

Macroeconomics

- Macroeconomics is the economics of economies.
- Macroeconomics studies economies when taken as a whole and, in particular, investigates how an economy works.
- As distinguished from microeconomics, macroeconomic analysis minimizes what is taken as given.
- The central concerns of macroeconomics are
 - macroeconomic fluctuations (Great Recession)
 - long-term economic growth (Great Divergence).

The magnificent seven

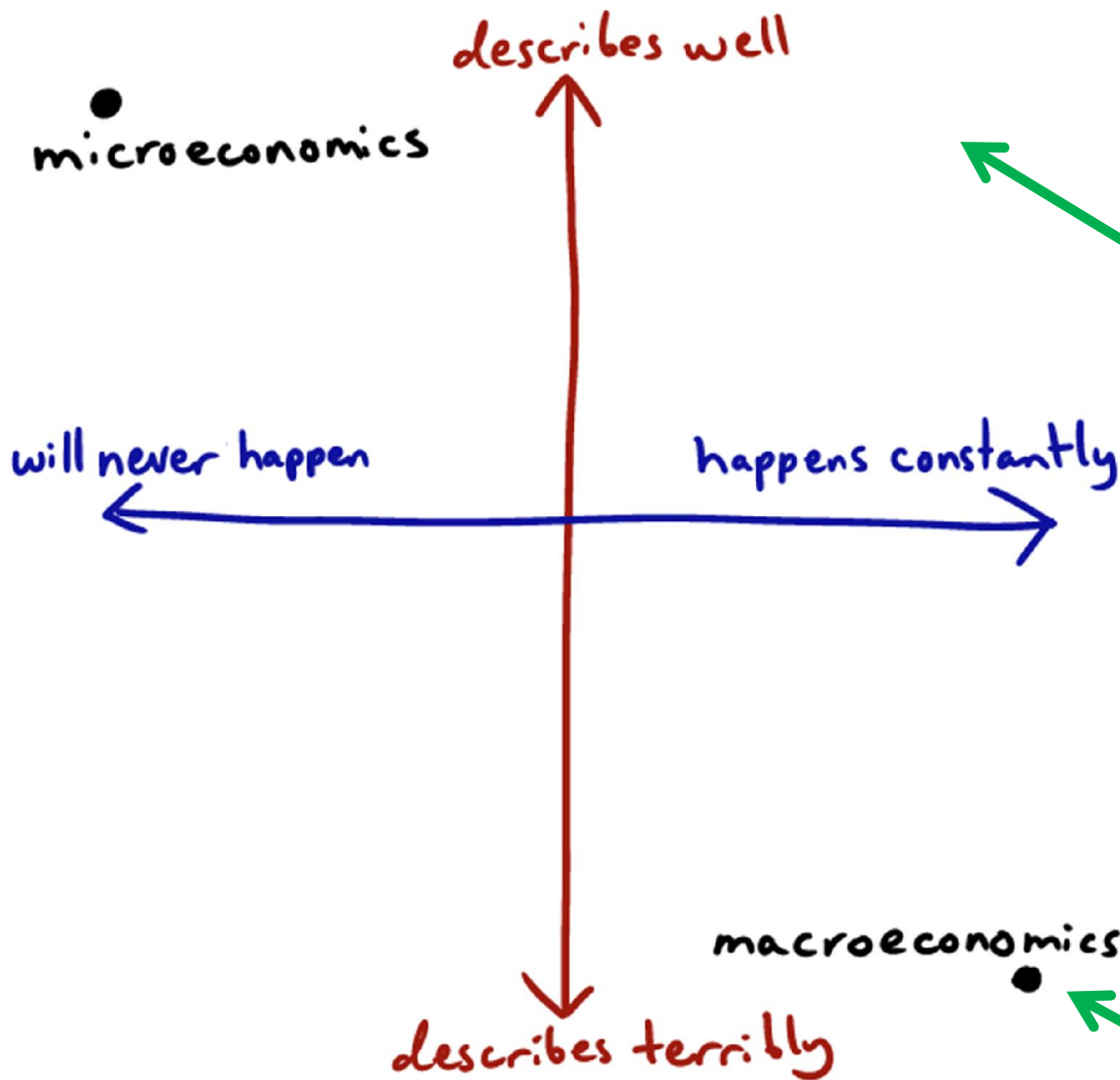
- This course focuses on macroeconomic fluctuations and, specifically, proposes explanations of the behaviour of the seven following variables.
 - GDP – measure of economic activity
 - inflation rate – measure of economic stress
 - interest rate – basic price in the financial sector
 - exchange rate – foreign price of home currency
 - unemployment rate – performance indicator
 - government budget deficit (or government debt)
 - foreign deficit – trade balance in deficit

Main theoretical lessons

- This course relies on three insights to explain how an economy operates and generates outcomes.
 - Feedback processes account for the persistence of certain phenomena through multiplier effects: economic growth, unemployment, inflation...
 - Optimizing behaviour by agents of the economy justifies the simultaneous attainment by several markets of stable states (e.g., arbitrage).
 - Limits to what a government can do, control or achieve in an economy (policies must take into account how people react to them).

KNOW YOUR BRANCHES OF ECONOMICS:

- HOW WELL THEORY DESCRIBES SCENARIOS IT CONSIDERS
- HOW LIKELY THOSE SCENARIOS ARE TO OCCUR IN REALITY



Macro textbooks want you to believe that you are over here...

... but actually you are here.

