The Social Rules theorem

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Divergence

> Les sries divergentes sont en gnral quelque chose de bien fatal et cest une honte quon ose y fonder aucune dmonstration. ("Divergent series are in general something fatal, and it is a disgrace to base any proof on them." Often translated as "Divergent series are an invention of the devil...") – Niels Henrik Abel, letter to Bernt Michael Holmboe, January 1826, reprinted in volume 2 of his collected papers. (Source: `http://en.wikipedia.org/wiki/Divergent_series`)

A divergent serie is the Fibonacci series since the numbers form a spiral when plotted in a coordinate system.

Works of art is usually plotted in a coordinate system in 2 dimensional or 3 dimensional space.

Film is recorded with a camera which moves in the function of $C(x, y, z, t)$ in the 3 dimensional space with the timestamp t.

Music as audio is recorded with a microphone with the position $P(x, y, z, t)$ in 3 dimensional space with the timestamp t with a certain frequency $f = \frac{c}{t}$ where c is the cycle and t is the time unit.

A divergent serie can either be a work of music (audio recording), a still photography or moving film (video recording) in a digital format such as MPEG-2 (audio/video), Ogg Vorbis (audio), Ogg Theora (video), FLAC (audio) or MPEG-4 (audio/video).

Film: Divergent (2014). A young girl (Shailene Woodley) has to face the choice of joining a faction or stay independent. She is going to take a test that decides which faction that she will join. If she joins one faction, she will have to stay in the faction for the rest of her life. She is challenged to jump from a building by one of the people in the test group, take a huge risk, but there is a security net on the bottom, so she doesn't die. She decides to join the warrior faction. She exercises kick boxing. The warriors train to never give up and to always protect life.

Nash Equilibrium

Birds inspired Professor John Forbes Nash to think of govern dynamics that led to his discovery of Nash equilibrium theory that established the field game theory after Professor John von Neumann's work in the late 1940s.

Film: Ron Howard - Beautiful Mind (2001). The story about John Nash played by Russell Crowe.

Arbitrage

The definition of arbitrage in mathematical finance is a monetary profit. Risk-free arbitrage opportunities are impossible.

Film: Arbitrage (2012). A man (Richard Gere), a person who try to gain risk-free arbitrage, has to face the law.

The Social Rules theorem

The Social Rules theorem is an extension of The Social Theorem, published in "Social Graphs in Mathematics" (2009) available from `http://math.aamot.org/Global/SocialGraphs.pdf`.

> Whenever a person meets another person, a vertice on the social graph, they will either ignore each other, talk to each other, occassionally talk to a new person, or be introduced to a person that isn't yet in a vertice on their social graph, by a person on the social graph.