

Conscious Spacetime. An outline to experinietal monism. Mc Farland

References to relevant Internet sites updated

TEXT

Theoretical Physics and some crucial experiments

Classical physics

Aether http://en.wikipedia.org/wiki/Classical_element
four types of causes http://en.wikipedia.org/wiki/Four_causes

Newtonian Mechanics

laws of motion http://en.wikipedia.org/wiki/Newton's_laws_of_motion
Neptune http://en.wikipedia.org/wiki/Discovery_of_Neptune

Particles in space and time

inertial frames http://en.wikipedia.org/wiki/Inertial_frame_of_reference

Waves

waves <http://www.acs.psu.edu/drussell/Demos/waves/wavemotion.html>
the surface is still all the time even if two waves pass the spot
http://en.wikipedia.org/wiki/Huygens-Fresnel_principle

Dr Quantum <http://www.youtube.com/watch?v=DfPeprQ7oGc>

What is light?

During the Greek time the focus was to explain sight. Some as the Pythagoreans thought that the eye sent out an invisible fire and Euclid talked about rays of sight but not rays of light. Alhazen¹ (965-1040) talked about light rays and gave the base for geometrical optics developed by Kepler¹ (1571- 1630) which strengthened the view that light was a physical phenomenon: outside ourselves there is something which propagate in straight lines, is reflected, is diffracted and gives rise to pictures when passing a lens. This 'something' we call light, but what is its nature?

Alhazen http://www.visionlearning.com/library/module_viewer.php?mid=170
Kepler <http://plato.stanford.edu/entries/kepler/#OptMetLig>
Huygens http://en.wikipedia.org/wiki/Huygens-Fresnel_principle
"Newton's rings" http://en.wikipedia.org/wiki/Newton's_rings

Young http://en.wikipedia.org/wiki/Young's_interference_experiment

Electricity and magnetism

These phenomena were, as far as I know, in a scientific meaning seen as separate.

thunderbolt was of electrical nature

http://en.wikipedia.org/wiki/Benjamin_Franklin#Electricity
<http://www.mos.org/sln/toe/kite.html>

Galvani http://en.wikipedia.org/wiki/Luigi_Galvani

Volta's pile http://en.wikipedia.org/wiki/Alessandro_Volta#Volta_and_Galvani

Oersted

<http://www.youtube.com/watch?v=BM4m2GId3F8&feature=related> Some say it was discovered 1802. http://en.wikipedia.org/wiki/Gian_Domenico_Romagnosi
<http://physicsworld.com/cws/article/indepth/2013/nov/28/a-romantic-scientist>

A review of a book about H.C.Oersted saying that french scientist didn't expect e connection between electricity and magenetsim but that Oersted did.

Faraday http://en.wikipedia.org/wiki/Michael_Faraday

magnetic force could give electrical current Suggested the year before according to http://en.wikipedia.org/wiki/Francesco_Zantedeschi

This is the base for how we produce electricity in power plants using water , carbon , oil or nuclear energy to drive turbines. Se also another way **bränsle celler, solarpower**

James Clark Maxwell http://en.wikipedia.org/wiki/James_Clerk_Maxwell

Maxwell's equations ∇ concerns partial differentiating on x, y, z : $\frac{\partial}{\partial x}, \frac{\partial}{\partial y}, \frac{\partial}{\partial z}$ see