The first wheel

FISCAL
POLICY



EXPENDITURE

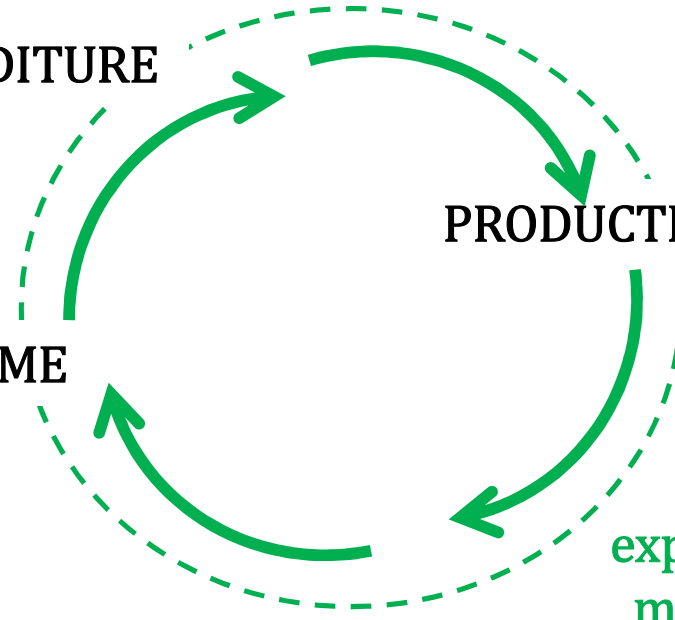
PRODUCTION

INCOME

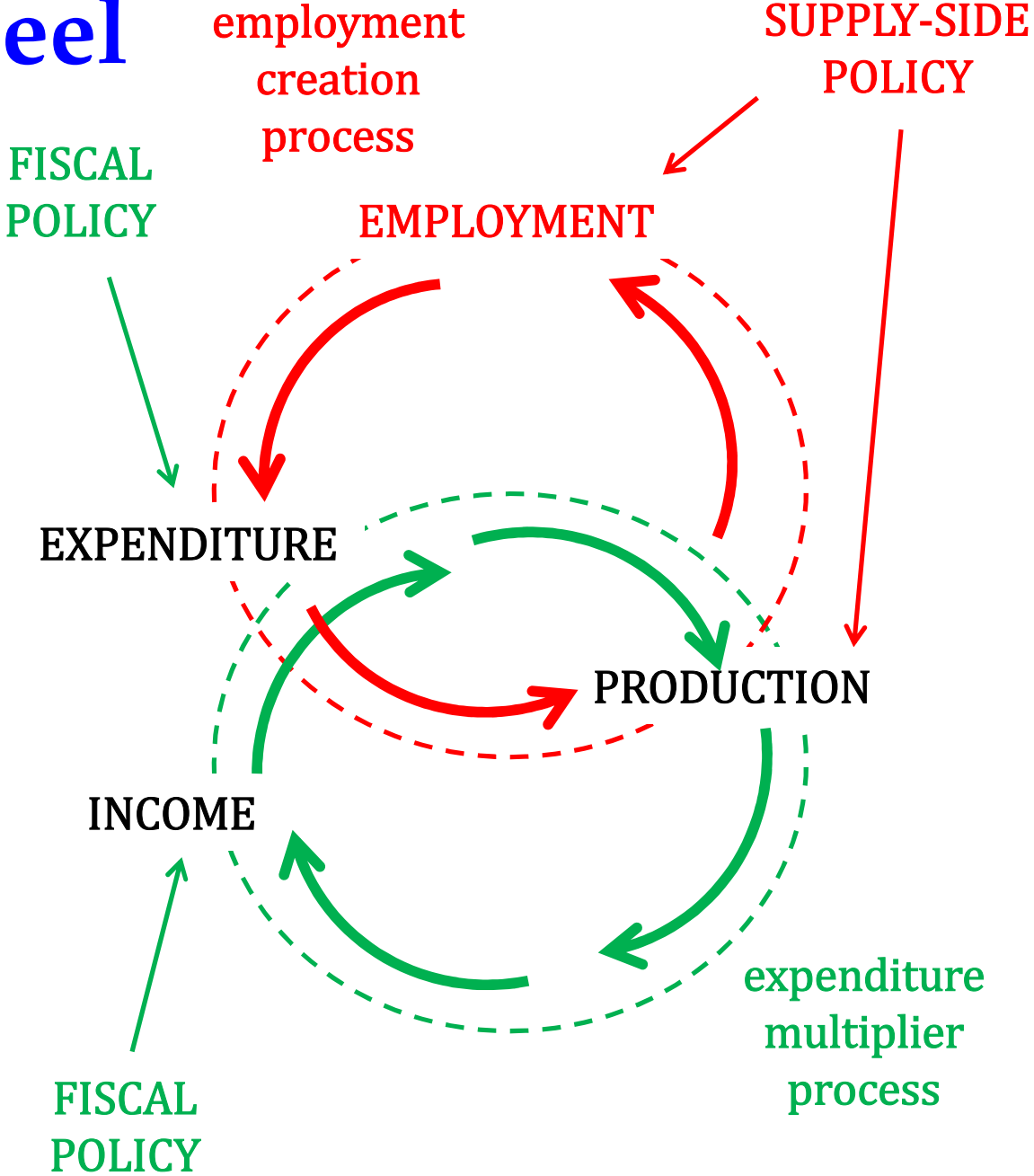


FISCAL
POLICY

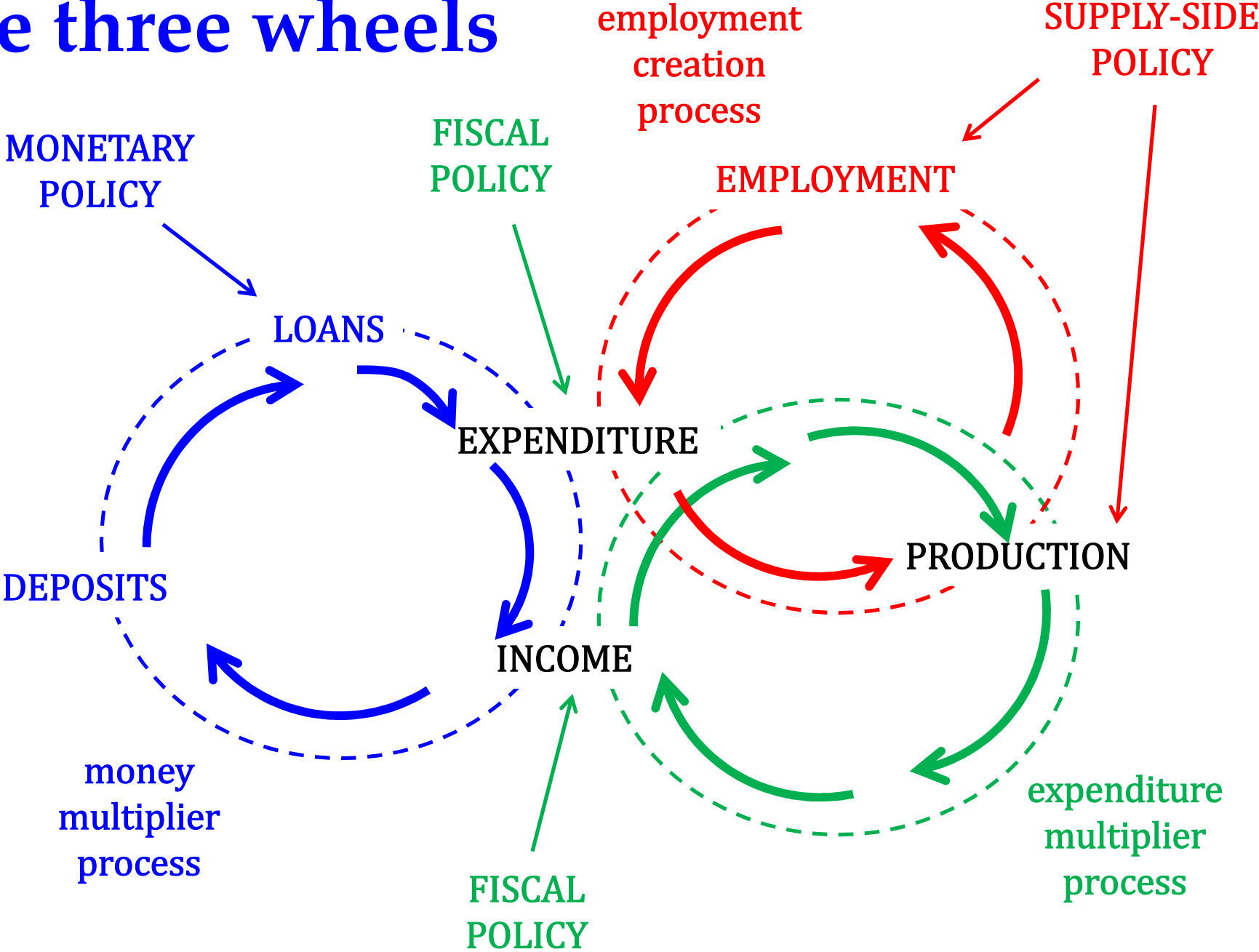
expenditure
multiplier
process



The second wheel



The three wheels



Problems in the study of “reality”

- The act of perception creates reality. Does “reality” only exist in our brains? Color, for instance, is an emergent feature of brain activity.
