Cēloņsakarību loma statistikas analīzē

Aldis Ērglis

Emergen Latvija

#STATISTIKAI100

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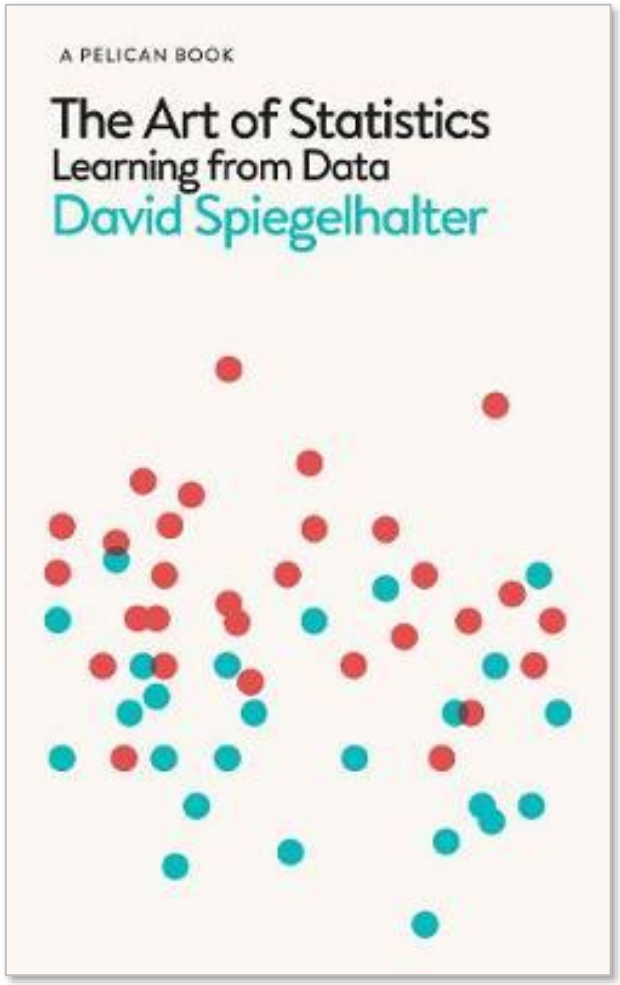
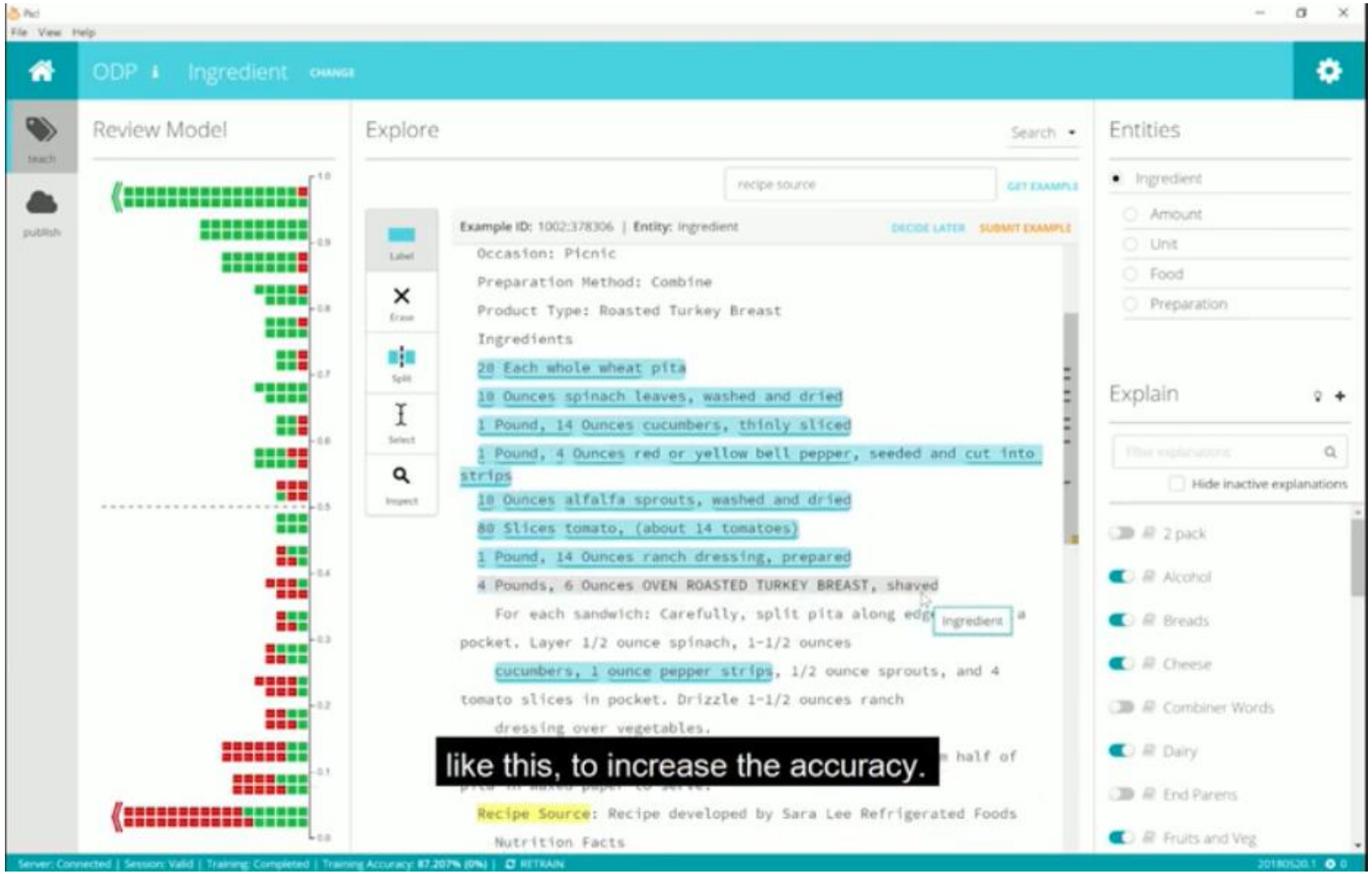
The Art of Statistics: Learning from Data



- Statistikas pieeja spēlējusi nozīmīgu lomu pasaules zinātniskā izpratnē
- Lielo datu laikmetā statistikas zināšanas ir svarīgākas kā jebkad agrāk

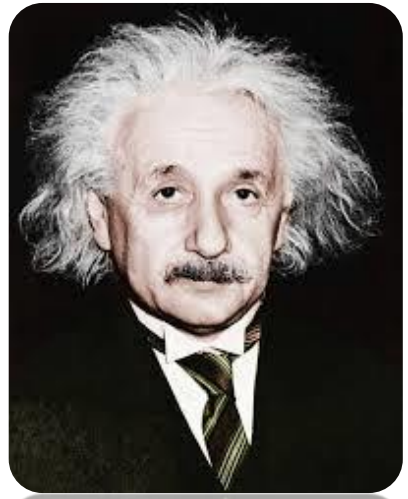
Machine Teaching (Mašīn-mācīšana)