http://en.wikipedia.org/wiki/Maxwell's_equations

Velocity of light <http://www.speed-light.info/measurement.htm>

http://en.wikipedia.org/wiki/Fizeau_experiment

http://en.wikipedia.org/wiki/Fizeau-Foucault_apparatus

electromagnetic waves http://en.wikipedia.org/wiki/Electromagnetic_spectrum

Michelson and Morely experimentally <http://www.aip.de/pr/Michelson.e.html>

Lorentz theory http://en.wikipedia.org/wiki/Lorentz_ether_theory

Poincaré http://en.wikipedia.org/wiki/Henri_Poincare

Unsolved problems in classical physics

Atoms <http://plato.stanford.edu/entries/atomism-modern/>

“cathodic rays” <http://www.youtube.com/watch?v=4QAzu6fe8rE&feature=related>

Thompson <http://web.lemoyne.edu/~giunta/ea/THOMSONann.HTML>

<http://library.thinkquest.org/13394/angielsk/athompd.html>

Rutherford http://en.wikipedia.org/wiki/Ernest_Rutherford

<http://www.youtube.com/watch?v=bSEOOMs5VNU>

electromagnetic radiation http://en.wikipedia.org/wiki/Electromagnetic_spectrum

black body (not a black hole) http://en.wikipedia.org/wiki/Black_body

Einstein's theory of special relativity

Spacetime

Plato's definition of time Plato (Timaeus 37c-38b) .

<http://www.mesacc.edu/~davpy35701/text/plato-time.html>

Possible extensions of Einstein's theory of relativity

dark energy http://en.wikipedia.org/wiki/Dark_energy

http://www.nobelprize.org/nobel_prizes/physics/laureates/2011/press.html/

time-space interchange

reversal of the order between cause and effect

Faye, J. (2010) Backward Causation. <http://plato.stanford.edu/entries/causation-backwards/>

Quantum mechanics

Planck, black body radiation

<http://www.youtube.com/watch?v=bwCGUj1Xztc>

“a purely formal assumption” of Quanta quotation from the article

<http://physicsworld.com/cws/article/print/2000/dec/01/max-planck-the-reluctant-%20revolutionary%20> p.3

photoelectrical effect http://en.wikipedia.org/wiki/Photoelectric_effect#20th_century

<http://www.youtube.com/watch?v=0qKrOF-gJZ4&feature=related>

light travels in discrete quanta of energy, by Einstein called photons. **ref**

spectroscopy http://en.wikipedia.org/wiki/Atomic_spectral_line

Bohr now used quantisation laws http://en.wikipedia.org/wiki/Bohr_model

Louis De Broglie http://en.wikipedia.org/wiki/Louis_de_Broglie

electron diffraction http://en.wikipedia.org/wiki/Electron_diffraction

Bacciagaluppi¹ G., Valentini A. (2009) Quantum Theory at the crossroad. Reconsidering the 1927 Solvay Conference. Cambridge University Press

Som finns att läsa <http://arxiv.org/abs/quant-ph/0609184v2>

Schrödinger's wave equation http://en.wikipedia.org/wiki/Schrodinger_equation

Schrödinger's Cat <http://www.youtube.com/watch?v=IOYyCHGWJq4>

Copenhagen interpretation

Pavšic M. (2001) The Landscape of Theoretical Physics . A global view. Chap 12.

Kluwer Academic Publisher. PDF on <http://www-fl.ijs.si/~pavsic/>

http://en.wikipedia.org/wiki/Schr%C3%B6dinger%27s_cat

Faye, J. (2008). Copenhagen Interpretation of Quantum Mechanics.

<http://plato.stanford.edu/entries/qm-copenhagen/>

many world interpretation See Copenhagen interpretation and also **Vaidman L. 2008**

other interpretations See Copenhagen interpretation and many world interpretation

EPR paradox Fine, A. (2011). The Einstein-Podolsky-Rosen Argument in Quantum Theory.

<http://plato.stanford.edu/archives/win2011/entries/qt-epr>

Unification of theory of relativity and quantum mechanics

string theory http://en.wikipedia.org/wiki/String_theory

positron found in experiment <http://en.wikipedia.org/wiki/Positron>

Chalmers D.J. (2010) The Character of Consciousness. Oxford University Press

Summary of Chap 5 about broadly reductive views which Chalmers thinks are incorrect

from Chalmers latest book the character of consciousness 2010

<http://www.drpilotti.info/eng/david-chalmers.html>

Aphlysia

http://en.wikipedia.org/wiki/Eric_Kandel

visual experiences

http://www.youtube.com/watch?v=h9AfJbXe3rc&feature=player_embedded

Moorjani <http://www.youtube.com/watch?v=7jFN9XQeEn4>

http://anitamoorejani.com/?page_id=58

Cognitive (Behaviour) Therapy C(B)T

http://en.wikipedia.org/wiki/Cognitive_therapy

order between cause and effect is changed

Faye, J. (2010) Backward Causation. <http://plato.stanford.edu/entries/causation-backwards/>