- The understanding economic reality presumes a conceptual framework that guides our interaction with reality and within which reality is interpreted.
- The same reality may be interpreted differently in alternative frameworks. Was the 2008 financial crisis due to too much or to too little government regulation? Was it a market or a policy failure?



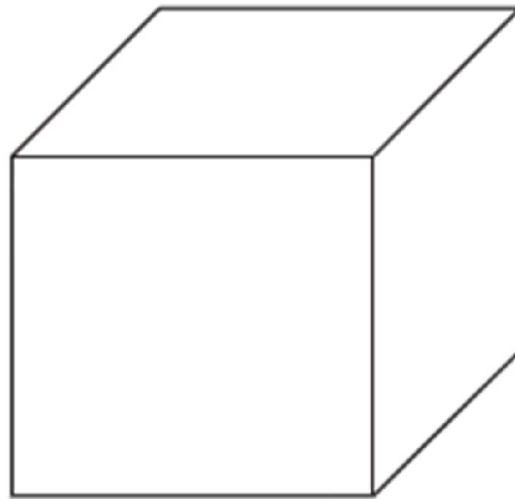
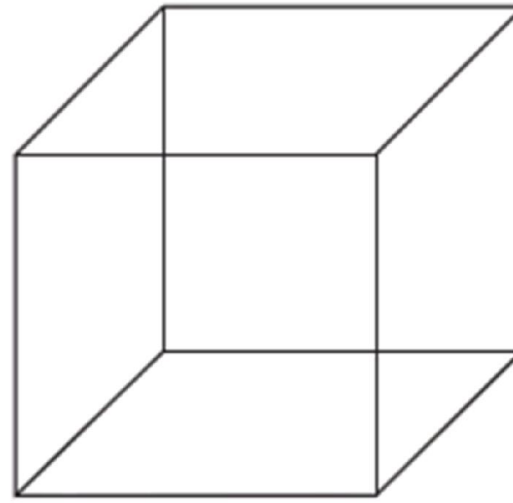
Old woman or young lady?

