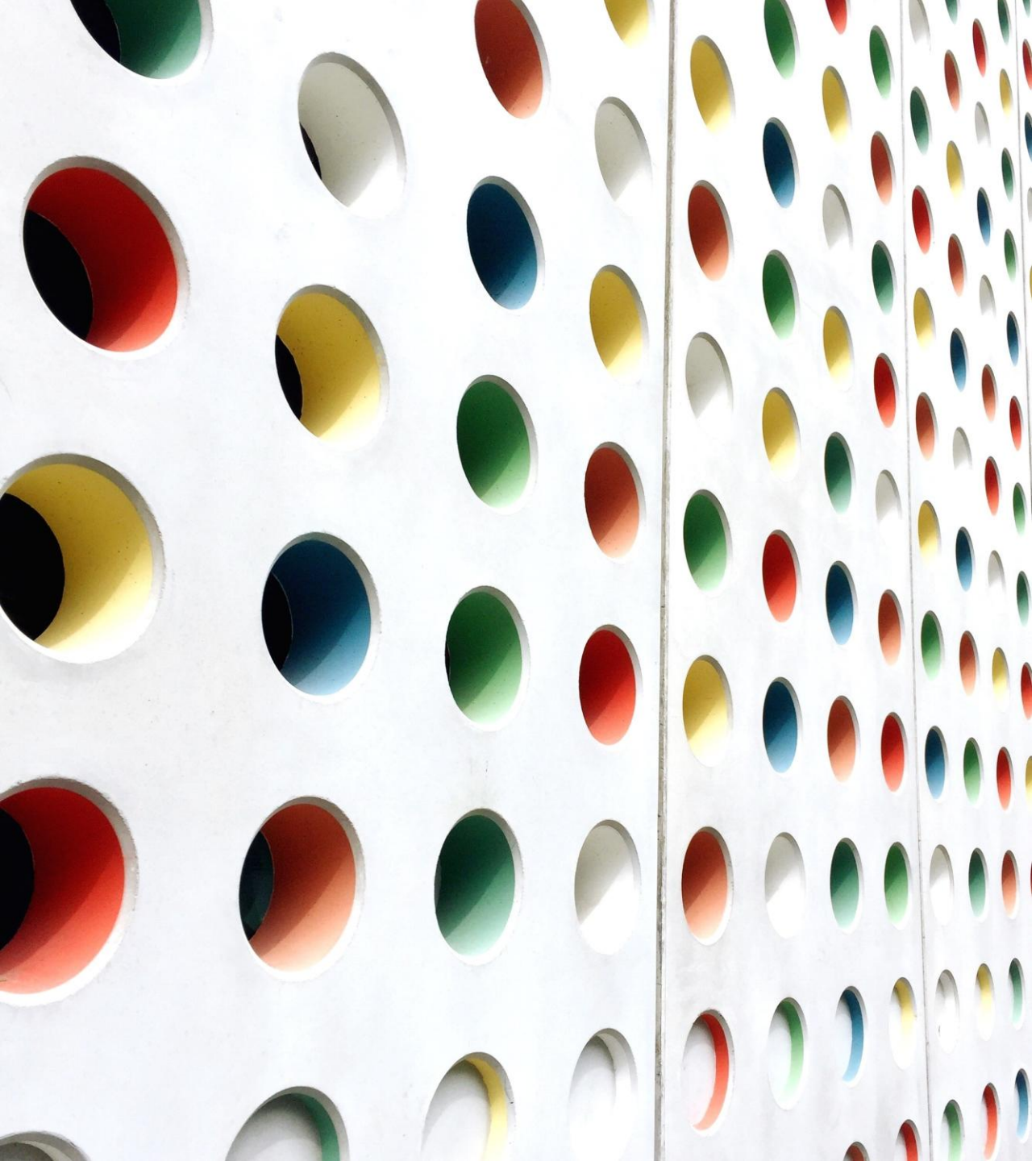


Critical Thinking

Nishantha kamaladasa

Critical thinker

Who questions everything (nothing is sacred for him/her

- irrespective of its origin,
- irrespective of who accept it,
- irrespective of its standing in the society,

before accepting.

Who qualifies?




"We spend the first year of a child's life teaching it to walk and talk and the rest of its life to shut up and sit down. There's something wrong there."
Neil deGrasse Tyson

We have killed the creative thinker

- කට, කට, කට (Shut up)
- කට වරද්ද ගන්න එපා (Don’t sin by saying such kind of things)
- කට ගහ ගෙන එන්න එපා (Don’t talk to the elderly and respectful people)

Why critical thinking?

Reasons

- To know the truth
- To decide better
- To understand and learn better about something
- To avoid being misguided by others
- It opens up opportunities to change for better
- It enable us to communicate clearly

Not to fall in to the same pit in noon, that you have fallen in night



- කාලාමයෙනි, තොප විසින් සෑක කරන්නට නිසි මෑය. විචිකිත්සා කරන්නට නිසි මෑය. සෑක කටයුත්තෑන ම තොපට විචිකිත්සාව උපන. කලාමයෙනි, තෙපි එව, අනශ්‍රව කථායෙනුදු නොගණුව (ආරංචි මාත්‍රයෙන්, අසන්නට ලැබුණ පමණින් පිළිනොගත යුත්ත බව), පරම්පරාකථායෙනුදු නොගණුව (පාරම්පරිකව පැවතෙන විශ්වාස ඇදහිලි අරුත්ගැන්වීම්වලට අනකල පමණින්ම පිළිනොගත යුත්ත බව), තෙල මෙසේ වී ලැයි ද නොගණුව (යමක් "මේ අයුරින් සිදුවුණල" යන අදහසින් පමණක් පිළිනොගත යුත්ත බව), අපගේ පෙළපත හා යෙදෙහී ද නොගණුව (තම තමන්ගේ පිළිගත් පිටක සම්පදාය අනව, පොත පත සමග ගැලපුණ පමණින් නොපිළිගත යුත්ත බව), තර්කාගාහයෙනුදු නොගණුව (හුදු තර්කානකල ව පමණින් පිළිනොගත යුත්ත බව), නයගාහයෙනුදු නොගණුව (හුදු න්‍යායන්ට අනකල පමණින් පිළිනොගත යුත්ත බව), ආකාරපරිවිතර්කයෙනුදු නොගණුව (යහපත් ආකාරයෙන් පෙනෙන්නට තිබූ පමණින් නොපිළිගත යුත්ත බව), අප සිතා වෙසාගත් දෘෂ්ටිය හා සෑසෑඳෙතෑ යි ද නොගණුව (තම තමන් සිතාබලා සුදුස්ස යයි සතටින් පිළිගත් යම් විශ්වාස, ඇදහිලි, දෘෂ්ටීන් සමග ගැලපුණ පමණින් නොපිළිගත යුත්ත බව), භව්‍යරූපතායෙනුදු නොගණුව (මෙතෙම පජ්‍රායෙකැයි, මොහු ගරුකටයුත්තය, සුදුස්සෙක, යයි සෑලකීමෙන් පමණක් පිළිනොගත යුත්ත බව), මේ මහණ අපට ගුරුහයි ද නොගණුව (තම ආචාර්යයන්, ගුරුන් විසින් කී පමණින්ම නොපිළිගත යුතු බව), කාලාමයෙනි, මේ දහම් අකුසල්ය, මේ දහම් වරද සහිතය, මේ දහම් නුවණැත්තන් විසින් ගර්හිතය, මේ දහම්හි සපුරන ලද්දාහ සමාදන් කොට ගන්නා ලද්දාහ අවුඩ පිණිස දුක් පිණිස පවත්නාහ'යි තෙපි යම් කලෙක තුමූ ම දැනගන්නහු නම්, කාලාමයෙනි, එකල්හි තෙපි එය දුරු කරව.