Microsoft Research

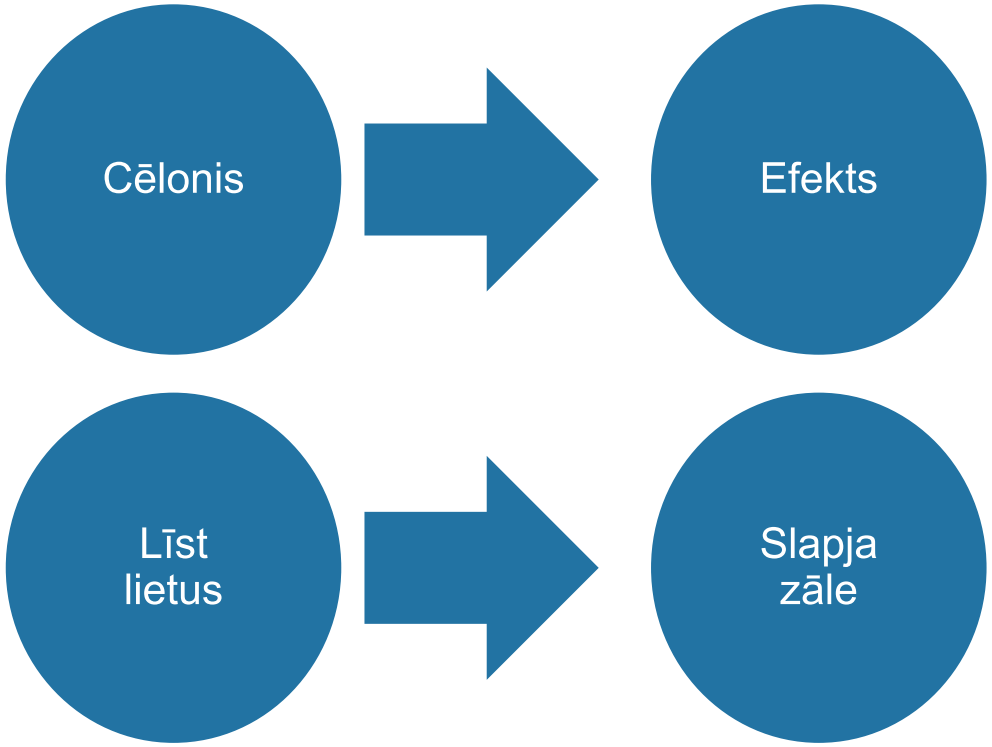
Prologs

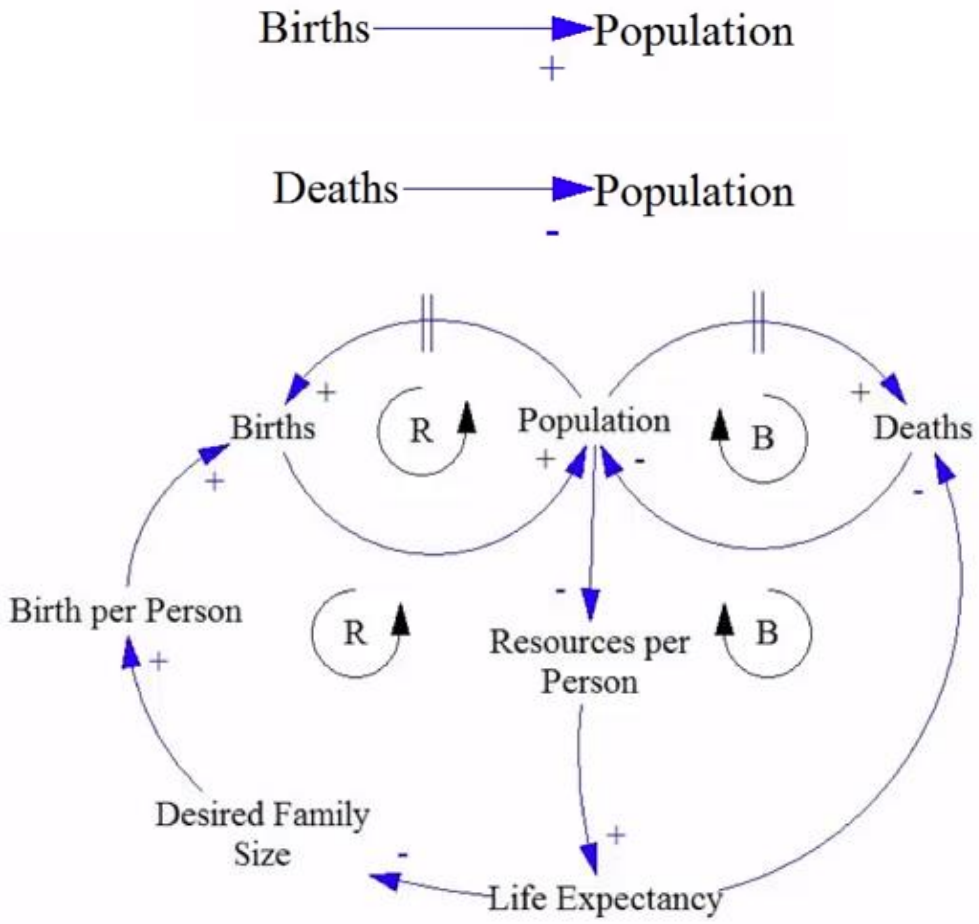
Development of Western science is based on two great achievements: the invention of the formal logical system (in Euclidean geometry) by the Greek philosophers, **and the discovery of the possibility to find out causal relationships by systematic experiment (during the Renaissance).**



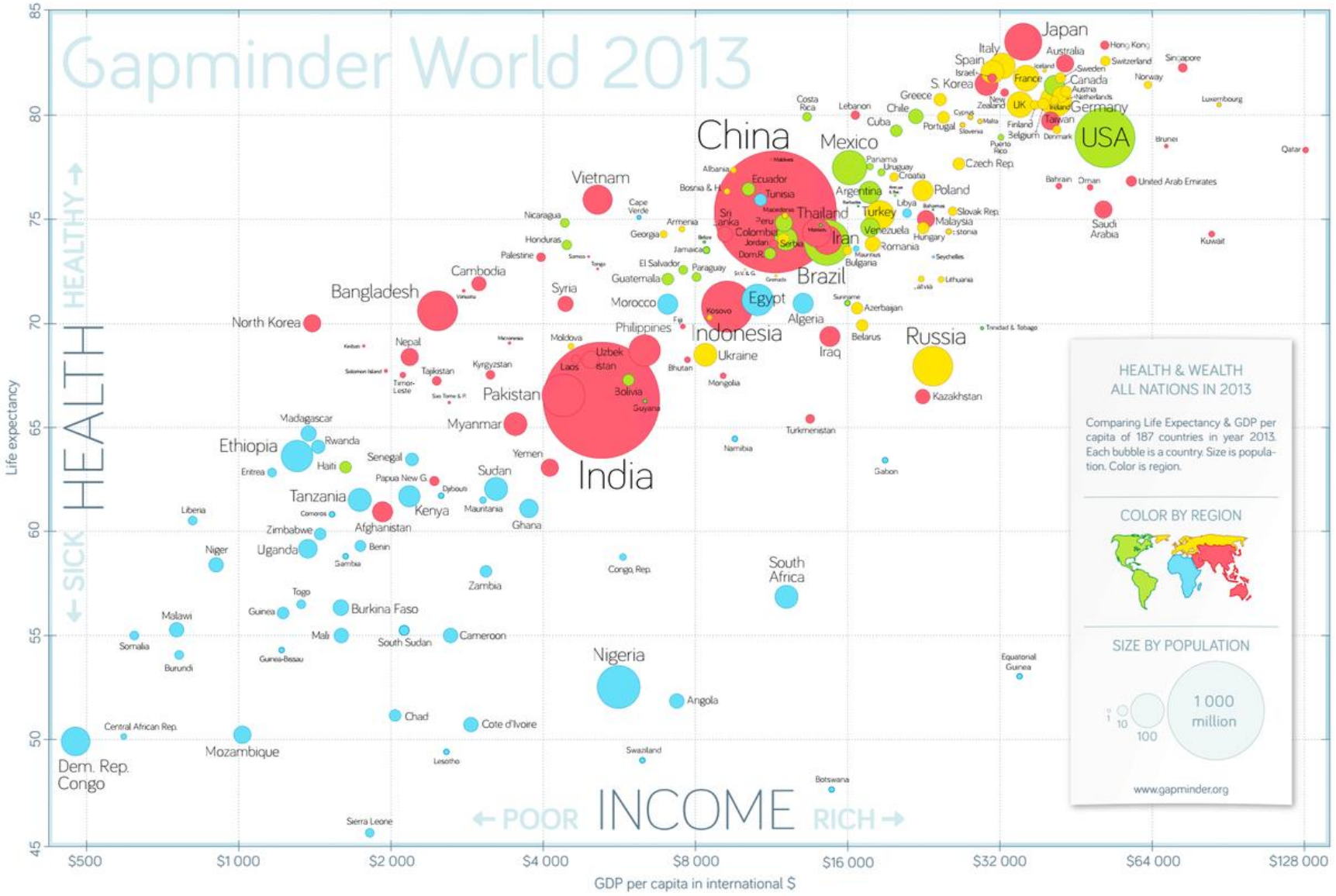
Albert Einstein (1953)