Steven Mark Cohn (2006): *Reintroducing macroeconomics*, p. 5

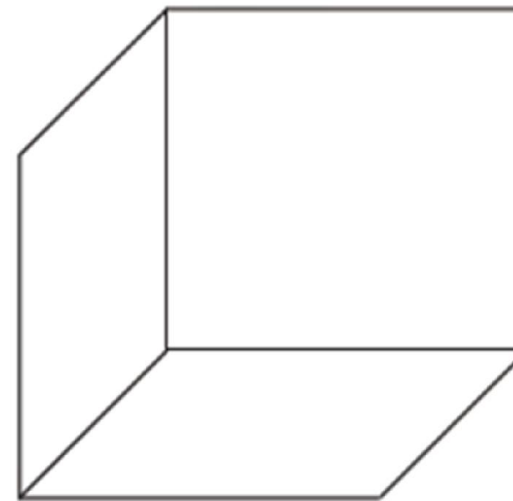
The Necker cube

Daniel Reisberg (2009):

Exploring the science of mind, p. 62

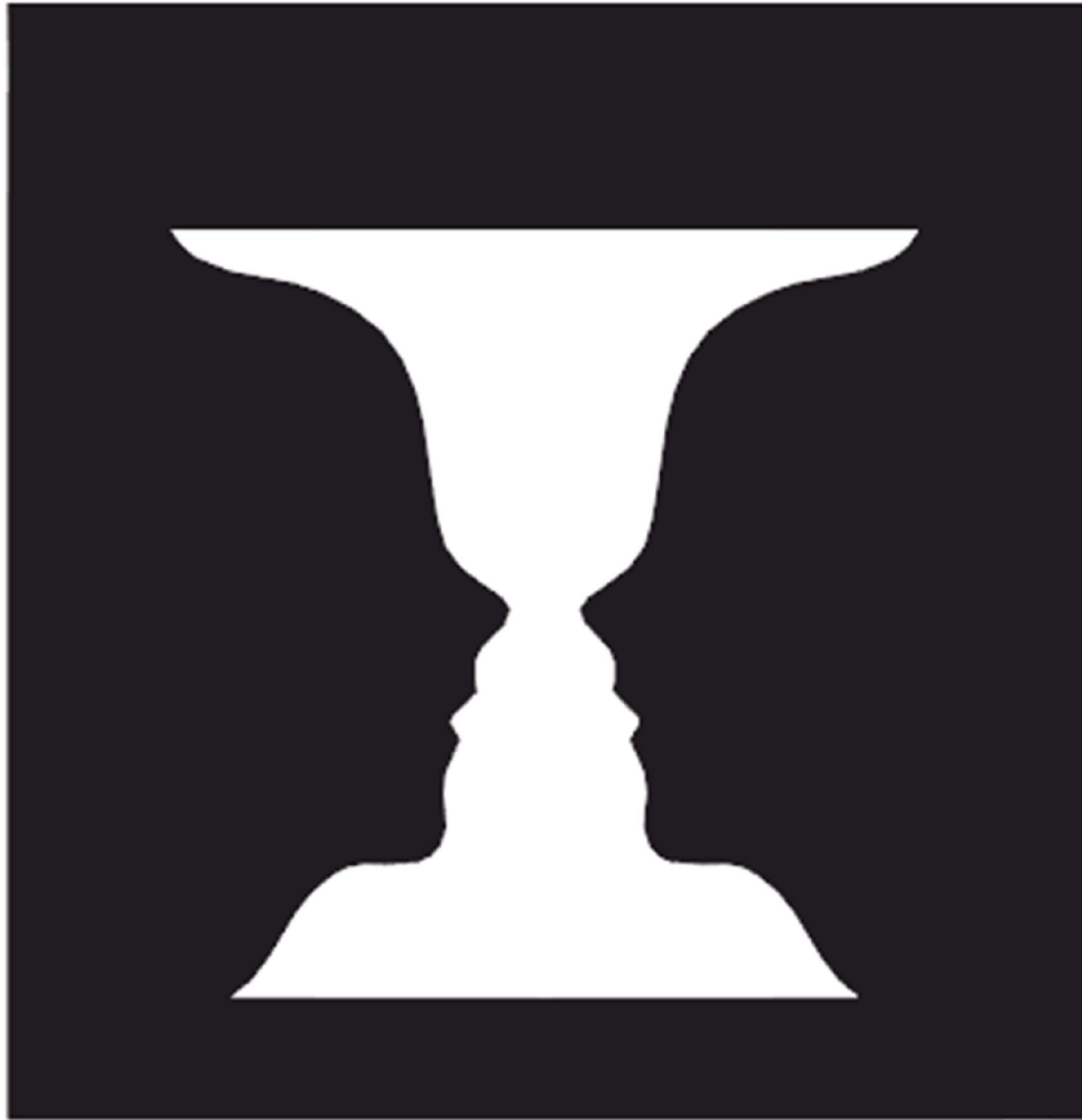


A



B

The top cube can be perceived as if viewed from above (in which case it is a transparent version of Cube A) or as if viewed from below (i.e., a transparent version of Cube B).