Don’t believe because

- You have heard it through rumor
- It tallies with the beliefs you inherited from your parents
- Someone has said that it happened this way
- It tallies with the teachings
- It looks logical
- It seems right
- It tallies with the beliefs you are having or the ideology you have
- It is said by a teacher or someone superior, some one believable

Until you realize that it is right

Key Aspects

- Analysis:
  - Breaking down complex information into smaller, more manageable parts.
  - Identifying relationships, patterns, and underlying principles.
- Evaluation:
  - Assessing the credibility and relevance of information sources.
  - Judging the strength and validity of arguments and evidence.
- Inference:
  - Drawing logical conclusions from available data and evidence.
  - Making reasoned judgments that follow from the evidence.
- Explanation:
  - Clearly and precisely articulating reasoning and conclusions.
  - Justifying methods, criteria, and standards used in reaching conclusions.

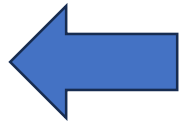
What do you think about this statement

මැරුනු කෙනෙකුට පින් යවන්න තරම් නාක්ෂණයක් තියෙන රටේ බයිසිකලයක් වත් හදාගන්න බැරි හැටි



Analysis

- We are competent
- Because we have a technology
- Which enable us to transfer merit to some other person
- But has not been able to produce bicycles



Evaluation

- What ever enable us to transfer merit to some other person is not a technology but a belief
- Beliefs cannot produce anything, not only bicycles
- Is it a fact that we are not producing bicycles – no it is not true, we not only produce varieties of bicycles but also export them
- Hold on – may be the author referring not to assembling but producing – No we are not only assembling bicycles but also producing some parts, No country produce anything solely from parts produced in their own country and in some successful businesses nothing is produced in the home country, but they run lucrative businesses

About Light Engineering

Why Sri Lankan Light Engineering Products

Sri Lankan Light Engineering Products

- Bicycles & Bicycle Parts
  - Non - Motorised Bicycles
  - Electric Bicycles
  - Bicycle Spare Parts
- Trailers and Spare Parts
- Base Metal Products
- Machinery & Machinery Parts

The Foundry Industry

Sustainable Practices

BICYCLES & BICYCLE PARTS MANUFACTURING IN SRI LANKA



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Inference and Explanation

- This post is not only untrue
- It tries to send several unrelated messages probably having certain ulterior motives, which we can only guess
  - It may be trying to ridicule a religious belief
  - It may be trying to ridicule the ruling or the business class
- Or might even simply be that the author is ignorant

Critical thinking



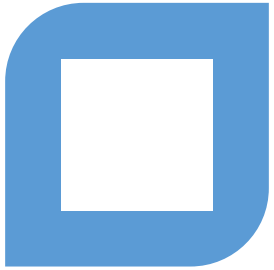
NOT SUPERFICIAL JUDGEMENTS



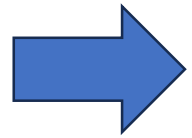
DEEPER ANALYSIS.



EVIDENCE BASED



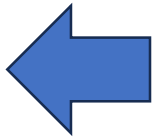
SYNTHESIS & DYNAMICS FOR REASONED JUDGEMENTS



Not because

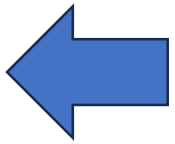
- Large majority believes
- Believed for centuries
- Not because it is in a holy book
- Not because someone great has said it

- What large majority has believed has been discarded lately
- What has believed over centuries have been considered invalid by later findings
- Holy books have not been holy all the time, later findings have revealed
- Great many have failed



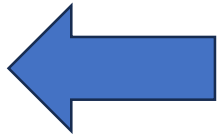
Large majority believed

- Dolukanda (දොළුකන්ද)
- Millawa (මිල්ලැවෙ)
- බුදු රැස්
- God Kataragama
- Dhammika පැනිය



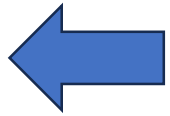
Believed for centuries

- World is flat
- Sun rotates around the earth
- God gives us rain
- When god is unhappy droughts and floods occur



Contents of the holy books

- World was created in six days
- Prince Siddartha walked immediately after the birth



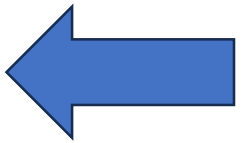
Some authorities on the subject have said these

- “There is no reason for any individual to have a computer in their home”

  - Olsen, the co-founder of Digital Equipment Corporation (DEC).

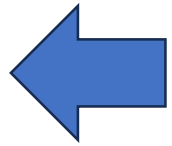
- "I think there is a world market for maybe five computers.“

  - Thomas Watson, Chairman of IBM (1943)



Deeper Analysis – Ethnic issue that led to war

- Language issue
- Inequal distribution of resources, power and opportunities (educational, job and business)
- Economic under-development which did not create enough to share
- Racialism
- Racial violence
- Foreign influence
- Terrorism unleashed by all sides



Evidence - on racial violence

- 1958
- 1978
- 1981
- 1983

Synthesis – Ethnic issue that led to war

- Language issue
- Discrimination
- Inequal distribution of resources, power and opportunities (educational, job and business)
- Economic under-development which did not create enough to share
- Racialism
- Racial violence
- Demand for a separate state
- Foreign influence
- Terrorism unleashed by all sides

Characteristics of a critical thinker

- Curiosity:
  - An eagerness to learn and understand more about the world.
- Open-mindedness:
  - Recognizing limits of one's own knowledge and willingness to consider alternative perspectives and solutions.
- Skepticism (having doubt as to whether something is right):
  - A questioning attitude towards knowledge, arguments, and evidence.
- Analytical skills:
  - Ability to dissect complex problems and examine their components.
- Logical reasoning:
  - Using structured and coherent thinking to solve problems.

