

-
- : (Jonathan Latham)
 - : “The Meaning of Life (Part I)” (2017.10.24)
 - :
 - :
 - : “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
DNA
(1917)
(公憤)
. 1911 (Harry Pratt Judson)
. 1913
“ 가 ”
,
가 가
, 가
가 • •
,
(psychobiology)

1.

“ ”

1900

1929

(Max Mason)

가

“ ”

[]

가

(Lily Kay
Molecular Vision of Life, 1993)

(Lily Kay)

□The

(Edmund E. Day)

“

”

“

”

(Warren

Weaver)

“

”

“

”

“

”

가

가

“

” 1930

가

“

(Kay, 1993).

2.

가

‘ ’ ([])

()

“ ” .))

(Nicolas Rashevsky)

가

(Abraham, 2004)

(記述)

1933

— 가

. (1)

(George Beadle)

‘ ’

가DNA

1953

18

(Kay, 1993).

1989

가

가

가

가

「 _____ 」

_____」

가

(2)

1953

DNA

“ ”

가

3.

:

50

(

)

“

”

(Desmond, 1998).

가

가 가

가

—

—

가

가

(([]

(Darwin's

Bulldog)

.))

가

“

(salique law)—

”

가

가

가

가

가

가

가

가

가

.(Desmond, 1998).

가 ‘

’(protoplasm)

가

가

4.

)

(

1950

3 7

(Wallace, 2009).

(Gundle et al., 2010).

가

()

(Vrecko, 2008).

1920

1930

(Adolf Hitler)

'(genome sequencing)

가 DNA가

가

1 '(presumptive primary cause)

DNA

“

”

(Mullis, 1997).

5.

1865

“ [] ”

가

가

(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)
 , ‘ , ,
 . DNA
 가 , , — • , , ,
 (가 Kales et al.,
 1980). 가

6. ‘ ,
 2016 (Gary Greenberg,)
 「 (棺) 가? 」 .(([
] ‘ ’ 가 .)) ‘ , “
 (反) ” (Richard
 Lerner)(Lerner, 2007)
 “ ” (Douglas Wahlsten)(2012)

가 ()

가
 가 . 2013
 가 MIT < > (([

] 「 (Eric Lander .)) 「 (phantom) (Zuk et al., 2013). 180 4가

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).

() 가 .

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

가 1993

“ ”

「 _____] ,(([] (A short guide to alternative paradigms of life) .)) 가 “ ” — • • • • • —

가 DNA 가 DNA 가가 DNA 가 —RNA , —

가

가

GMO

(

)

DNA가

DNA

(prescientific vitalism)

DNA가

7.

1860

(Ernst Haeckel)

(

)

“

”

(1882)

(

가

)

“

”

“

가

”

(John Morley, 1882, Desmond 1998

)

가

. DNA

가 DNA

가

가

1975

, E.O.

『

<

>(NY Review of Books)

:

『(Sociobiology: a New Synthesis)

(([

] C.H. Waddington

1975 8 7

Mindless Societies

.)

.(([]

.)

가

가

가

가

가

『

』

가

and Joseph, 2013)

(Chaufan

(素因)

(場)

>

—

,

<

—

(Dorothy Nelkin)

(Susan Lindee)

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

(가)

가

가

가

가

, 20

가

가

2

가

(Adolf Eichmann)

(Hannah

Arendt)

가

“

”(banality of evil)

가

(『 : 1933-1945』) .

(『 II』)

가,

가가

가

(『 II』)

가

. DNA가

가

DNA

. DNA

DNA가

—

DNA

가

—

가

가



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