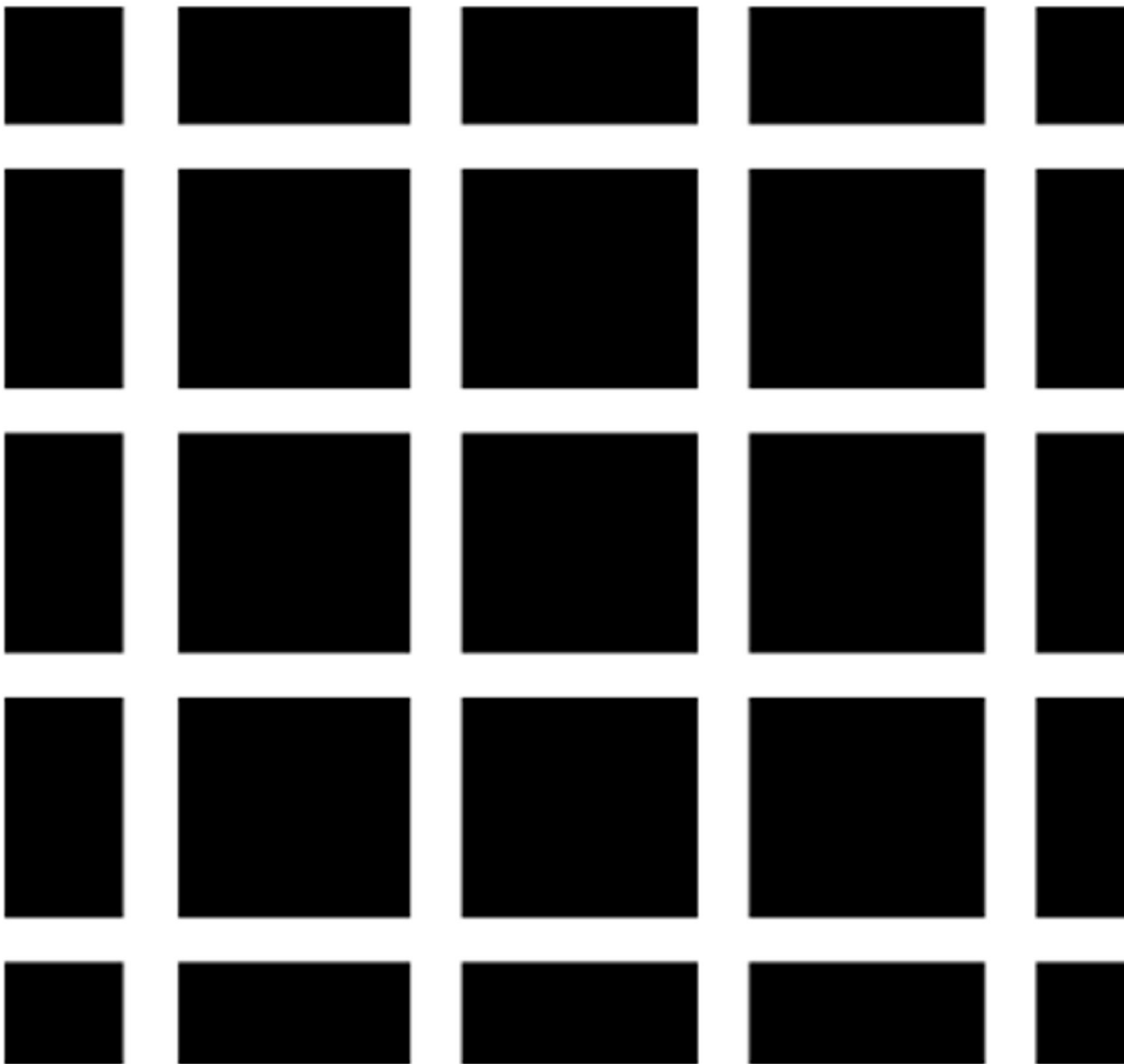
The vase/profiles figure

Daniel Reisberg (2009): *Exploring the science of mind*, p. 63



Hidden figure: is it “really” there or are we making it up?
(Does the answer depend on whether you know English?)

Daniel Reisberg (2009) *Exploring the science of mind*, p. 64



The grid illusion

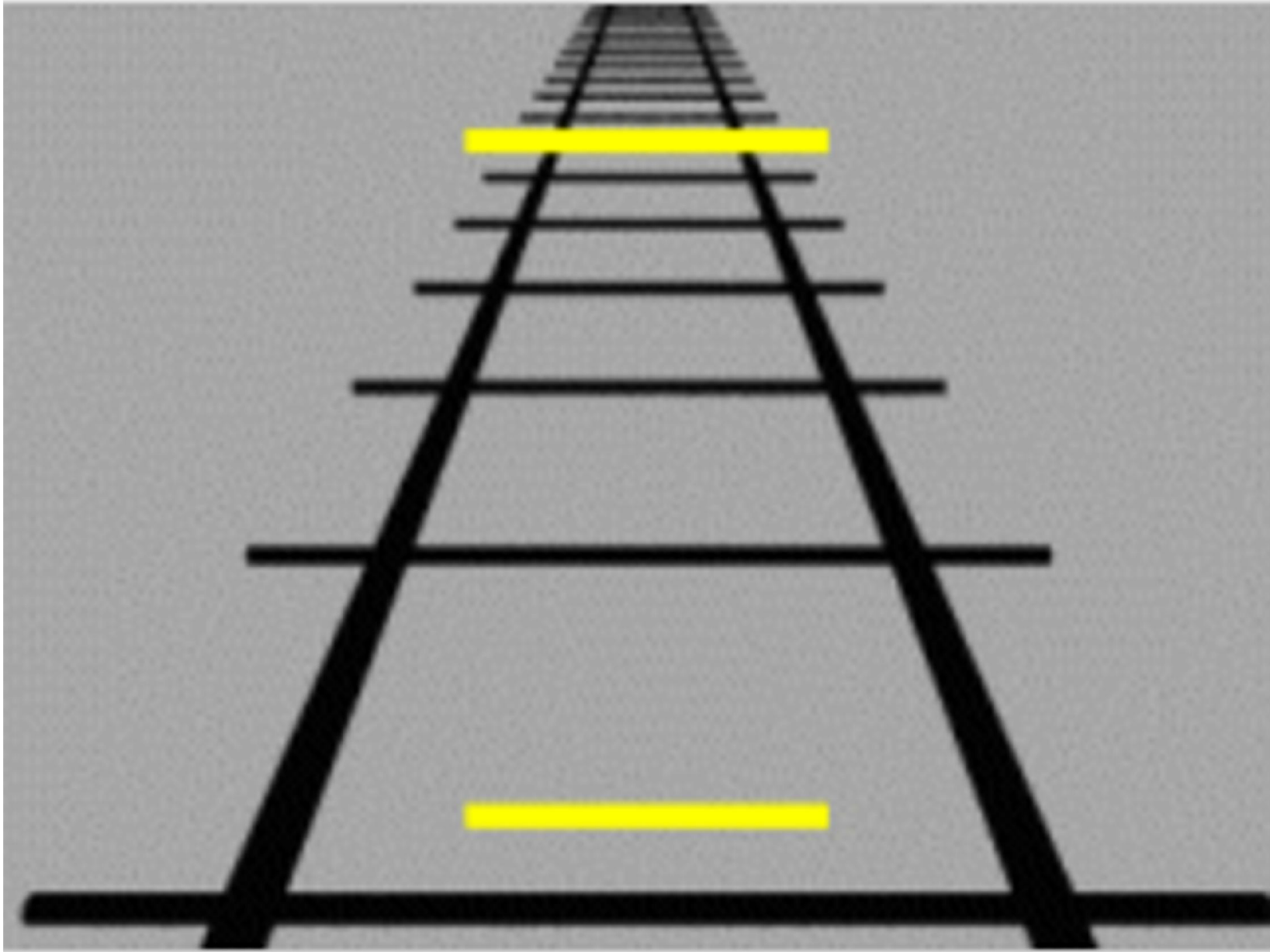
(Gray squares at the intersections of the white boundaries)