Question

- Is it a cause and effect relation?
- Or
- Is it just a coincidence?

Points to ponder

- Astrology episode
- Once single evidence is not good enough (corrupted evidence)
- Sufficient sample size has to be used

Question

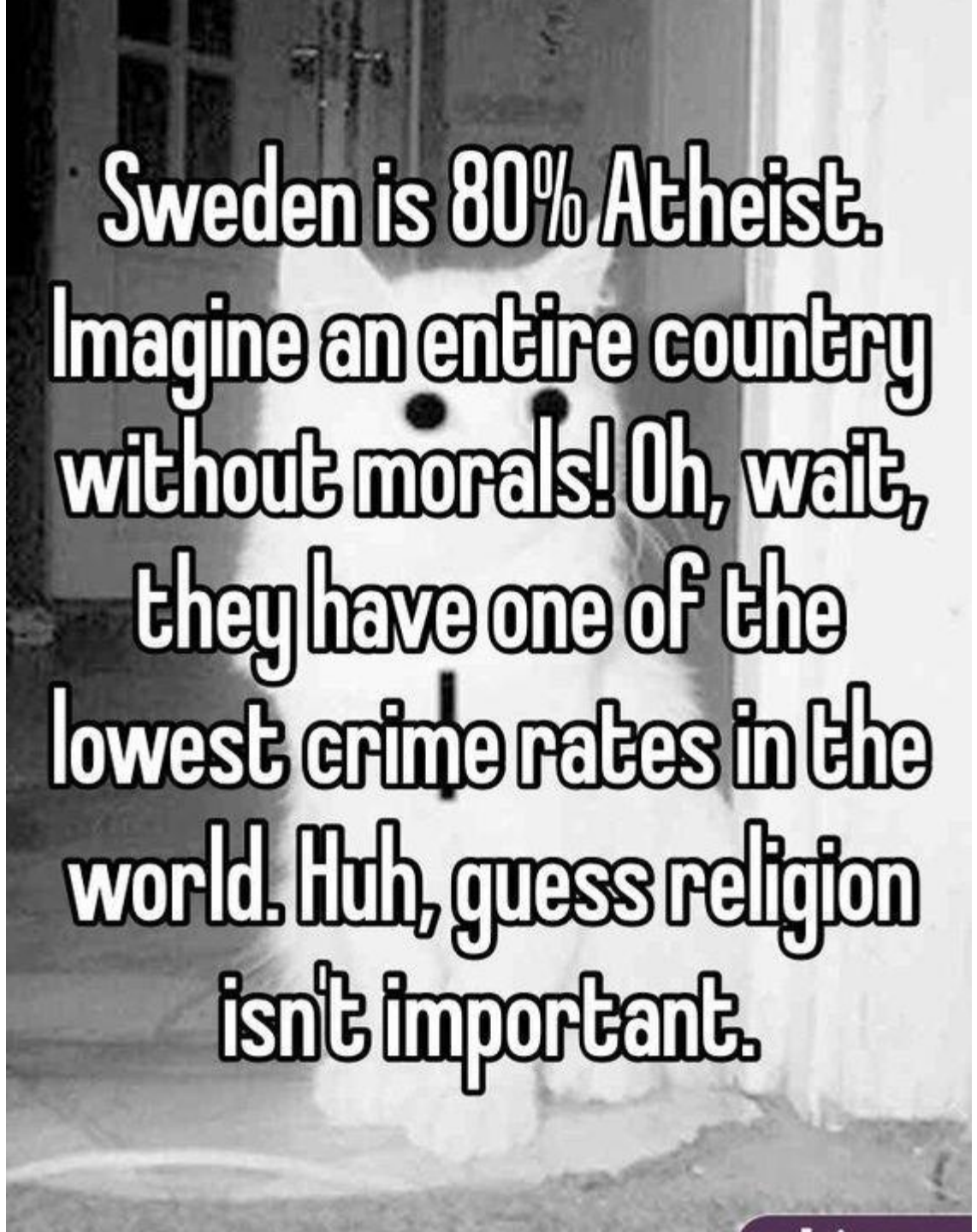
- Is it correlated?
- Or
- Is it triggered by a third factor?

When Ice-cream sales go up

- Number of people drowning also goes up
- Are we to stop selling ice-cream?

Question

- It is correlated
- But what causes what?


Sweden is 80% Atheist.
Imagine an entire country without morals! Oh, wait, they have one of the lowest crime rates in the world. Huh, guess religion isn't important.

World's least religious countries

Percentage of respondents in each country claiming to be either not religious or atheist.