Kas ir cēloņsakarības?





Vai ir atkarība starp dzīves ilgumu un ienākumiem?



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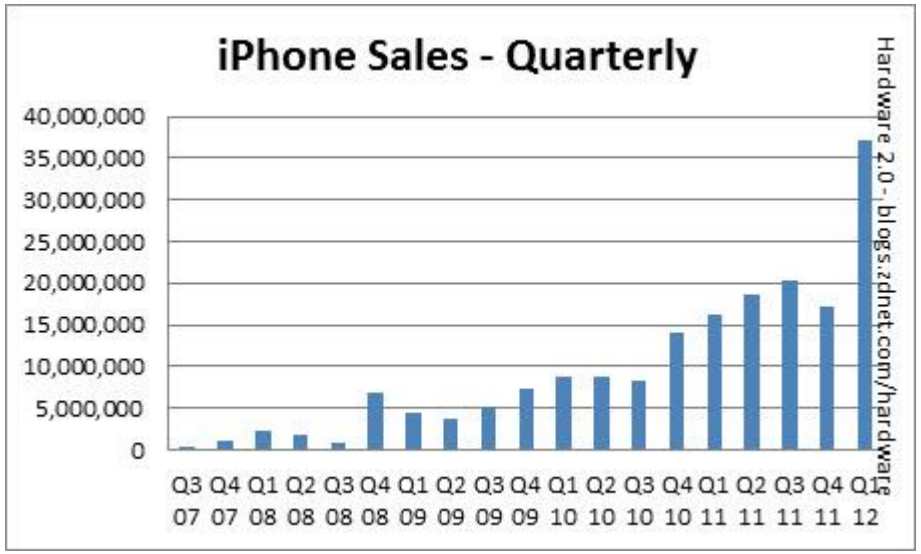
GAPMINDER

https://www.gapminder.org

Datu analīzes mērķis ir labāki lēmumi

Pieejamie dati ierobežo domāšanu, mēs domājam par to, par ko mums ir dati



Intuīcija *(nevaram izskaidrot)*

Dati + ??? = Lēmums

Cēļoņsakarības *(varam izskaidrot)*

Mēs veidojam vairāk atskaišu kā jebkad

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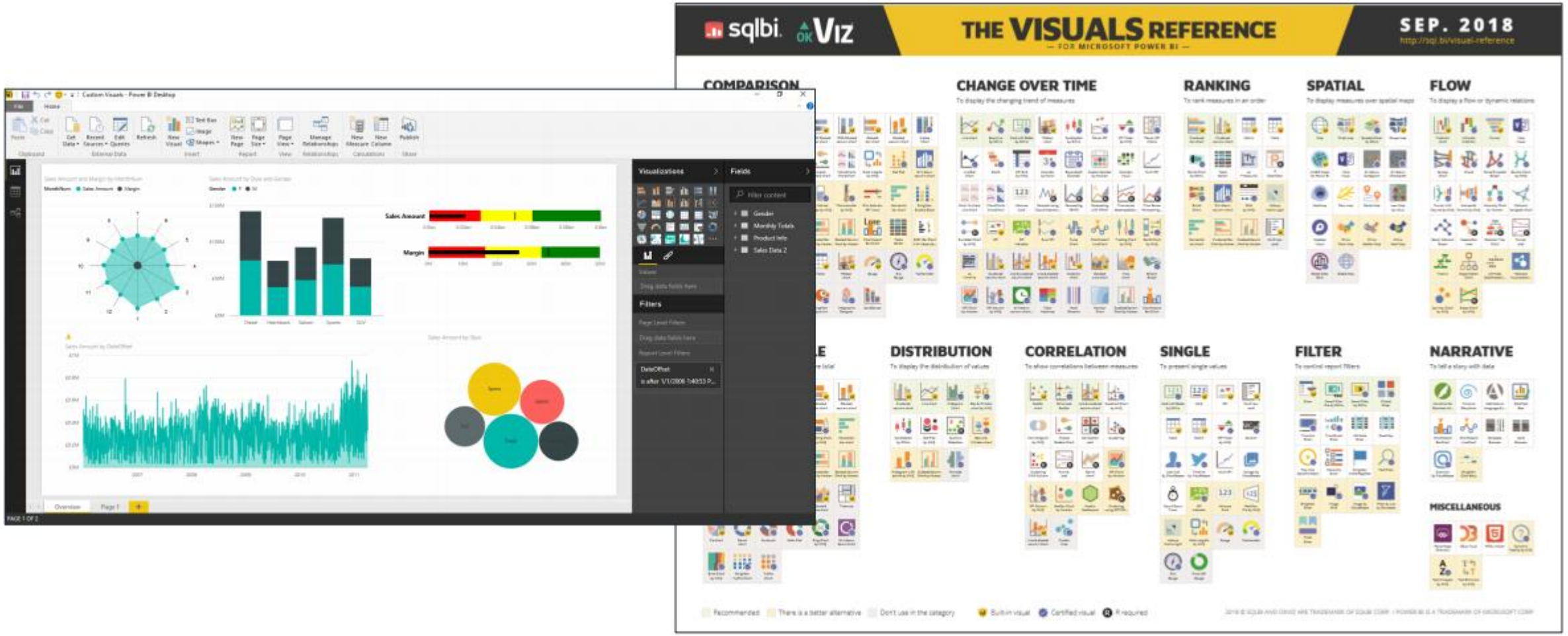

Kas ir efektīva atskaite?

Atskaite - informācija

Darbinieki

Savādāka rīcība

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Svarīgākais jautājums datu analīzē – KĀPĒC?