David Rosenbaum (2014): How competition and cooperation in the brain shape the mind, p. 85



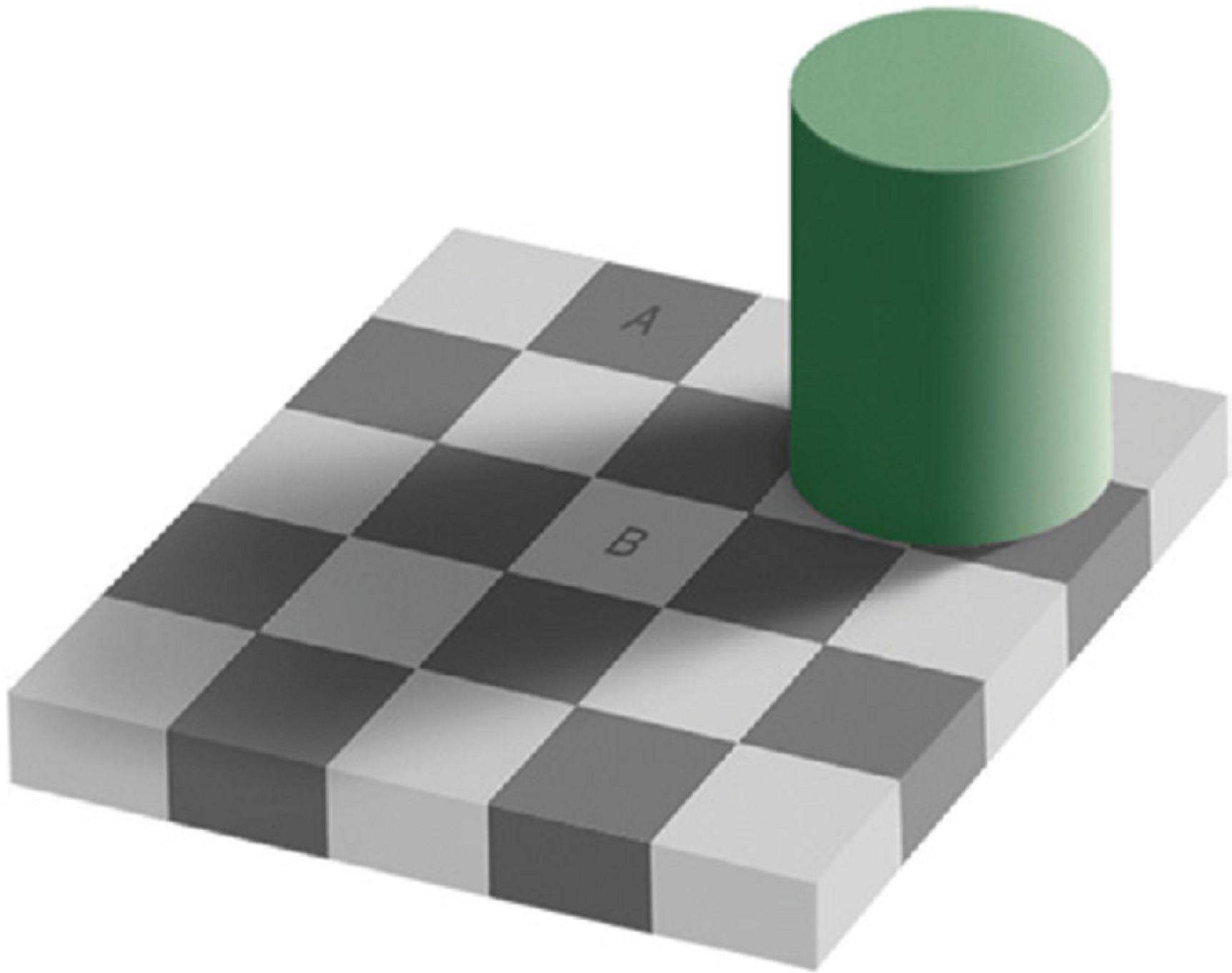
Müller-Lyer illusion

Michael Clark (2012): Paradoxes from A to Z
https://en.wikipedia.org/wiki/M%C3%BCller-Lyer_illusion