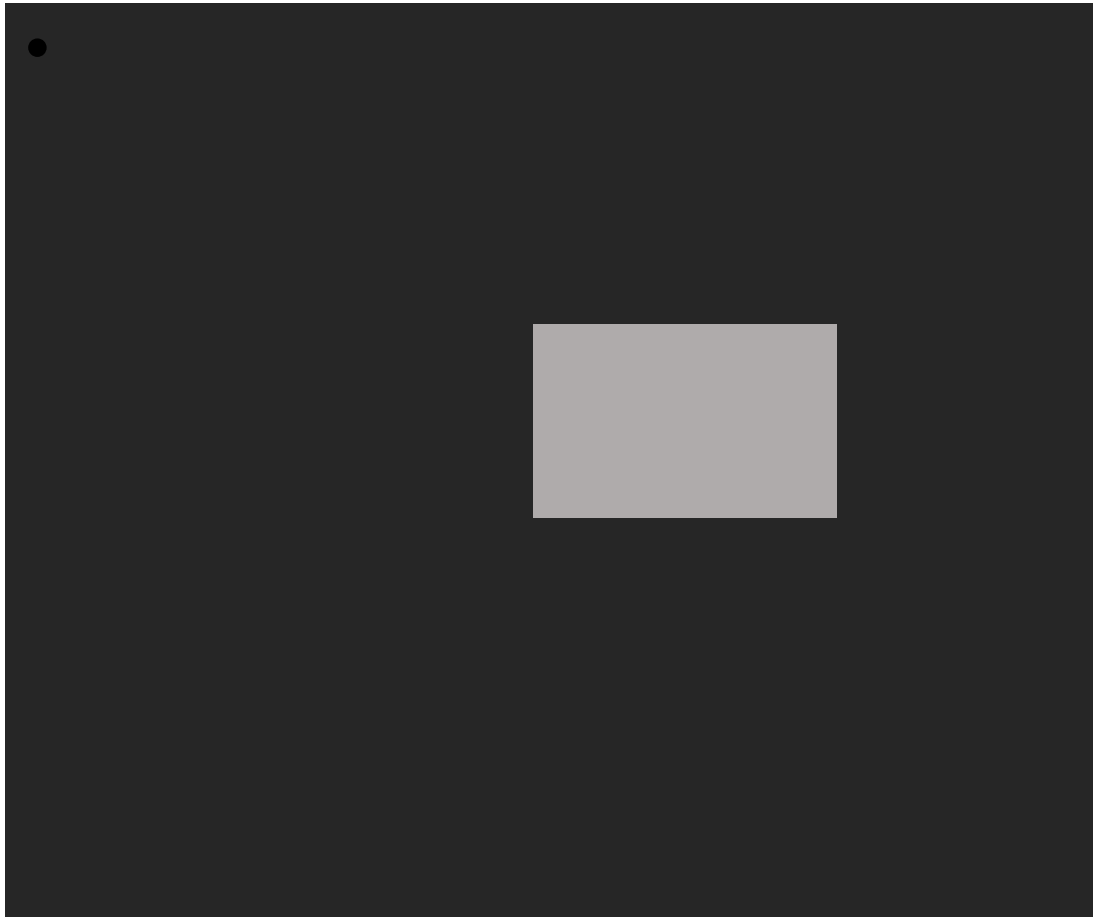
Source: WIN/Gallup International

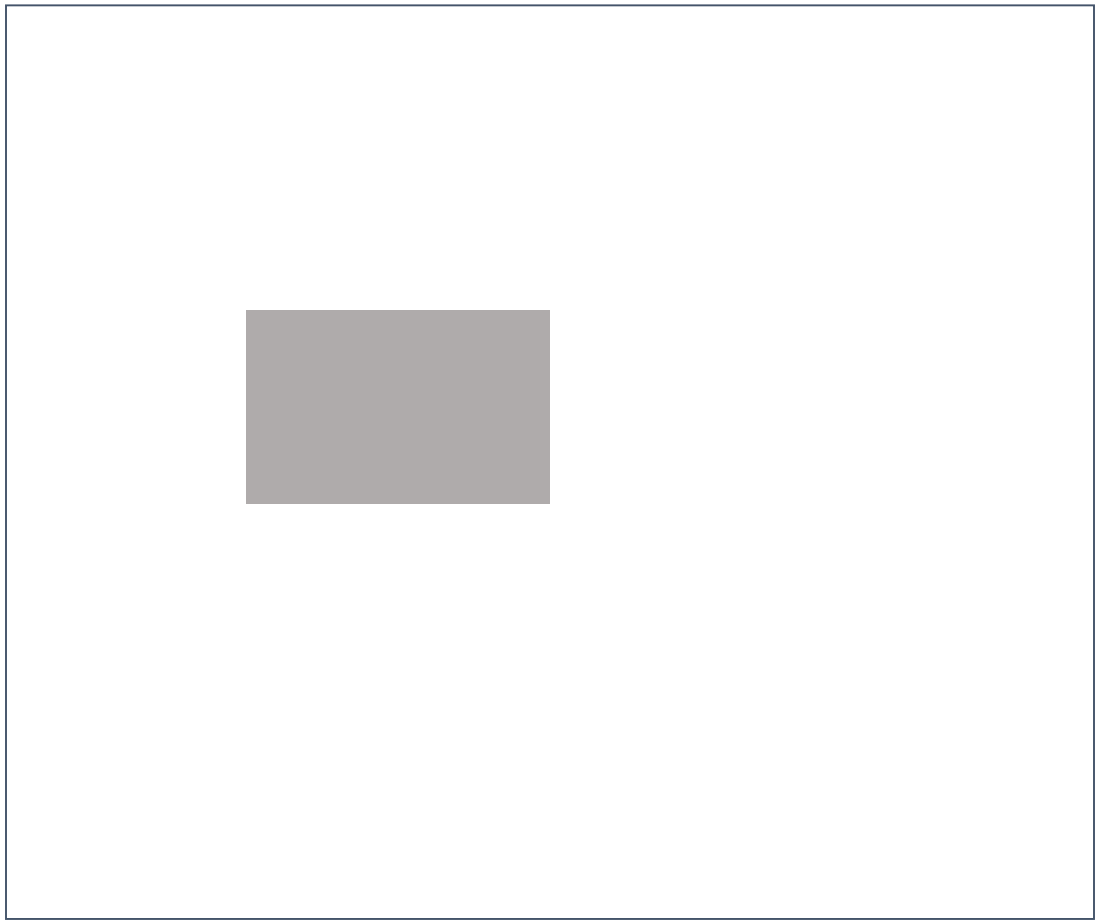
THE WASHINGTON POST

Question

- Is it real?
- Or
- Is it an illusion?

Difference





Question

- Is it logical
- Or
- Is it a logical fallacy (circular logic)

Trust because it is trustworthy

- Premise:

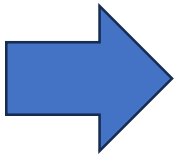
My political party is trustworthy.

- Conclusion:

You can trust it because it is trustworthy

Similar logical fallacies

- Straw Man Fallacy: Misrepresents an argument to make it easier to attack.
- Ad Hominem Fallacy: Attacks the person making the argument rather than the argument itself.
- False Dilemma: Presents two options as the only possibilities when others exist.



Straw Man Fallacy
(කොහෙද යන්නෙ - මල්ලෙ පොල්)

Original Argument:

- Person A:

"We need to implement stricter regulations on industrial carbon emissions to combat climate change.

Straw Man Argument:

- Person B:

"Person A wants to shut down all factories and put everyone out of work. They don't care about people's livelihoods or the economy."

Ad Hominem Fallacy

- Original argument

Person A: (Young person)

The process is too long and with number of bottlenecks.

- Ad Hominem argument

Person B: (Experienced boss)

You are an inexperienced guy. What do you know about management?