Korelācijas nav cēloņsakarība

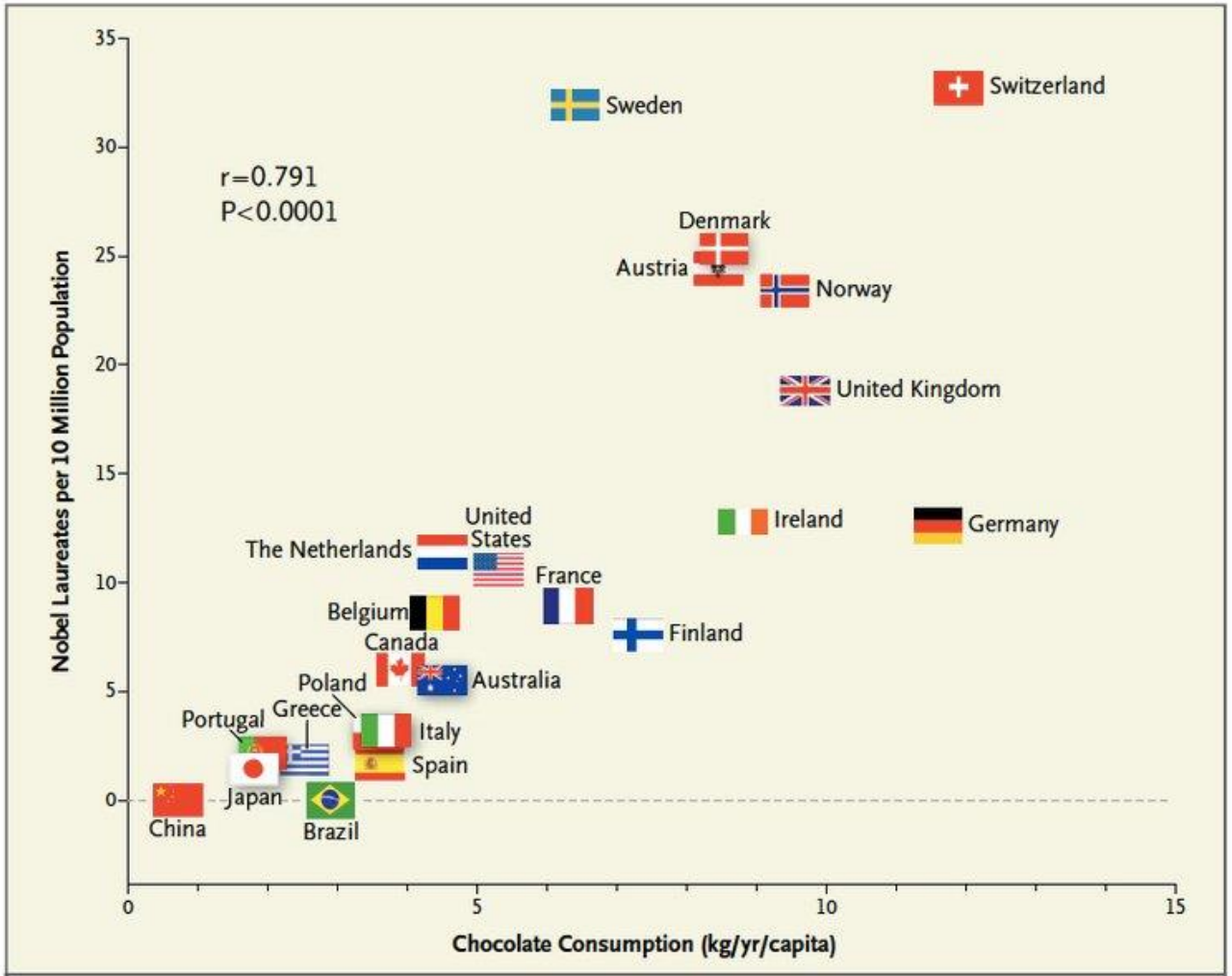
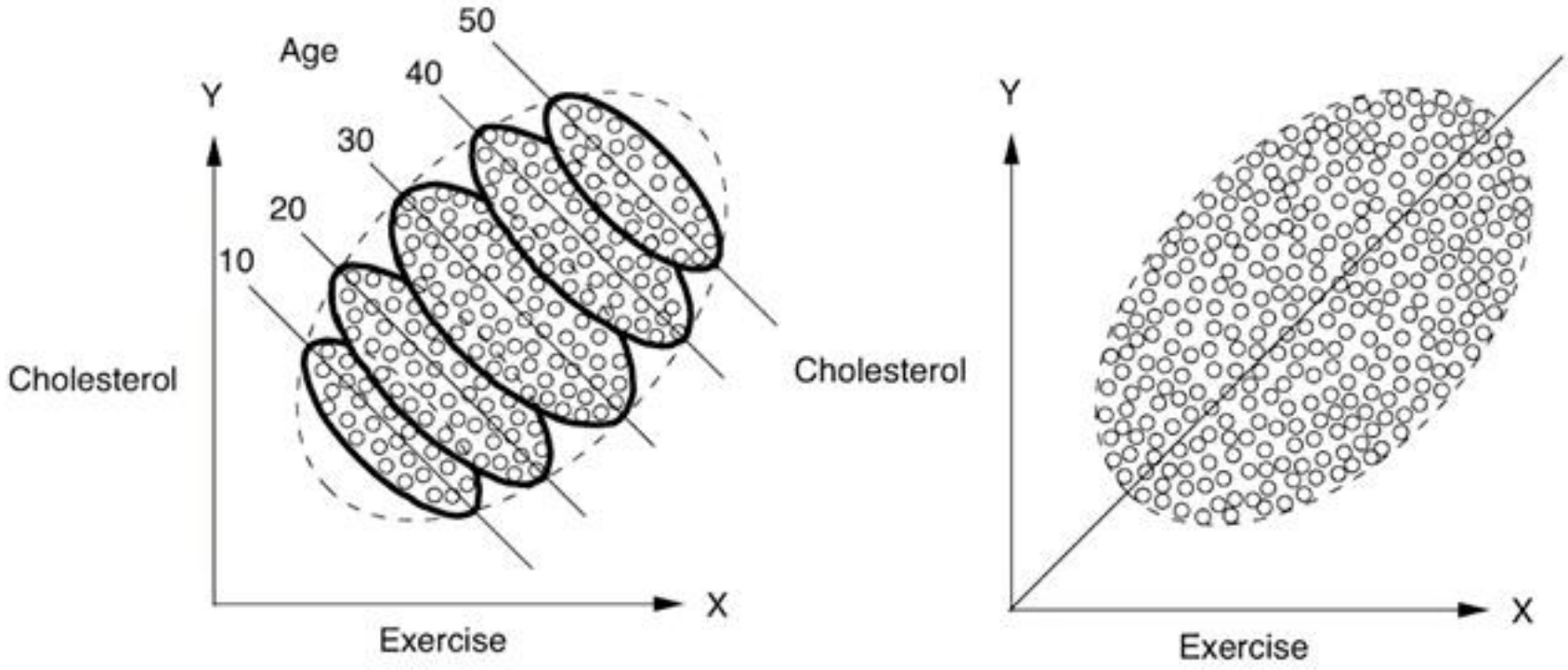