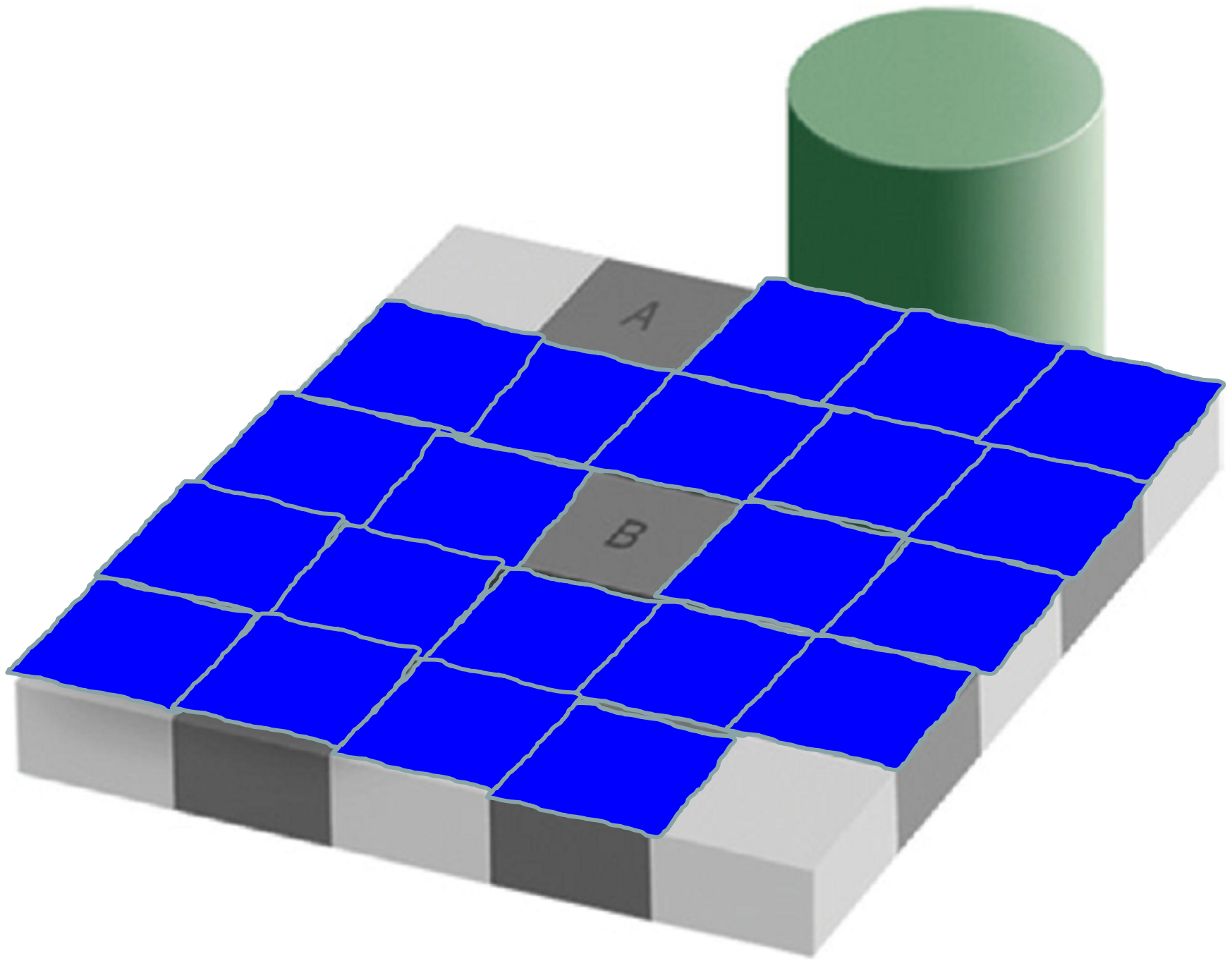


Ponzo illusion

https://en.wikipedia.org/wiki/Optical_illusion



The checkered shadow illusion (developed by Edward H. Adelson)
Christian Jarrett (2014): Great myths of the brain, Plate 28



The checkered shadow illusion (developed by Edward H. Adelson)

Christian Jarrett (2014): Great myths of the brain, Plate 28

Data manipulation

- The numbers in the table represent the amount of a certain economic variable (like production).
- The sum of the values of four consecutive quarters provides the annual value V of the variable. The government announces V every two quarters.
- Though the value of V oscillates, the government may induce people to believe that V grows by choosing to report the value of V in an odd quarter. In this case, the government would announce values 40, 41, 42, 43, 44...

quarter	1	2	3	4	5	6	7	8	9	10	11	12
value	10	10	10	10	9	12	7	14	4	18	3	19

quarter	1	2	3	4	5	6	7	8	9	10	11	12	13
value	10	10	10	10	9	12	7	14	4	18	3	19	
V					40	39	41	38	42	37	43	36	44

Fallacy of composition

- The fallacy of composition occurs when it is automatically presumed that what is true at a certain scale (the individual level) is true at a larger scale (the group, or economy, level).
- **Example 1.** A seller reducing prices may sell more products. But if every seller reduces prices, it is not true that all of them would sell more products.
- **Example 2.** If everybody leaves home earlier to avoid a traffic jam, the jam is no avoided but merely brought forward.