C

@chamindabatagalla4451 8 months ago (edited)

නාකි වෙනකම් රට කාලා තවත් විචාර දෙනවා .මමනම් හිතන්නේ අලුත් පරම්පරාව පක්ෂ බදගෙන ඉන්නෙ නෑ .එහෙම කරලා රටක් කවදාවත් ගොඩදාගන්න බෑ දේශපාලන බලය අයුතු ලෙස පාවිච්චි කරන්න රටක් මේක . ..

4 Reply

3 replies

A

@anurajitha3180 8 months ago

පල් ගොනෝ කන හා ල් ටිකේ ඉදලා සියල්ලම පිටරටින් ගෙනත් රට බංකොලොත් කරලා නරිවදම් කියවන්නට එපා .

1 Reply

1 reply

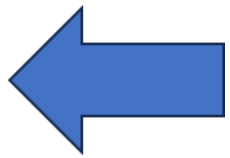
D

@dhammikawijayawickrama9881 8 months ago (edited)

කතාව අසම්පූර්ණ එකක්...ගොවිපලවල් ගොවි බිම් යනු ගොවියාගේ ජීවිතයයි..ඒක ආර්ථික දත්ත මත කොහොමද තක්සේරු කරන්නේ.. අපිටත් වඩා අඩු භූමියක් ඇති රටවල් කෘෂි නිෂ්පාදනයෙන් ලෝකයේ වෙළෙඳ පල ජයගෙනෙන තිබෙනවා ...ජාතික ජනබලවේගයේ කෘෂිකර්ම ප්‍රතිපත්ති සම්පාදනය කලේ ඉතාම විශිෂ්ඨ කණ්ඩායමක් ....බොරුනම් කියන්න එපා මහත්තයෝ.. වගා කල හැකි සියලු බිම් හරිම විද්‍යාත්මක ලෙස වෙන් කරගෙන ඉතාම දියුණු බීජ, තාක්ෂණය, යොදාගෙන ලෝක වෙළෙඳ පල දක්වා ගෙනයන කෘෂි අපනයන ප්‍රතිපත්තියකට තමයි අවතීර්ණ වෙන්නේ ..හරියටම නිතට වැඩ සිද්ධ වෙනවා ...ඒක සහතිකයි ...

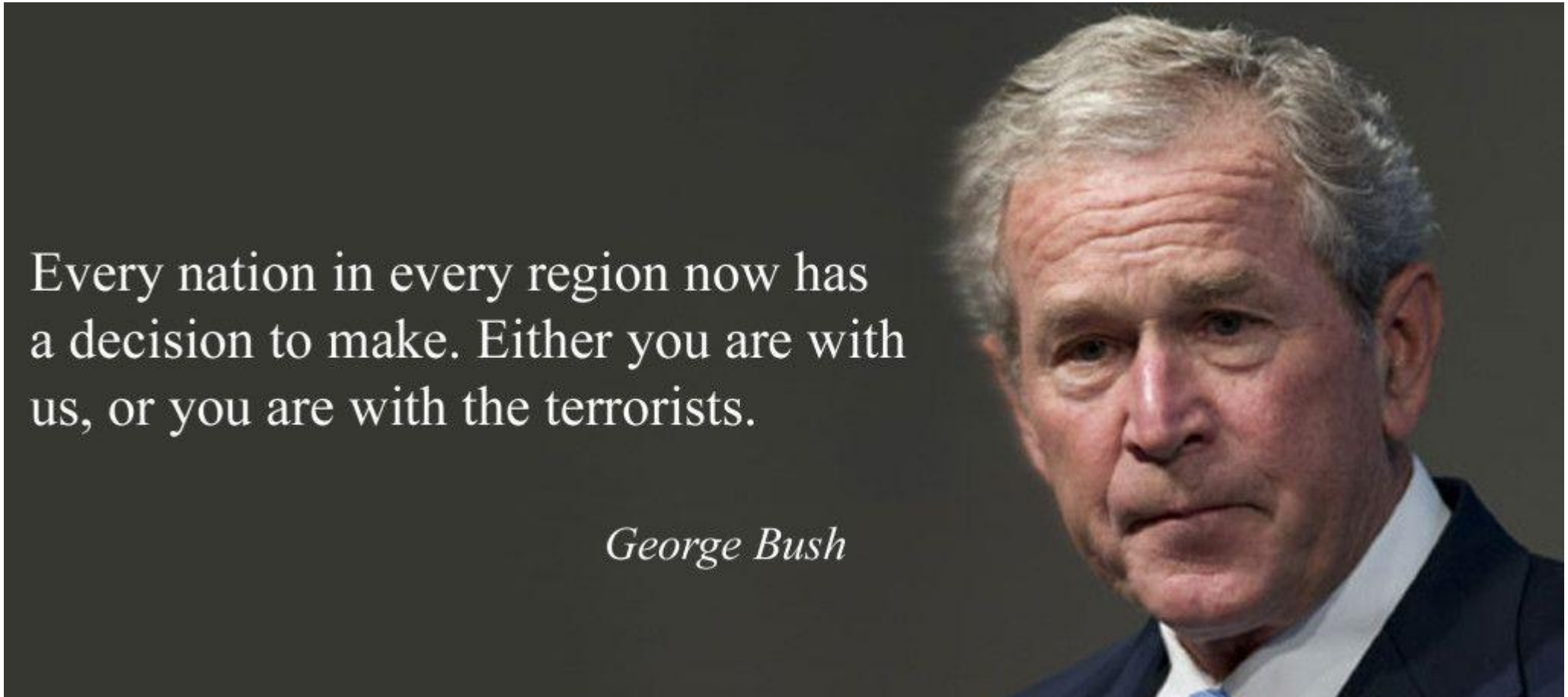
Read more

1 Reply



False Dilemma:

- Presents two options as the only possibilities when others exist.



Why do we sidestep?