See also Rindler rel pages my homepage

final cause http://en.wikipedia.org/wiki/Four_causes

References

Allori What is Bohmian Mechanics. Int. J. of Theoret. Physics 43, 1743-1755 (2004)

<http://www.niu.edu/~vallori/wibm.pdf>

Bacciagaluppi Quantum Theory at the crossroad. Reconsidering the 1927 Solvay Conference.

Cambridge University Press. <http://arxiv.org/abs/quant-ph/0609184>

Bergson Matière et mémoire. Essai sur la relation du corps à l'esprit English translation Matter and memory <http://archive.org/details/matterandmemory00berguoft>

Campbell). Mind's past, present and future. Framtider International pp.21-24

<http://www.drpilotti.info/eng/aspectsofconsciousness.html>

De Broglie, L. (1924). Recherches sur la theorie des quanta. English translation On the theory

of quanta http://aflb.ensmp.fr/LDB-oeuvres/De_Broglie_Kracklauer.pdf

De Broglie¹, L. (1939). Matter and Light. The New Physics. New York W.W.Norton&CO

Inc. <http://archive.org/details/matterandlightth000924mbp>

Dürr D. et.al (2013) Quantum Physics without Quantum Philosophy. Springer-Verlag Berlin Heidelberg. Foreword, contents at <http://link.springer.com/book/10.1007/978-3-642-30690-7/page/1> Introduction at

<http://www.mathematik.unimuenchen.de/~bohmmech/BohmHome/files/Introduction.pdf/>

Gangadean

http://www.transpersonal.lv/eurotas/EN_presenters_AG.html . Notes see

<http://www.drpilotti.info/eng/ashok-gangadean.html>

Manzotti, R. (2011) The Spread Mind. Seven Steps to Situated Consciousness. Journal of Cosmology, 14: 4526-4541. <http://www.consciousness.it/>

Petkov, V. <http://www.spacetimesociety.org/Petkov.html>

Pavšič M. (2001) The Landscape of Theoretical Physics . A global view. Kluwer Academic Publisher. PDF on <http://www-f1.ijs.si/~pavsic/>

Pilotti J. (2011c /2012). Consciousness and Physics. Towards a scientific proof that consciousness is in Space-time beyond the brain. J Transpersonal Research Vol 3 123-34

<http://www.transpersonaljournal.com/en/transpersonal-journalV3.htm>

Pilotti J. Unpublished Tachyons and tachyonian systems. Generalisation of the special principle of relativity and an idea of six-dimensional space-time.

<http://www.drpilotti.info/eng/sixdimensional-relativity.html>

Planck, M. (1901) Ueber das Gesetz der Energieverteilung im Normalspectrum. Annalen der Physik vol 4, pp 553

http://www.physik.uni-augsburg.de/annalen/history/historic-papers/1901_309_553-563.pdf

English

Rindler W. (1960). Special Relativity. Edinburgh. Oliver&Boyd
relevant pages on <http://www.drpilotti.info/eng/sixdimensional-relativity.html>

Schrödinger E. (1935) . "Die gegenwärtige Situation in der Quantenmechanik (The present situation in quantum mechanics)". Naturwissenschaften. 23: pp.807-812; 823-828; 844-849.
REF

Tonomura et al (1989) Am. J. Phys. **57** 117-20 .Picture from
http://en.wikipedia.org/wiki/Double-slit_experiment

Wiseman, H. M. (2006). From Einstein's theorem to Bell's theorem: a history
of quantum non-locality Contemporary Physics, Vol. 47, No. 2, March–April 2006, 79 – 88
<http://arxiv.org/abs/quant-ph/0509061>