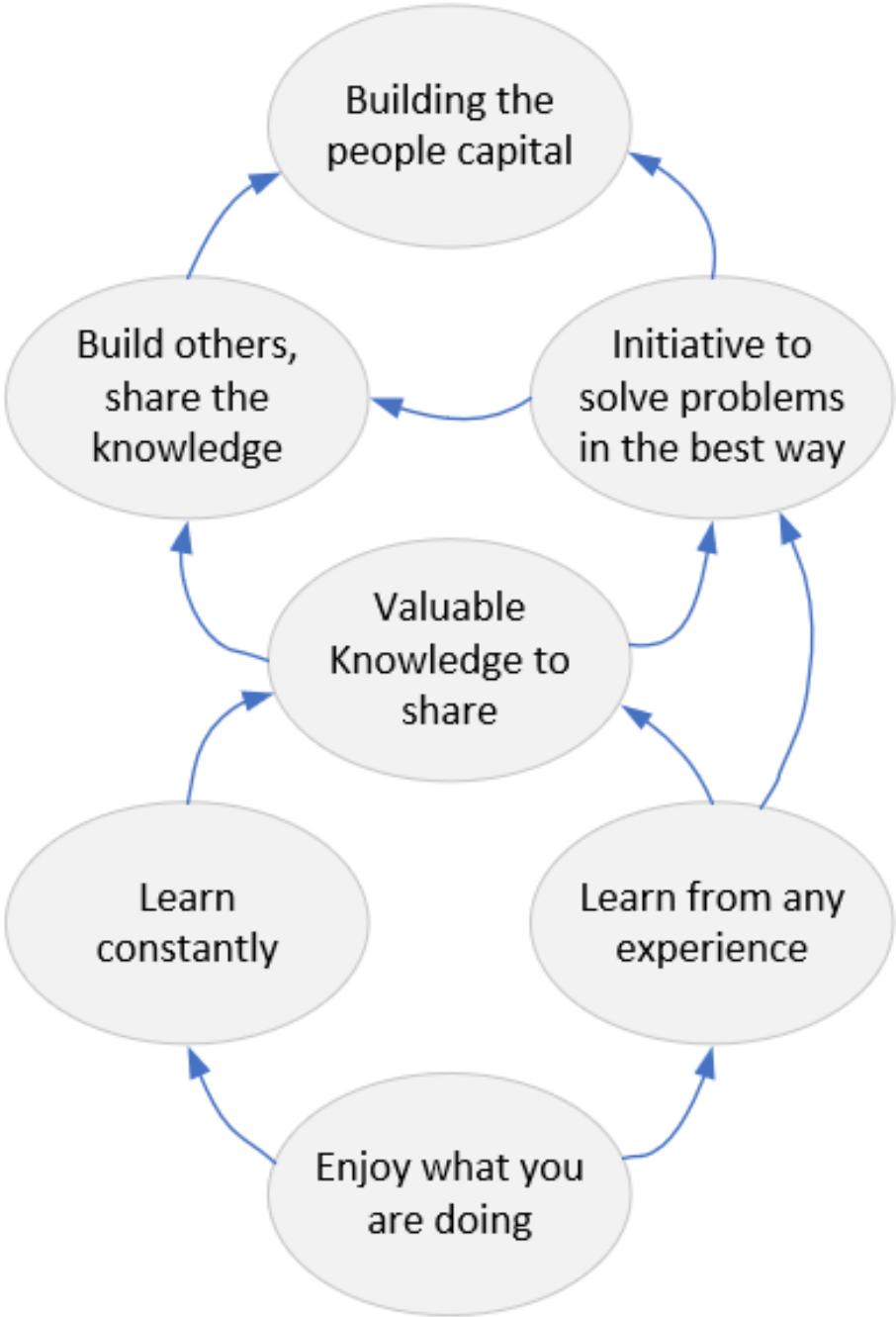
Figure 1. Correlation between Countries' Annual Per Capita Chocolate Consumption and the Number of Nobel Laureates per 10 Million Population.

Kāpēc secinājumi var būt nepareizi?

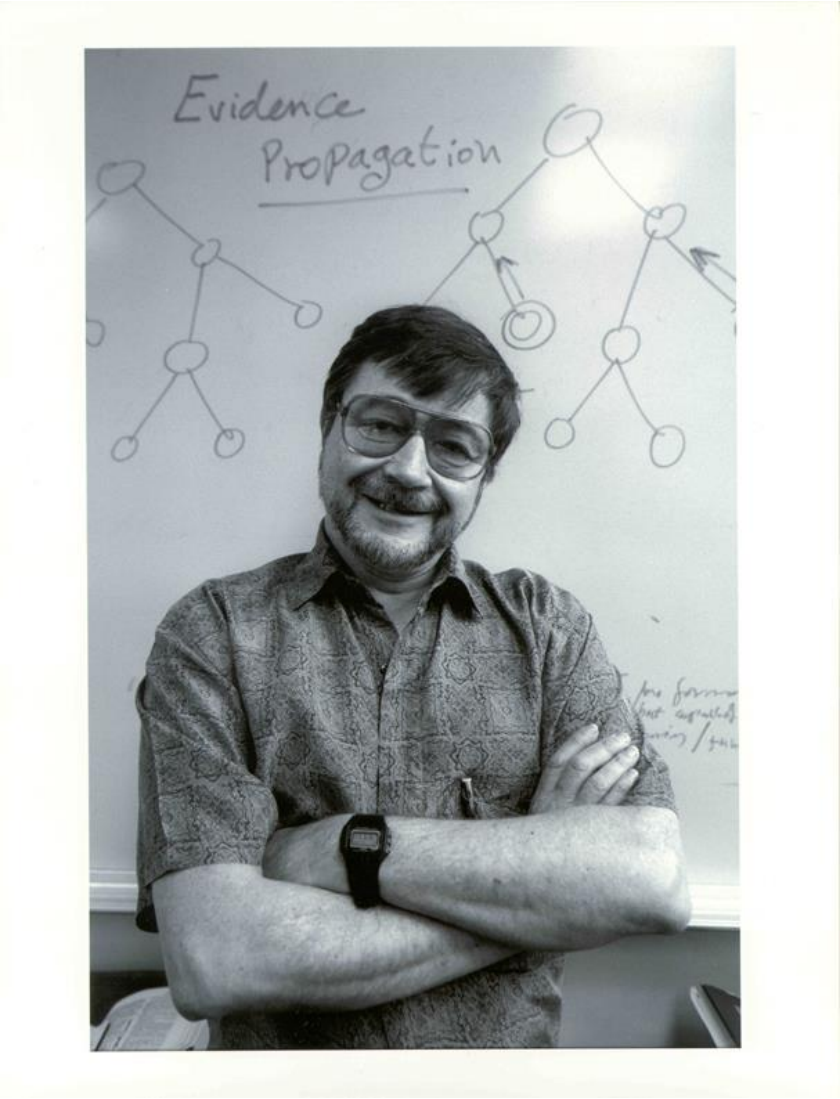


Exercise is helpful in every age group but harmful for a typical person.

