

Uncertainty: Disturbance in Finance and Art

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“Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know.”^[i]

Donald Rumsfeld

The notion of uncertainty goes much further beyond this popular, epistemic doubt based on the technique of the *Johari window*^[ii]. In this particular case, the US administration knew very well that there are no significant known and unknown unknowns, before invading Iraq in 2003^[iii]. Presence of uncertainty has a disturbing effect and impact the way we are going to individually support or disapprove certain actions. Rumsfeld clearly (ab)used it in order to provoke the fear of unknown and manipulate the public's political opinion. The fear of the unknown is the most persistent fear, and comes as a reaction of losing our primary evolutionary weapon – a capability to understand and predict the patterns in control of the happenings, within a range we presume will directly endanger our safety.

Uncertainty lies in our inability to predict the upcoming positions of the elements within a system, measure precisely, or even locate the relevant question. It feels like being helpless about a hyper-depth of spatio-temporal dynamics in material nature. It is an omnipresent phenomenon, which is pinned in every single node of knowledge, from philosophy to engineering, and meteorology. Uncertainty is like a wave function, whose frequency rises up

with information entropy and whose amplitude is condensed by the lack of probable patterns.

Partially observable and randomly determined are two vectors around which the uncertainty embodies into a risk, ambiguity, vagueness, doubt, but as well a sudden possibility, useful information or chance. These profound and often unexpected implications to the experience of life have made humans to reflect, consider, and respect the uncertainty, throughout cults and deities in all ancient communities and civilizations.

"Sud" (literally "judgment" or "court") is a (South) Slavic hypothetical primordial god, the supreme creator of everything, represented by the symbol of *kolovrat* ("spoked wheel")^[vi]. Similar to the concept of Zodiac "Wheel of fortune", a symbol of the capricious nature of Fate, which borrowed from ancient Babylon, ended to represent Fortuna - Roman goddess of fortune and personification of luck. It is notable to mention that Julius Caesar, during the conquest of *Magna Germania*, erected statues of local deities, and found that Saxony worshipped prominently Krodo, identified by the Romans as Saturn^[vi]. Krodo (Chrodo or Crodo) is a Slavo-Saxon name for our previously mentioned god Sud, hence being depicted holding a wheel in the hand, among other details. The wheel represents the understanding of patterns of periodic renewal, but is in control of the gods and remains an uncertainty. Inter-cultural connections on the representation of fortune (uncertainty) are exceptionally rich and all going around the same idea of a supreme deity in charge of time, fate, but also generation and justice. "Sudnji dan" (en. "The Last Judgment") in the languages of South-Slavs literally means the day of Sud, the time when our fate will be finally decided. Not to mention an obvious connection between the name Chrodo and Chronos, Old Greek personification of time and justice, and Cronus, Greek equivalent to Saturn, which represents time, but periodic renewal and generation as well. Another fascinating parallel is to the Ancient Indian god Shani, who represents Saturn and fate, and whose alternative name is Kroda^[vi], similarity to Slavic Krodo is very thought provoking. The concept of good (and bad) fortune is a particularly interesting way to address the uncertainty. It does embrace it as a persistent fact, which operates far above our current capabilities of understanding, or controlling its presence (at a long run).

More recently, the uncertainty becomes a dominant fact of our technologically accelerated and culturally inflated, global civilization. Our recent gain in control

over some aspects of the terrestrial environment and digital technologies comes with a heavy price of short-termism^{lvii}. Developing complex systems in order to run a constant and functional probability means controlling the uncertainty. The system, in which everything is highly predictable, becomes too heavy to maintain, requiring an excessive additional power and centralizing the control. Fighting the uncertainty means fighting a chance and an unexpected experience, which means fighting the substance of which freedom is constituted.

The global financial system, which fuels our societies, hates uncertainty and is dedicated to fighting it, by improving the algorithms of measuring the uncertainty and risk analyses^{lviii}. Contrary, art has no problem with uncertainty, as it (should be) all about discovering new expressive formations, aimed at understanding and feeling the infinite aspects of the uncertainty itself. Art has that polyphonic capability to expose an irrational psychopathic drive of fighting the uncertainty - a "reptilian brain" which has no empathy toward the quality of sharing, contributing and co-creating, but only toward the certainty, territory, and control. Global finances hate this property of art, and will do anything in order to take control over the art world, setting it as a monopoly game in which big money matters, and turning it into a measurable, entertainment production, impressive as much as money there is invested. This is becoming a fact, and has very little or nothing to do with a traditional concept of Mécène, or patron in art. For instance, one who has a basic admiration toward the art would never launch a format of art-fair, where artworks are boiled down to a capital, and artists portfolios are transformed into a risk-investment document. It is literally finance, which takes the scalp of art and exposes it in its own yard.

However, the uncertainty is there to disturb confidence and power built on quantity and control. It disturbs any system of belief, which tries to establish a quantitative certainty of value and control. The scale of economy, the value of money, the scale of culture, the value of art – all this is nothing more but a glass bubble, which the wheel of uncertainty loves to run over, letting behind an unpredictable number of smashed pieces. In addition, it is smashing always and has perfect timing to come over. The resonating sound of this smashing does not need to be necessarily a concrete collapse, but sometimes we can hear it as a waste of time, life irony or absurd.

Now, let us dive into few truly disturbing facts about "material" nature of uncertainty and its *modus operandi*, which put some light on a depth (both, material and mathematical) at which uncertainty appears. In parallel, we will also bring down our notions of art and finances, and draw some uncertain connections.