US Debt Clock.org

GET iPhone App

Debt Clock Time Machine

State Debt Clocks

World Debt Clocks

US NATIONAL DEBT

\$19,019,035,692,544 DEBT PER CITIZEN **\$58,880** DEBT PER TAXPAYER **\$158,968**

US FEDERAL SPENDING **↑119%** US FEDERAL BUDGET DEFICIT **\$446,688,699,276**

US FEDERAL TAX REVENUE **↑80%** REVENUE PER CITIZEN **\$10,297**

INCOME TAX REVENUE **\$1,587,717,407,478**

PAYROLL TAX REVENUE **\$1,078,979,134,835**

CORPORATE TAX REVENUE **\$385,028,708,202**

TOTAL STATE REVENUE **\$1,697,297,745,805**

LOCAL REVENUE **\$1,231,652,878,260**

REVENUE PER CITIZEN **\$9,067**

STATE DEBT **\$1,164,857,569,202**

LOCAL DEBT **\$1,935,073,659,588**

Largest Budget Items

MEDICARE/MEDICAID **\$1,020,302,619,305** SOCIAL SECURITY **\$893,452,177,795** DEFENSE/WAR **\$584,526,957,039**

INCOME SECURITY **\$304,951,570,141** NET INTEREST ON DEBT **\$234,414,788,173** FEDERAL PENSIONS **\$260,016,524,456**

US GROSS DOMESTIC PRODUCT **↑98%** TOTAL FEDERAL/STATE/LOCAL SPENDING **\$6,431,078,128,777**

GROSS DEBT TO GDP RATIO **104.2899584%** REVENUE TO GDP RATIO **34.2980863%** SPENDING TO GDP RATIO **35.2516213%**

US POPULATION **323,016,306** US WORK FORCE NOW **150,653,197** OFFICIAL UNEMPLOYED **7,740,474**

US INCOME TAXPAYERS **119,638,634** US WORK FORCE 2000* **154,614,345** ACTUAL UNEMPLOYED **15,582,586**

PRIVATE SECTOR JOBS **118,785,010** NOT IN LABOR FORCE NOW **94,122,997** FULL-TIME WORKERS **123,251,942**

SELF-EMPLOYED **8,697,029** NOT IN LABOR FORCE 2000* **79,019,892** PART-TIME WORKERS **27,359,401**

UNION WORKERS **15,065,319** MEDIAN INCOME NOW **\$29,152** MEDIAN NEW HOME NOW **\$296,003**

GOVERNMENT EMPLOYEES **23,859,132** MEDIAN INCOME 2000* **\$28,204** MEDIAN NEW HOME 2000 **\$162,037**

MANUFACTURING JOBS NOW **12,356,974** BANKRUPTCIES **1,030,130** PRISON INMATES **1,934,488**

MANUFACTURING JOBS 2000* **19,620,270** FORECLOSURES **629,601** CONVICTED FELONS **6,662,968**

US RETIREES **49,316,372** US VETERANS **21,187,031** PUBLIC SCHOOL STUDENTS **50,112,993**

US DISABLED **10,805,720** US ARMED FORCES **1,352,019** CHARTER SCHOOL STUDENTS **3,491,771**

LIVING IN POVERTY **46,293,372** MEDICARE ENROLLEES **56,848,984** FOOD STAMP RECIPIENTS **45,280,119**

WITHOUT INSURANCE **41,035,709** MEDICAID RECIPIENTS **72,771,533** TOTAL RECEIVING BENEFITS **161,093,910**

US TOTAL INTEREST PAID

\$2,405,641,747,299

INTEREST PER CITIZEN **\$7,447**

US TOTAL DEBT ↑153%

\$64,899,306,610,795

TOTAL DEBT PER CITIZEN **\$200,915**

TOTAL DEBT PER FAMILY **\$795,039**

SAVINGS PER FAMILY **\$9,109**

TOTAL PERSONAL DEBT ↑123%

\$17,433,029,154,198

MORTGAGE DEBT

\$13,871,329,018,632

STUDENT LOAN DEBT

\$1,331,345,368,871

CREDIT CARD DEBT

\$943,482,788,430

PERSONAL DEBT PER CIT.

\$53,968

Money Creation

MONETARY BASE 2016 **↑523%** **\$3,782,697,002,474**

M2 MONEY SUPPLY 2016 **↑164%** **\$12,467,041,729,949**

TREASURY SECURITIES 2016 **↑294%** **\$463,536,373,764**

CURRENCY AND CREDIT DERIVATIVES 2016 **↑424%** **\$465,742,286,908,913**

MONETARY BASE 2000 **\$606,716,134,282**

M2 MONEY SUPPLY 2000 **\$4,697,024,914,844**

TREASURY SECURITIES 2000 **\$117,442,662,479**

CURRENCY AND CREDIT DERIVATIVES 2000 **\$88,957,838,539,561**

Trade Numbers

US DEBT HELD BY FOREIGN COUNTRIES **\$6,128,039,314,095**

US TRADE DEFICIT **\$739,126,661,011**

US TRADE DEFICIT - CHINA **\$370,644,073,549**

US IMPORTED OIL **\$121,242,277,982**

IMPORTED OIL - OPEC **\$38,081,694,975**

SMALL BUSINESS ASSETS

\$10,800,424,207,982

CORPORATION ASSETS

\$22,509,470,065,542

HOUSEHOLD ASSETS

\$83,295,702,602,991

TOTAL NATIONAL ASSETS

\$116,605,596,876,544

ASSETS PER CITIZEN

\$361,010

US FEDERAL BUDGET DEFICIT (GAAP) **\$5,823,652,148,032**

SOCIAL SECURITY LIABILITY **\$14,713,847,088,015**

MEDICARE LIABILITY **\$27,606,862,625,267**

US UNFUNDED LIABILITIES (GAAP) **\$101,155,904,660,791**

LIABILITY PER TAXPAYER **\$845,483**