- We have less time to think
- It is a hassle to think even if we have time (there are better ways we could use the time)
- Just go by the first impression based on our prejudices (old knowledge)
- We have our own biases (unconscious/sub-conscious)

Our decisions are made by sub-conscious

- We use facts and arguments to defend it



I like him because he is from the same background

Mahinda Mama



ගම - village

Ranil Uncle

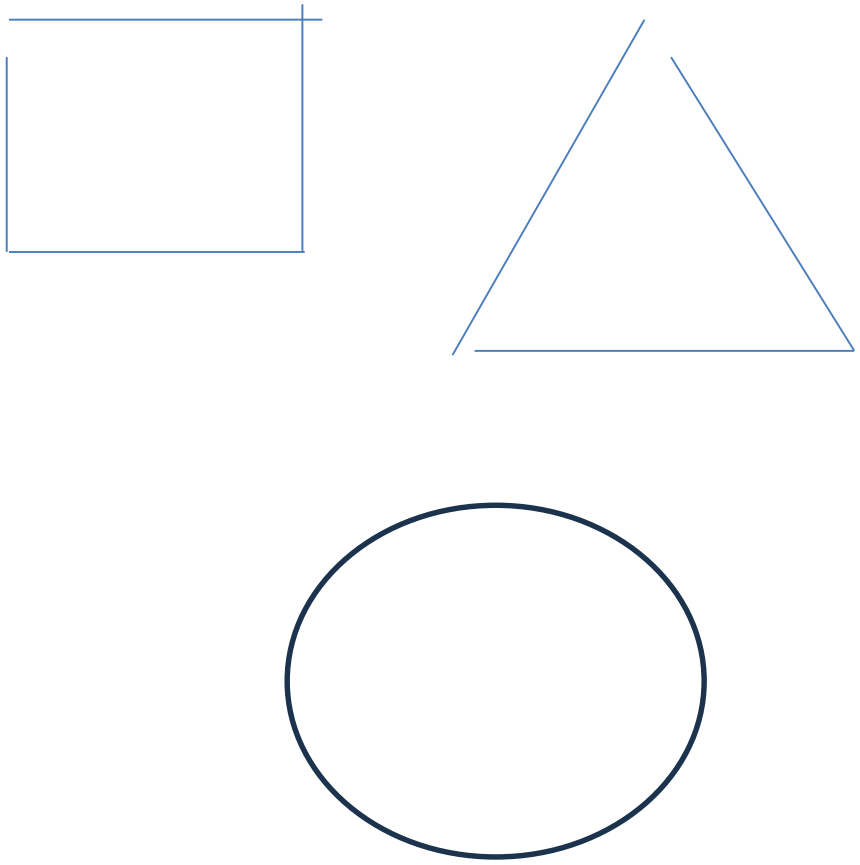


නගරය - city

We miss and drop data because they are not familiar

- Normally **we look** for things we like, which are familiar and known to us

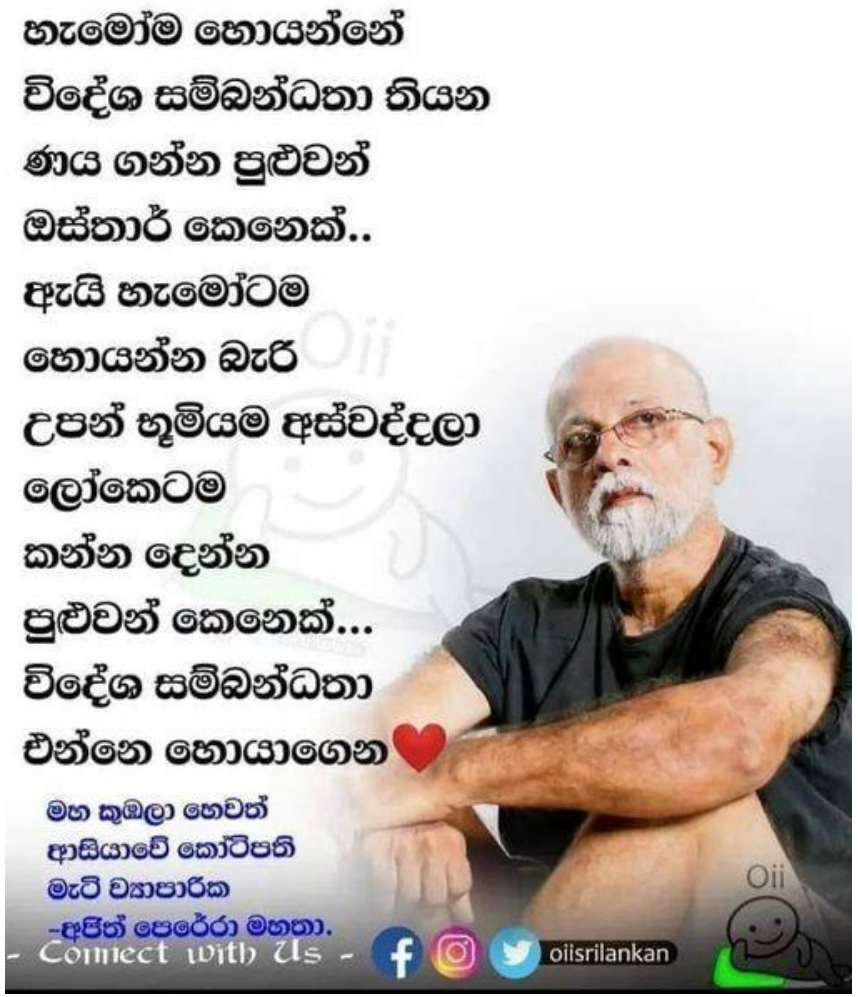
Remember this and tell what is in it



- He is the

  the President

You read what is not said



පොඩි පරහකට තියෙන්නෙ ලෝකෙට තියා ලංකාවට කන්න දෙන්න වත් තව අස්වද්දන ඉඩක් නෑ. වන ගහණය 24% ක් වෙලා තියෙන්නෙ.

Improving productivity in every sphere is the answer. Land productivity, peoples productivity, productivity of water and energy use can make a massive change. MAHA KUMBALA" WOULD HAVE meant that. God bless "MAHAKUMBALA"

We capture only what we want

- We capture things that support our thinking
- Rest is purposely left out
- We even capture things that are not there and use imagination
- We believe what is not there
- (දියකිඳුරියන්, යෙටී, මකරා, මෝහිනී)

https://abc7news.com/society/is-that-an-angel-in-clouds-/3862825/



We form conclusions

- Without evidence to suit our beliefs
- Religious countries have less crime rates

Halo effect

- He is first in the class
- Must be a good person



- First one does not support the second
- But we presume



Survivorship bias

- We look at few things that has survived
- Ignore the rest
- Then make conclusions

පරණ සිංදු තමයි ලස්සන





We are prejudiced

- Governed by our conditioning; Our past experiences which has nothing to do with the present

How old is she?





How old is she?