Disturbance 1: Wave-particle duality and the uncertainty principle of art and finance

Wave-particle duality is the concept in quantum mechanics, that every particle or quantic entity may be partly described in terms not only of particles, but also of waves. It expresses the inability of the classical concepts "particle" or "wave", to fully describe the behavior of quantum-scale objects.^[ix]

Particle (or corpuscule in older texts) is a small localized object to which can be ascribed several physical or chemical properties such as volume, density or mass. An electron is a particle. Electron itself does not "know" both, where it is and where it is going.

From other side, can we say that artwork is a particle, and that artwork itself does not "know" both, where it is and where it is going.

Money is a particle, as well, and money itself does not "know" both, where it is and where it is going.

A wave is a disturbance that transfers energy through matter or space, with little or no associated mass transport. Waves consist of oscillations or vibrations of a physical medium or a field, around relatively fixed locations.^[x]

Finance is a wave. Finance is a disturbance that transfers money. Art is a wave. Art is a disturbance that transfers artwork.

Art has a property of artwork and finance, at the same time. Finance has a property of money and art, at the same time.

The more you know about where the artwork and money are, the less you know about what they are doing.

Two laws of Heisenberg's uncertainty principle^[xi], never to forget:

1. You will be never able to predict, either their position, or their momentum perfectly.
2. If the chances of predicting one go up, then the chances of predicting the other one go down.

Disturbance 2: Strange attractor and an illusion of movements' change

Dynamical systems theory in the 1970s and 1980s has been dominated by research on non-linear systems, and so-called chaotic motion.

An attractor is a set of numerical values, toward which a system tends to evolve, for a wide variety of starting conditions of the system.^[xiii] If you are a position or a value on the attractor, your evolving unpredictability depends on initial data and properties of the very attractor.

An attractor is called strange if it has a fractal structure. It's exhibiting sensitive dependence on initial conditions, and two arbitrarily close alternative initial points on the attractor, after any of various numbers of iterations, will lead to the points that are arbitrarily far apart, and vice versa.

Attractor can be an economic surface, on which financial system sail (in the deterministic sense), and wander (in the random sense).

Attractor can be an economic surface, on which art system sail (in the deterministic sense), and wander (in the random sense).

Attractor can be a cultural surface, on which art system sail (in the deterministic sense), and wander (in the random sense).

Attractor can be a cultural surface, on which financial system sail (in the deterministic sense), and wander (in the random sense).^[xiii]

Even seemingly chaotic, the evolution of systems of art and finance is determined by those who create the economic or cultural surface of the attractor.

Changes in movements within culture and economy are based on attractor's inner randomness. In order to change evolution of art and finances, we need to reset the initial parameters and reshape the attractor. There is no other way, but to:

1. Leave the established attractors of culture and economy.
2. Understand what it is and how it works, as much as uncertainty allows
3. Set the values and launch your own micro-attractor.

Those micro-attractors (or *pendulums* in the transurfing^[xiv]) will either grow or disappear, but they will be a chaotic system of its own kind, and will become a disturbance for the hegemonic systems nourished by control. They will become a wheel of uncertainty. For an artist, willing to go along the art (and not finance) there is no other way around but to take those localized wheels of

fortune in his/her own hands, and roll them straight through the system of certain value, imposed and manipulated by the monetary economy. If you want to imagine how it looks in practice, you will see an artist walking around the art-fair in NYC, carrying a can of the Campbell's soup and sharing it with the exposed artworks, giving them some strength back, and disturbing the finance while scalping them at the place [\[xvi\]](#).



Igor Bošnjak, *Campbell's soup performance*, 2019

[Photo: courtesy of the author]

[i] Presenter: Secretary of Defense Donald H. Rumsfeld, February 12, 2002, 11:30 AM EDT;

See: <http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=2636>

[ii] Joseph Luft (1916–2014) and Harrington Ingham (1916–1995), American psychologists, developed the idea of unknown unknowns in 1955;

See: <https://www.communicationtheory.org/the-johari-window-model/>

[iii] “What Donald Rumsfeld knew we didn’t know about Iraq” by John Walcott, Politico, 2016; See: <https://www.politico.eu/article/what-donald-rumsfeld-knew-we-didnt-know-about-iraq/>

[iv] Mathieu-Colas, Michel (2017). "Dieux slaves et baltes" ;

See : www.mathieu-colas.fr/michel/Classes/Dieux_slaves_et_baltes.pdf

[v] Delius, Christian Heinrich (1827). [Ueber den vermeinten Götzen Krodo zur Harzburg: eine historische Untersuchung: mit lithographirten Abbildungen.](#) Vogler.

[vi] Roshen Dalal (2010). [Hinduism: An Alphabetical Guide.](#) Penguin Books India. p. 373. ISBN 978-0-14-341421-6.

[vii] Richard Fisher for the “Deep Civilization” of BBC; Read:

<http://www.bbc.com/future/story/20190109-the-perils-of-short-termism-civilisations-greatest-threat>

[viii] Five Ways AI is Transforming the Finance Industry;

See: <https://www.marutitech.com/ways-ai-transforming-finance/>

[ix] See: https://en.wikipedia.org/wiki/Wave%E2%80%93particle_duality

[x] See: <https://en.wikipedia.org/wiki/Wave>

[xi] See: <http://hyperphysics.phy-astr.gsu.edu/hbase/uncer.html>

[xii] See: <http://www.iaacblog.com/programs/lorenz-attractor-particel-system/>

[xiii] Allusion to Ben Tamari’s study of economics and attractors. See:

<http://www.bentamari.com/attractors.html>

[xiv] Reality Transurfing Pendulums Explained;

See: <https://www.youtube.com/watch?v=bkgKh9XMAzs>

[xv] Allusion to the Campbell’s soup performance of Igor Bošnjak at the *Independent Art Fair* in New York City on March 7th, 2019.