Kas ietekmē organizācijas cilvēcisko kapitālu



Cēloņsakarību zinātne



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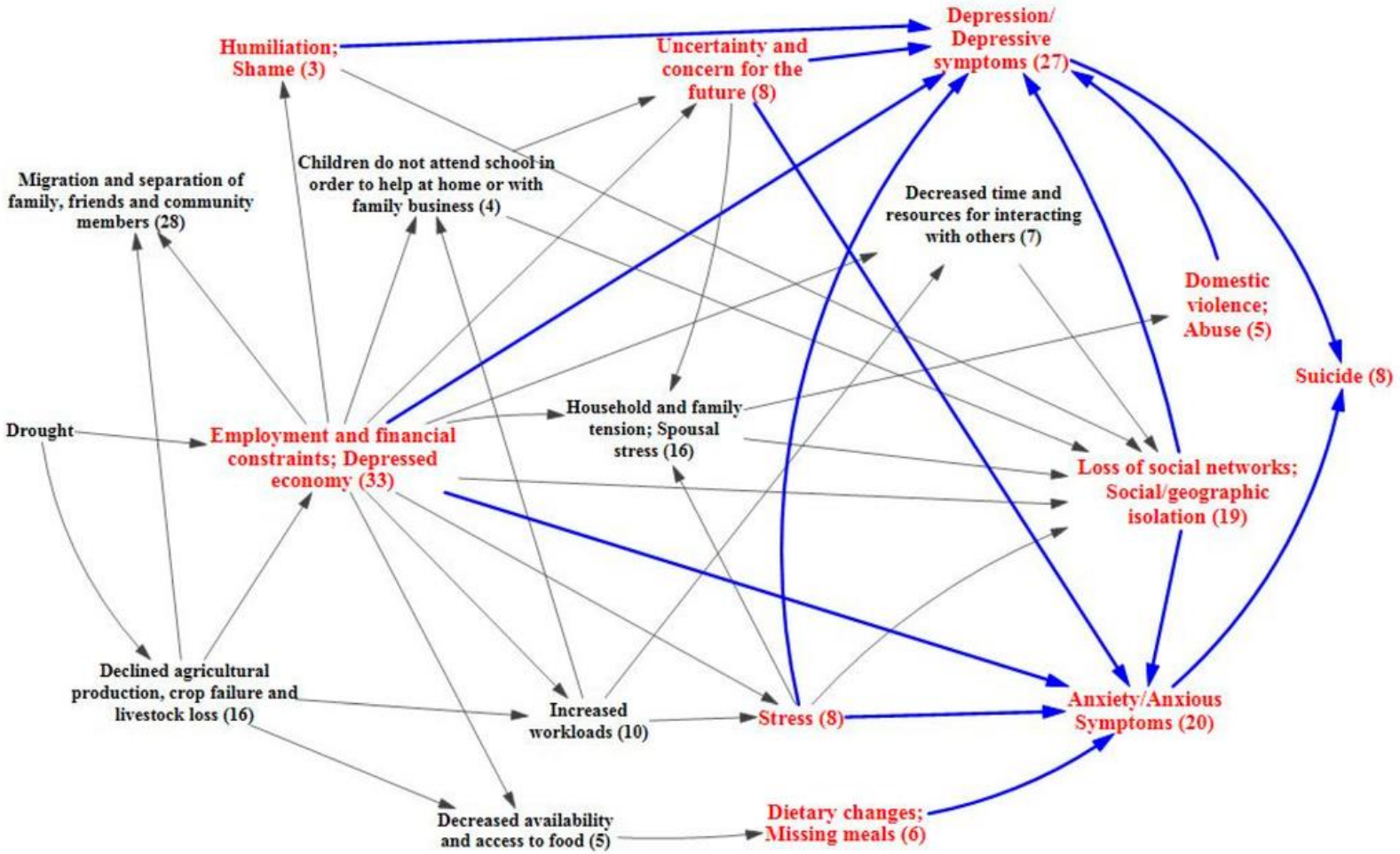

