

(,)

97 가 6 26
(biotechnology)

. TV

1

DNA
가

가
DNA

TV

DNA

(information technology)

17

가

(Jeremy Rifkin)

"*(The Biotech Century)*"

1

“ 25

가 2

. 2025

가

[humanity], (性),

가

(

, 가

가

가

”

21

(version)

가

(胚芽)

가

“

”

(Human Genome Project,

HGP)가

가

가

2.

1)

(Basiswissenschaft)¹⁾

가 (scientific)
 revolution)' (力學) 가 (clockwork)
 가 ,
 가 .
 가 .
 , , 가
 .

2)

(hierarchy) 가 , 가 .
 가 ,
 (F. J. Ayala) ,
 (ontological reductionism) 가 (entity)
 (methodological reductionism)
 가 (epistemological reductionism)
 가 , HGP
 , 가
 가 (奇蹟) .2)

1) (physicalism)

(Carnap), (Neurath)

2)

(Vicedo, 1992).

가 가 . ,
(fundamental) , (essence)

가

(Sarkar) 가
1)

가
(fundamentalism) 2) (abstract hierarchy) 3) (spatial hierarchy) .
3 .³⁾ (weak reduction)

1) . , (phenotype)

1) 2) . 가

가 (顯現) 가 . (strong reduction)
1), 2), 3) 가

가 (Sarkar, 1998).

strong reduction) 3) 가 1) 2)
(geneticism, (strong reduction) (approximate
Sarkar가) ,

가
가

가
가 가 “

”

가 “
(molecularization)”
HGP가 가 .

(level) ,

3) weak reduction, approximate abstract hierarichical reduction, abstract hierarichical
reduction, approximate strong reduction, strong reduction 가 ,
가

3.

가 ,

가 .

(population) (質)

가

가

가

1)

“ (back-door eugenics)” 가 가 가

가 가

(select)

(複數)

가 (negative eugenics)⁴⁾ (cost-benefit) 가

(Philip Kitcher) HGP가 가 (enterprise of choosing people) 가 가 ” (Kitcher, 1998). 가

“ (slippery slope)” 가 가

가 가

가

가

4) 가 (positive eugenics)

가 “ (cost-benefit)”

가

가

가

가

4.

가

21

“ ”

가 (家系)

가

가

가

가

가

가

가

가

(胚芽)

가?

(奇形) 가

가?

가

“ 가 ”

”

(Kitcher, 1996).

“ ”

가

가

가

가

가

가

가

가

가

7)

가

가

가

가 가

가

가

가

< >

1953 DNA (container)⁸⁾ 가 DNA DNA

(process) 'DNA = DNA' DNA 35 (code)

(linear) DNA가 DNA가

(體細胞) (有性生殖)

(有性生殖)

가

가

(cost) 가 (humanity)

, DNA가

(優良性) 가

, DNA 가

(ecosystem) 가 1:1 가 , ' -

(network)

가

(")

가 가 가 가

(identity) . < >

< >

Ayala, F. J., 1974, "Introduction" in F. J. Ayala and T. Dobzhansky (eds.), *Studies in the Philosophy of Biology* (London, Macmillan)

8) Richard Dawkins "The Selfish Gene()"

- Bishop Jerry E. and Waldholz, Michael, 1990, *Genome; The Story of Our Astonishing Attempt to Map All the Genes in the Human Body* (“ ”, / ,)
- Cook-Deegan Robert, 1994, *The Gene Wars; Science, Politics and the Human Genome*(“ ”, / ,)
- Grace Eric S. 1997, *Biotechnology Unzipped, Promises & Realities*(“ 가”, ,)
- Keller Evelyn Fox, 1992, "Nature, Nurture, and The Human Genome Project", in Daniel J. Kelves and Leroy Hood(Edit), *The Code of Codes; Scientific and Social Issues in the Human Genome Project*, Harvard University Press
- Kimbrell Andrew, 1993, *The Human Body Shop* (“ - ”, / ,)
- Kitcher Philip, 1996, *The Lives To Come; The Genetic Revolution and Human Possibilities*, Simon & Schuster
- Kitcher Philip, 1998, "Who's Afraid of the Human Genome Project?" in David L. Hull and Michael Ruse (Edit.) *The Philosophy of Biology*, Oxford University Press
- Lewontin R, C, 1991, *The Doctrine of DNA; Biology as Ideology*, Penguin Books
- Nelkin Dorothy, 1995, *The DNA Mystique, The Gene as a Cultural Icon*, W. H. Freeman and Company
- Nelkin Dorothy, 1995, *Selling Science, How the Press Covers Science and Technology* ,W. H. Freeman and Company
- Paul Diane B. "Is Human Genetics Disguised Eugenics?", in David L. Hull and Michael Ruse (Edit.) *The Philosophy of Biology*, Oxford University Press
- Rifkin Jeremy, 1998, *The Biotech Century* (“ ”, , ,)
- Rose Hilary and Rose Steven(Edit.) 1976, *The Political Economy of Science, Ideology of/ in the Natural Sciences*, The Macmillan Press LTD
- Rose Steven, Lewontin R. C. and Kamin J. Leon, 1984, *Not In Our Genes; Biology, Ideology and Human Nature*, Penguin Books(“ ”, ,)
- Sarkar Sahotra(Edit), 1996, *The Philosophy and History of Molecular Biology; New Perspectives*, Kluwer Academic Publishers
- Sarkar Sahotra, 1998, *Genetics and Reductionism*, Cambridge University Press
- Vicedo Marga, 1992, “Human Genome Project; Towards an Analysis of The Empirical, Ethical, and Conceptual Issues Involved”, *Biology and Philosophy*, 7(1992) pp. 255-278, Kluwer Academic Publishers.