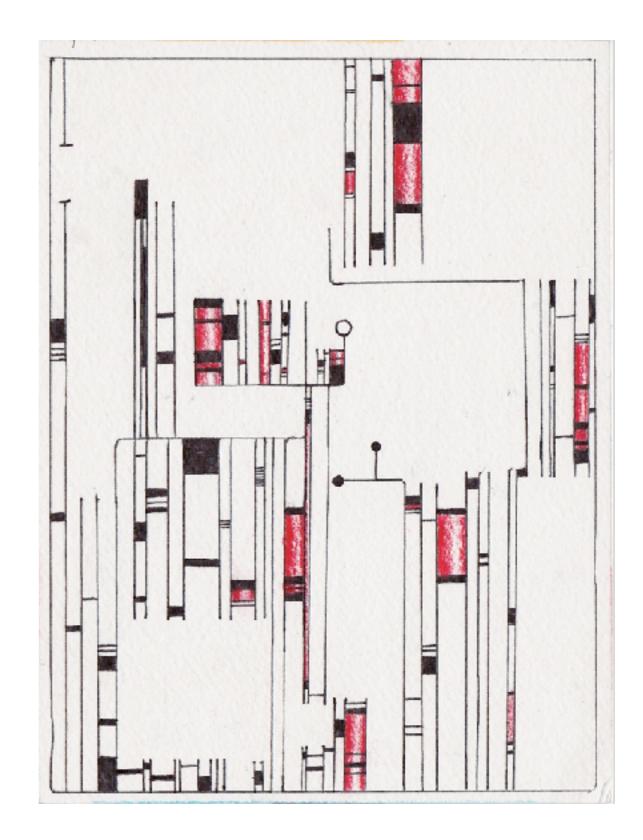




LAURA FELLINE "IT'S A MATTER OF PRINCIPLE. SCIENTIFIC EXPLANATION IN INFORMATION-THEORETIC RECONSTRUCTION OF QUANTUM THEORY"

Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 12, 2016

Video recording: https://youtu.be/KDFUYkNujeU



ARMOND DUWELL "UNDERSTANDING QUANTUM THEORY"

Color pencil on paper 5 $^{7/8}$ \times 4 $^{1/2}$ in (15.1 \times 11.5 cm) June 12, 2016





THE AUTHOR

Kaća Bradonjić is a visual artist and an Assistant Professor of Physics at Hampshire College, Amherst, MA.