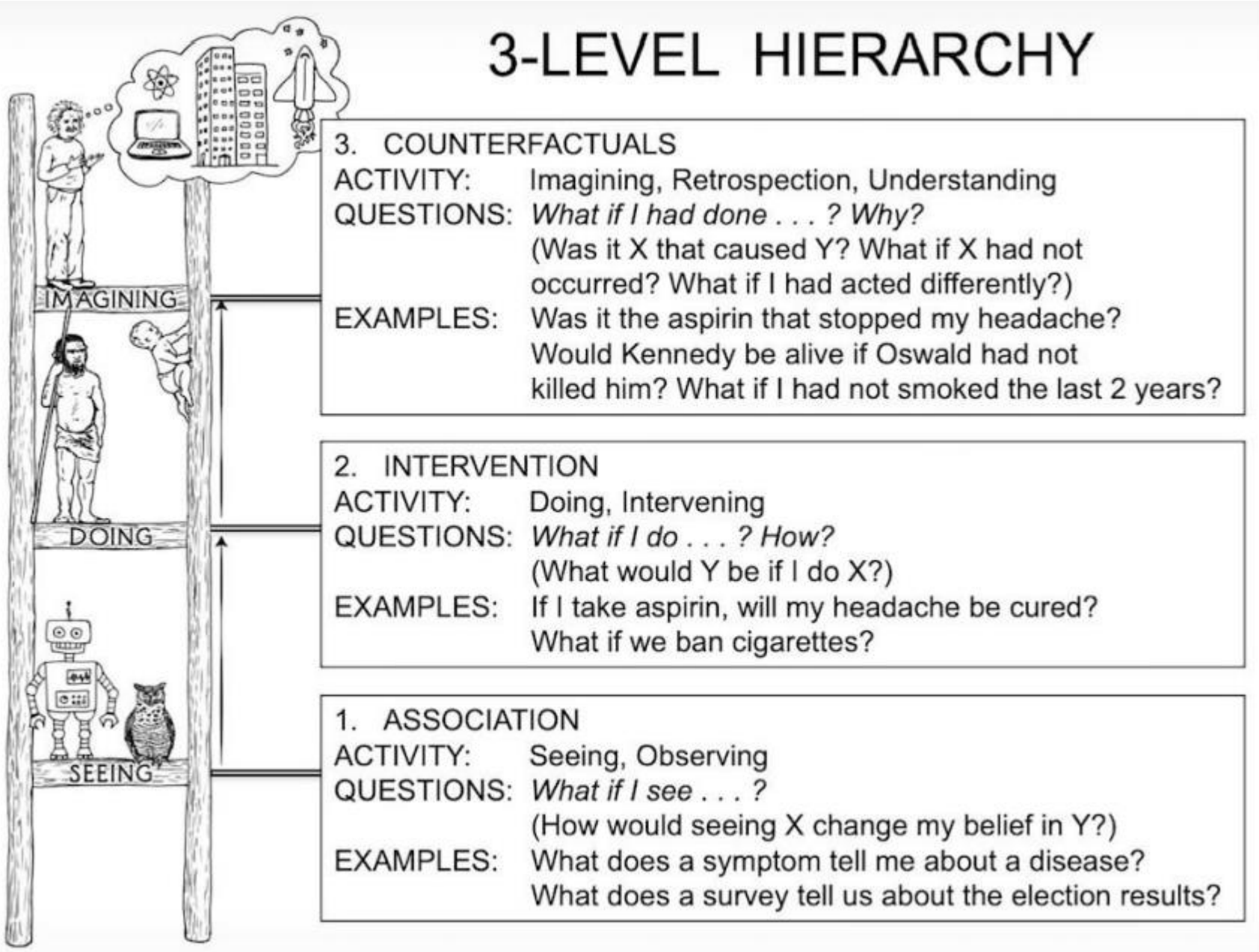

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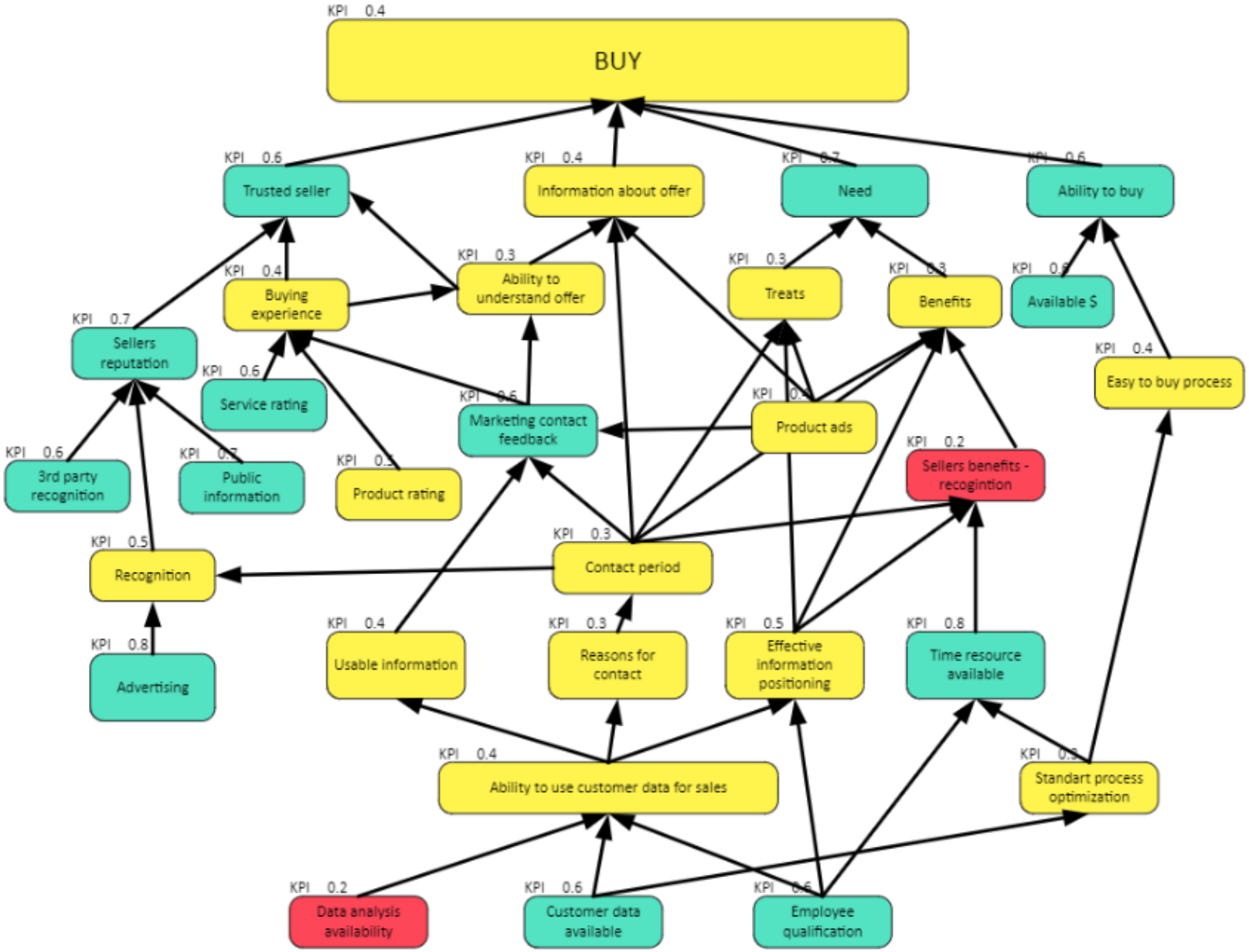
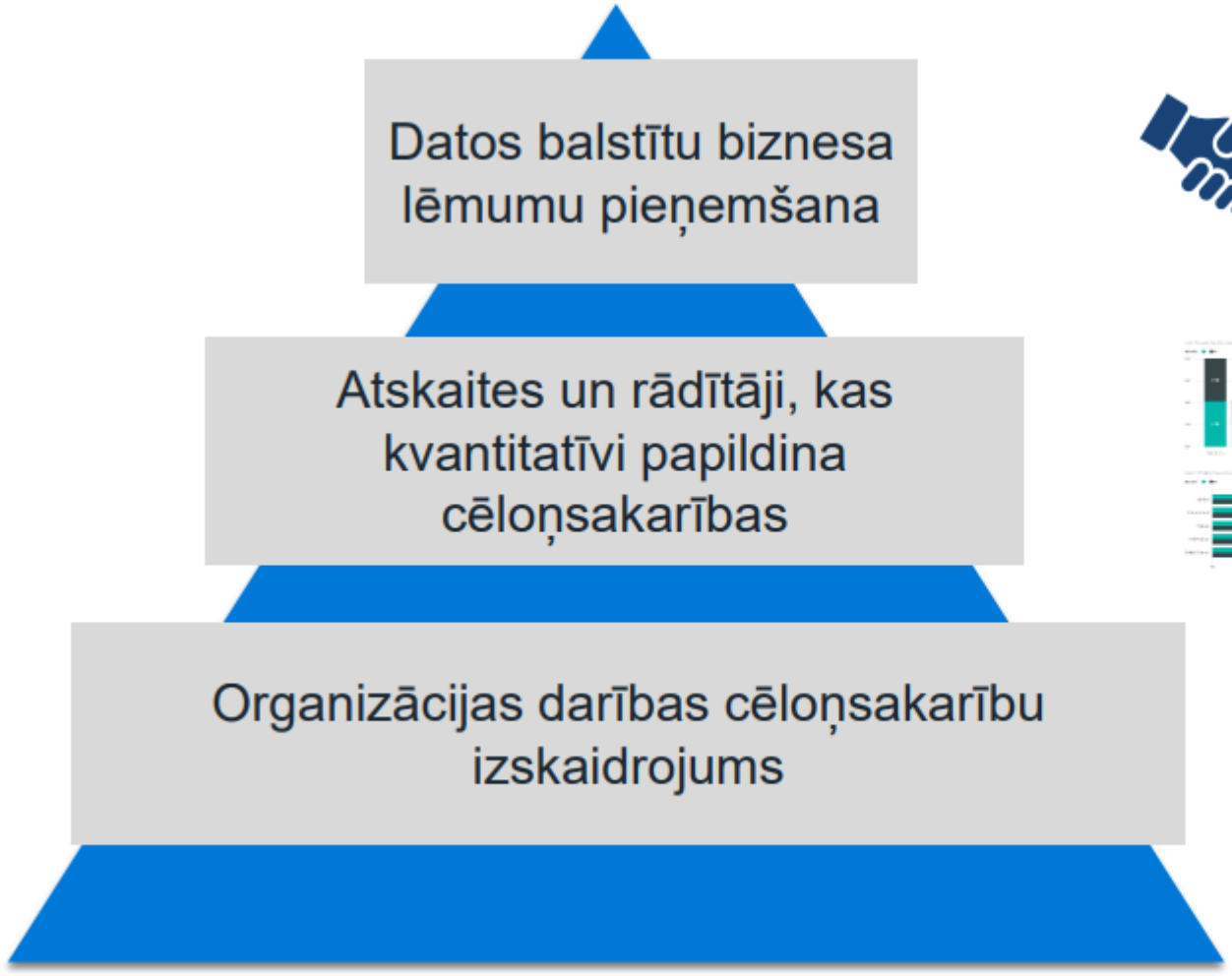
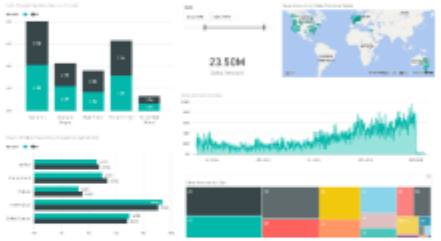
Cēloņsakarības – veids kā domā tikai cilvēks

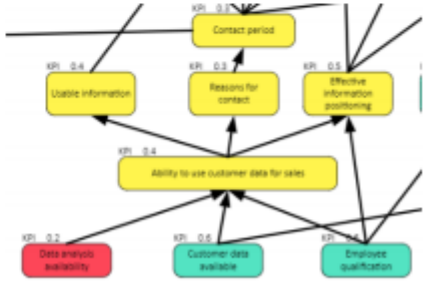
Datos var atrast abildes uz visiem jautājumiem, izņemot jautājumu: Kāpēc?


