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- : (Jonathan Latham)
 - : “The Meaning of Life (Part I)” (2017.10.24)
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 - : “The Meaning of Life (Part I)”
“Genetics Is Giving Way to a New
Science of Life”
-

(James Watson) (Francis Crick) DNA
1953 DNA . DNA 1953 30
DNA . DNA 1920
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(1917)
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(Max Mason)

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(Lily Kay
Molecular Vision of Life, 1993)

(Lily Kay)

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(Edmund E. Day)

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(Warren

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(Kay, 1993).

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(Nicolas Rashevsky)

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(Abraham, 2004)

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(George Beadle)

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(Kay, 1993).

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(Desmond, 1998).

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(Darwin's

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(salique law)—

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’(protoplasm)

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(Wallace, 2009).

(Gundle et al., 2010).

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(Vrecko, 2008).

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(Adolf Hitler)

'(genome sequencing)

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1 '(presumptive primary cause)

DNA

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(Mullis, 1997).

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1865

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(Herbert Spencer) (E. O. Wilson),
 (Richard Dawkins), (Steven Pinker), , DNA
 (含意) 『
 : 『(Sociobiology: The new synthesis, 1975) 『
 『(The Selfish Gene, 1976) 『 『(The Extended
 Phenotype, 1982)
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 1980). 가

6. ‘ ,
 2016 (Gary Greenberg,)
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 Lerner)(Lerner, 2007)
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 가 MIT < > (([

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가 (Ioannidis, 2007) 가 (Manolio et al., 2009; Dermitzakis and Clark, 2009) 가 (Ioannidis and Panagiotou, 2011) 가 (Buchanan et al. 2006; Wallace, 2006; Charney and English, 2012).

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UC C. (Richard C Strohman) 1997 「 (“The coming Kuhnian revolution in biology ”) “ []

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가 DNA 가 DNA 가가 DNA 가 —RNA , —

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(Ernst Haeckel)

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(John Morley, 1882, Desmond 1998

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>(NY Review of Books)

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『(Sociobiology: a New Synthesis)

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(Dorothy Nelkin)

(Susan Lindee)

(Preface to the second edition, *The DNA Mystique: The gene as a cultural icon*, 2004).

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(Adolf Eichmann)

(Hannah

Arendt)

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”(banality of evil)

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References

Abraham, TH (2004) Nicolas Rashevsky's Mathematical Biophysics. Journal of the History of Biology 37: 333-385.

Buchanan, AV, KM Weiss, and SM Fullerton. Dissecting Complex Disease: The Quest For the Philosopher's Stone? International Journal of Epidemiology 35.3 (2006): 562-571.

Charney E, and English W (2012) Candidate Genes and Political Behavior. American Political Science Review 106: 1-34.

Chaufan C, and Joseph J (2013) The 'Missing Heritability' of Common Disorders: Should Health Researchers Care? International Journal of Health Services 43: 281-303. Lucy S. Dawidowicz (1975) The War Against the Jews: 1933-194 New York: Holt, Rinehart and Winston

Dawkins R (1982) The Extended Phenotype. Oxford University Press.

Dermitzakis E.T. and Clark A.G. (2009) Life after GWA studies. Science 326: 239-240.

Desmond A (1998) Huxley. Penguin books.

Greenberg, G (2016) How many nails does it take to seal the

coffin? Developmental Psychobiology 9999: 1-2.

Gundle KR, Dingel, M and Barbara A. Koenig (2010) “To Prove This is the Industry’s Best Hope”: Big Tobacco’s Support of Research on the Genetics of Nicotine. Addiction. 105: 974-983. doi: 10.1111/j.1360-0443.2010.02940.x

Ioannidis, J.P., (2007) Non-replication and inconsistency in the genome-wide association setting. Hum Hered. 64: 203-13.

Ioannidis JP and Panagiotou O (2011) Comparison of Effect Sizes Associated With Biomarkers Reported in Highly Cited Individual Articles and in Subsequent Meta-analyses. J. Am. Med. Assoc. 305: 2200-2210.

Kales, A, CR Soldatos, EO Bixler, RL Ladda, DS Charney, G Weber and PK Schweitzer (1980) Hereditary factors in sleepwalking and night terrors. The British Journal of Psychiatry 137: 111-118. 10.1192/bjp.137.2.111

Kay, Lily E. (1993) The Molecular Vision of Life. Oxford University Press.

Latham, J (2017). Genetics Is Giving Way to a New Science of Life. Independent Science News Feb 2017.

Lerner RM (2007) Another nine-inch nail for behavioral genetics! Human Development 49 1-7

Lewontin R, Rose S, Kamin, L (1984) Not in Our Genes. Pantheon Books.

Manolio T. et al. (2009) Finding the missing heritability of complex diseases. Nature 461: 747-753.

Mullis, K Dancing Naked in the Mind Field. 1998, Vintage Books.

Nelkin D and Lindee MS (2004) The DNA Mystique: The gene as a cultural Icon. University of Michigan Press

Vrecko S (2008) Capital ventures into biology: biosocial dynamics in the industry and science of gambling. Economy and Society 37: 50-67.

Wahlsten D (2012) The Hunt for Gene Effects Pertinent to Behavioral Traits and Psychiatric Disorders: From Mouse to Human. Dev. Psychobiology 54: 475-492.

Wallace HM (2006) A model of gene-gene and gene-environment interactions and its implications for targeting environmental interventions by genotype. Theoretical Biology and Medical Modelling 2006, 3:35. .

Wallace H (2009) Big tobacco and the human genome: Driving the scientific bandwagon? Genomics, Society and Policy 5: 1-54.

Wilson EO (2000) Sociobiology: The New Synthesis. Belknap Press.

Zuk O, E Hechter, SR Sunyaev, and ES Lander (2013) The mystery of missing heritability: Genetic interactions create phantom heritability. 109: 1193-1198. doi: 10.1073/pnas.1119675109