Prejudices can restrict you (Incremental/trend trap)

- If you are unable to think critically
- Four squares

Fundamental attribution error

When it comes to me

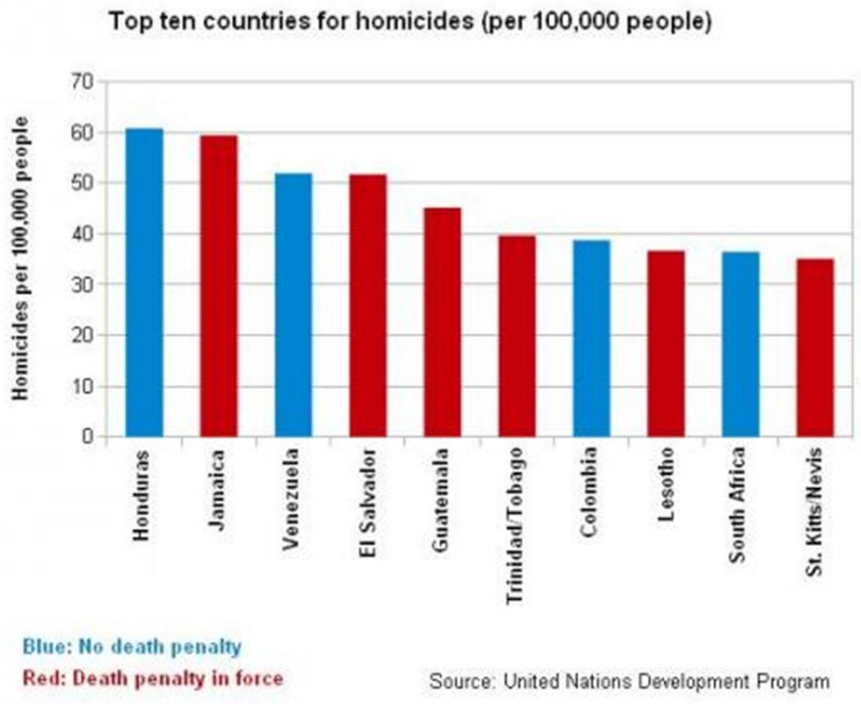
- My personality was the reason for success
- Situation or bad luck was the reason for failure

When it comes to him

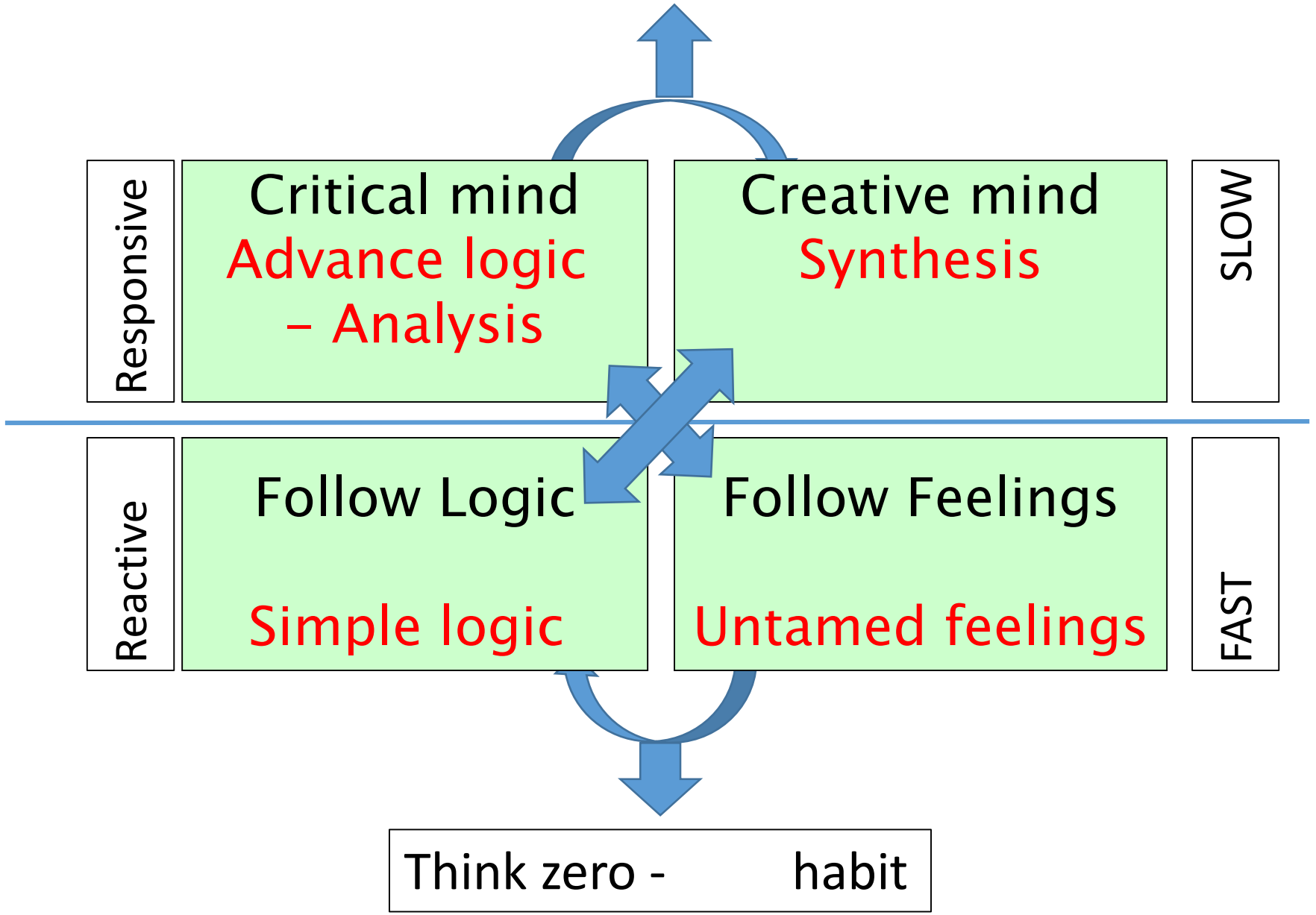
- Situation or luck was the reason for success
- His personality was the reason for the failure

We are influenced by consensus fallacy

- Capital punishment can bring down the crime rates



- We assume that a widely held belief is true


Responsive
Critical mind
Advance logic
– Analysis
Creative mind
Synthesis
SLOW
Reactive
Follow Logic
Simple logic
Follow Feelings
Untamed feelings
FAST
Think zero - habit


MGN

කැනේඩියන් රජය රියදුරන්ගේ වේගය අඩුකිරීමට
මෙවැනි උපක්‍රම යොදාගනී.....