KPI 0.4
BUY
KPI 0.6
Trusted seller
KPI 0.4
Information about offer
KPI 0.7
Need
KPI 0.6
Ability to buy
KPI 0.3
Ability to understand offer
KPI 0.4
Buying experience
KPI 0.3
Treats
KPI 0.8
Benefits
KPI 0.8
Available S
KPI 0.7
Sellers reputation
KPI 0.6
Service rating
KPI 0.4
Easy to buy process
KPI 0.6
Marketing contact feedback
KPI 0.6
Product ads
KPI 0.2
Sellers benefits - recogintion
KPI 0.6
3rd party recognition
KPI 0.7
Public information
KPI 0.2
Product rating
KPI 0.3
Contact period
KPI 0.5
Recognition
KPI 0.8
Advertising
KPI 0.4
Usable information
KPI 0.3
Reasons for contact
KPI 0.5
Effective information positioning
KPI 0.8
Time resource available
KPI 0.4
Ability to use customer data for sales
KPI 0.8
Standart process optimization
KPI 0.2
Data analysis availability
KPI 0.6
Customer data available
KPI 0.6
Employee qualification

Priekšnoteikumi datos balstītu lēmumu pieņemšanai







Grāmatas

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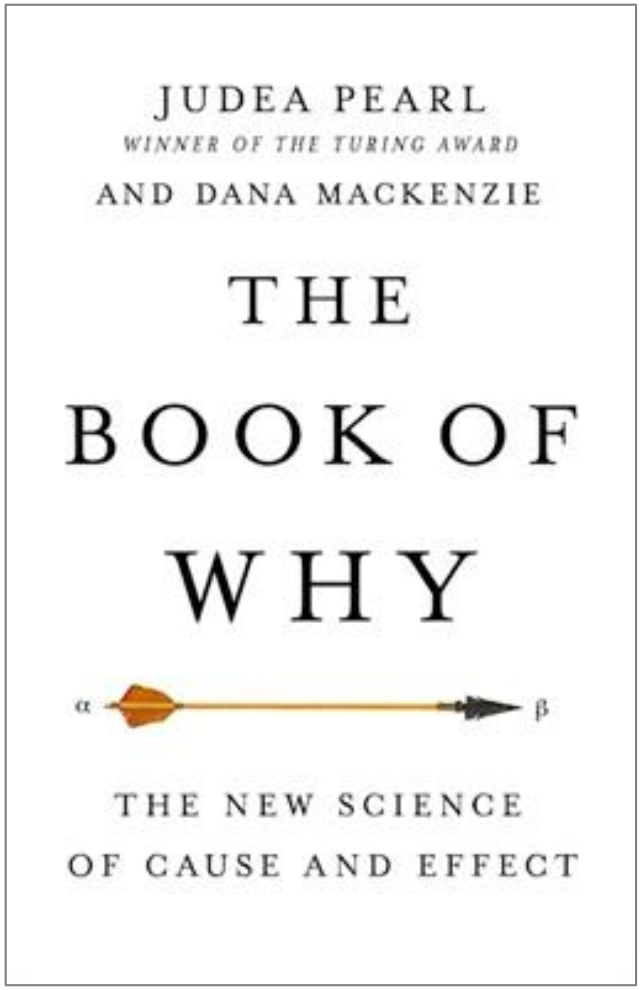

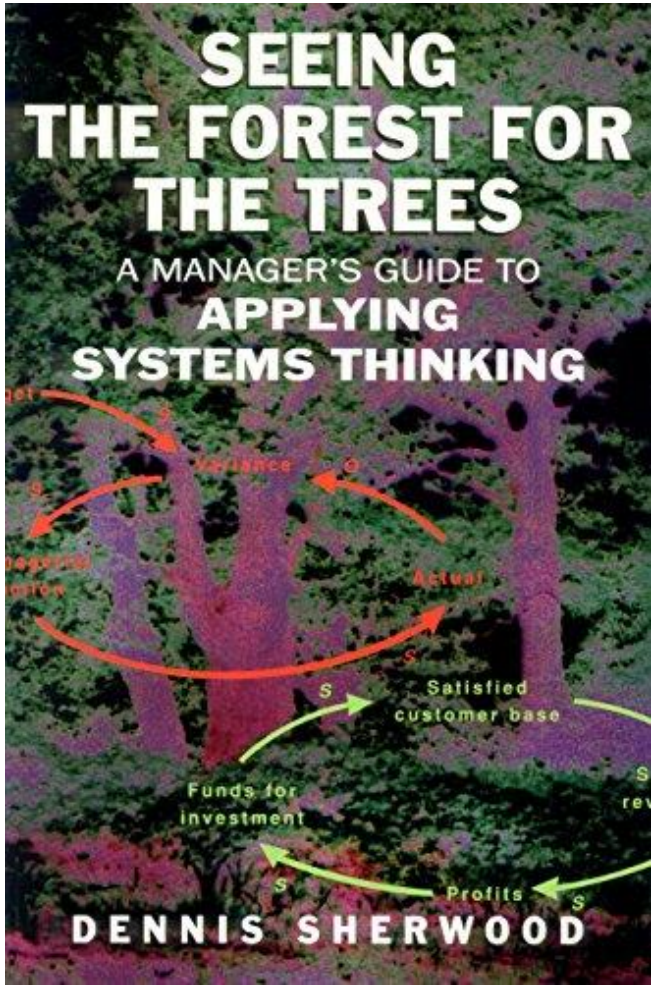

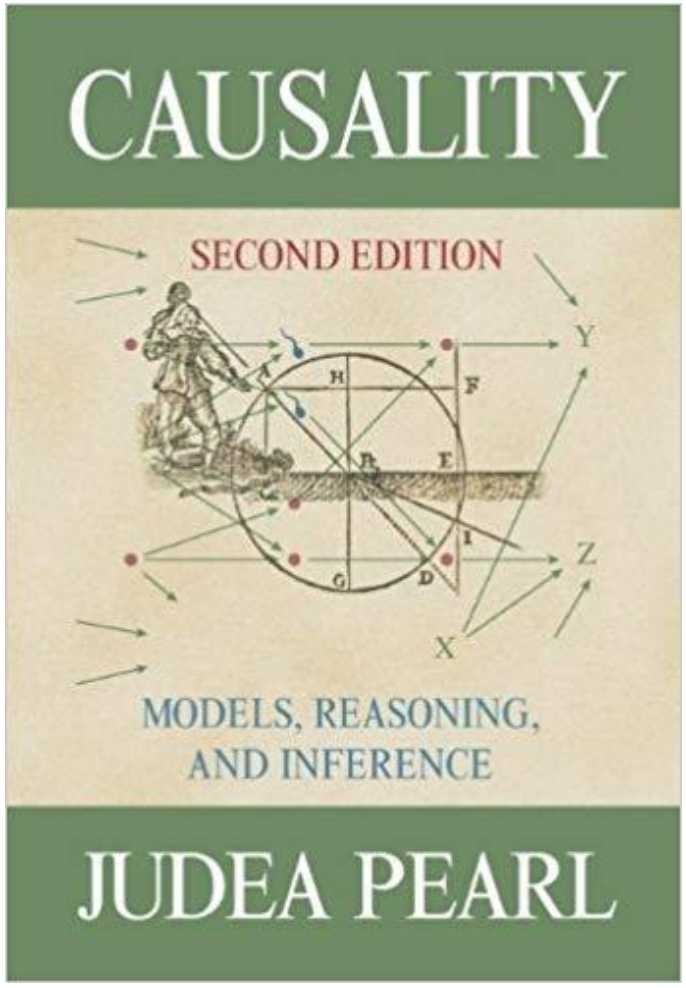

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Paldies

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