ලංකාවේ මෙම ක්‍රමය ක්‍රියාත්මක වන්නේ අතීතයේ පටන්ය.
කැනේඩියානුවන් අපේ තාක්ෂණය සොරා ගෙන ඇත....





SPEED CONTROL

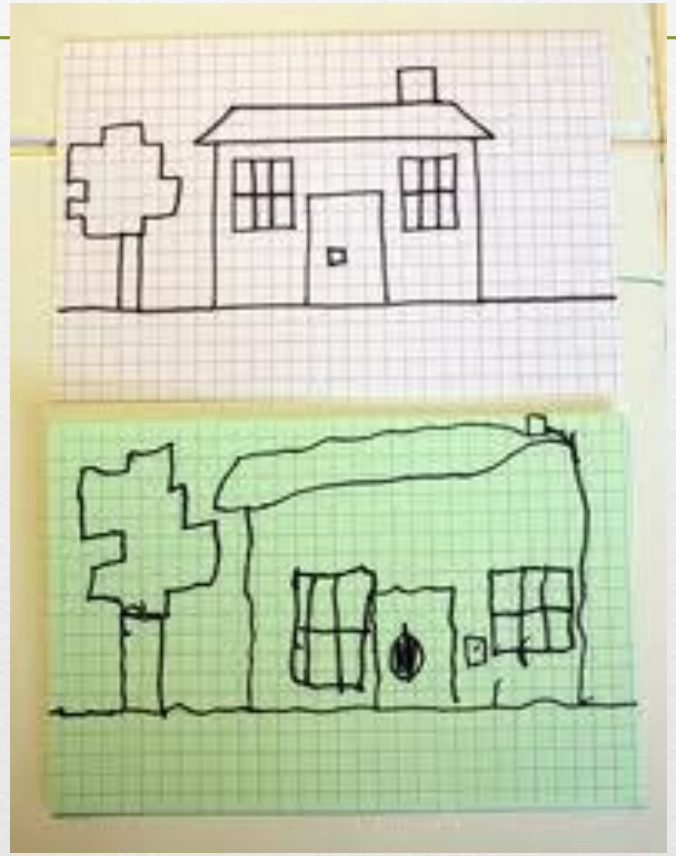
Some Towns Are Just More Creative Than Others


POL

Even for creative thinking

- We need the support of critical thinking

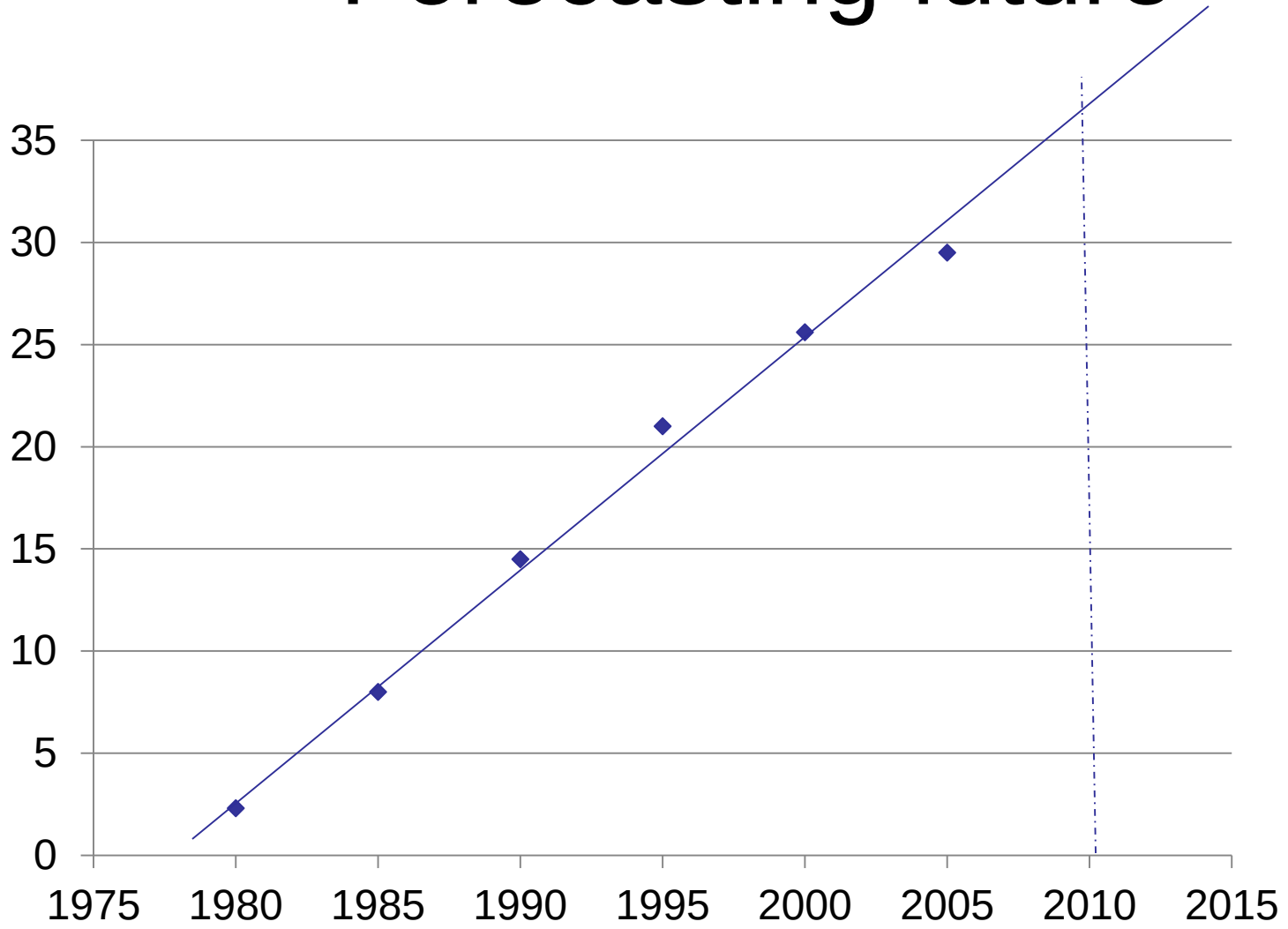
Direct copying



Context (time)

- We are living in a changing world
- What worked yesterday will not work today

Forecasting future



Context (space)

- We come from different institutions
- What is applicable in one institution may not be applicable in another

Take home message - Don’t jump to conclusions

- Ask questions
- Before you trust, first doubt
- Let it be proved.
- Critical thinkers could lead a better and fulfilling life

Be the three year old child

- With loads of questions

