



A critical ~~hit!~~ thinking!

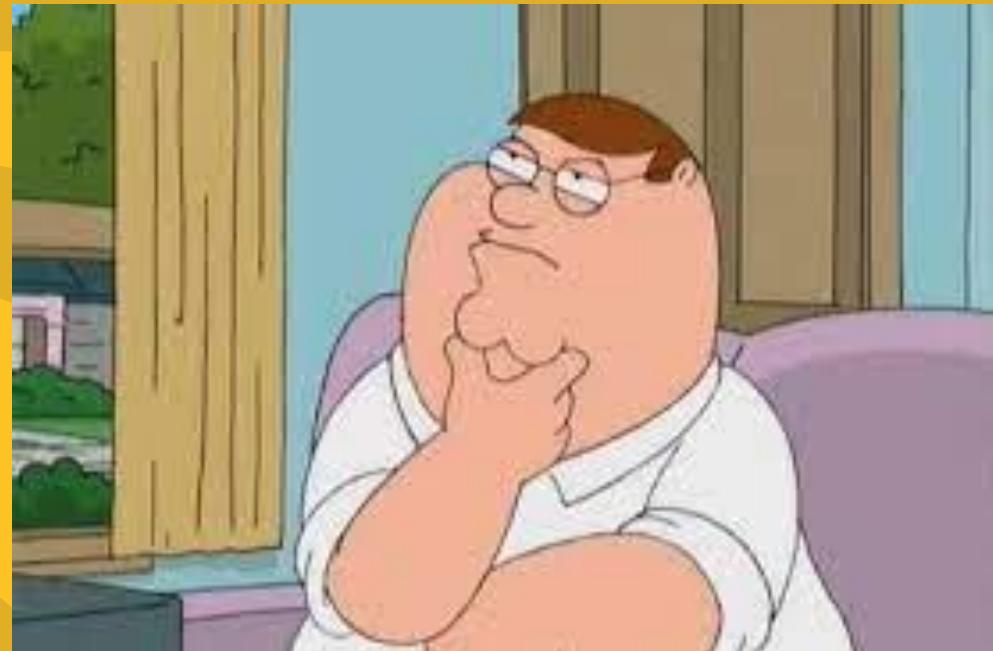
Aditya Firman Ihsan



Apa itu  
critical?

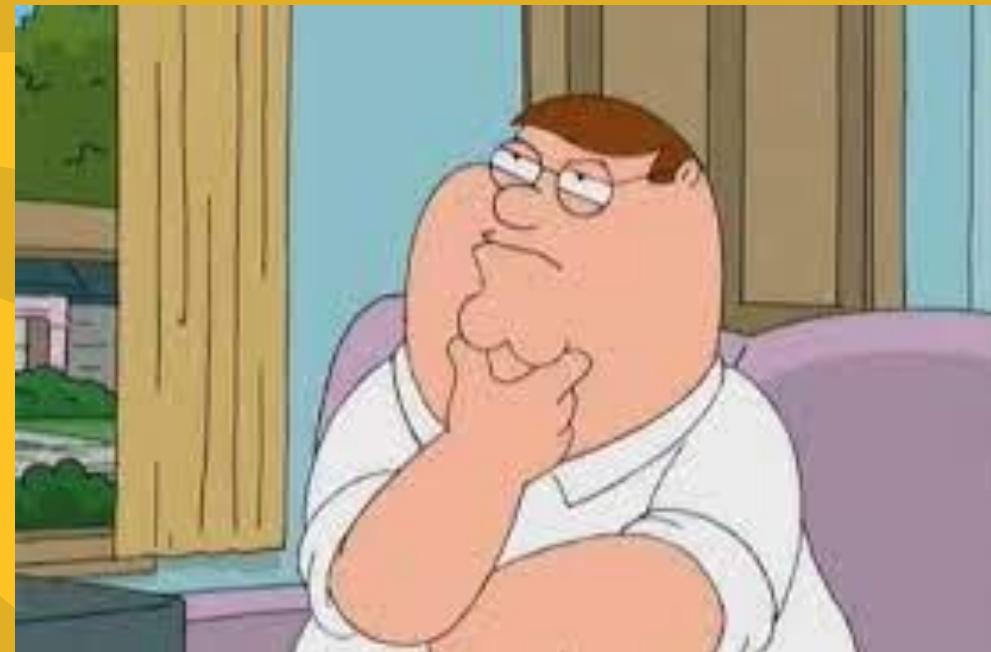


Critical = keras,  
bahaya, penting,  
darurat?

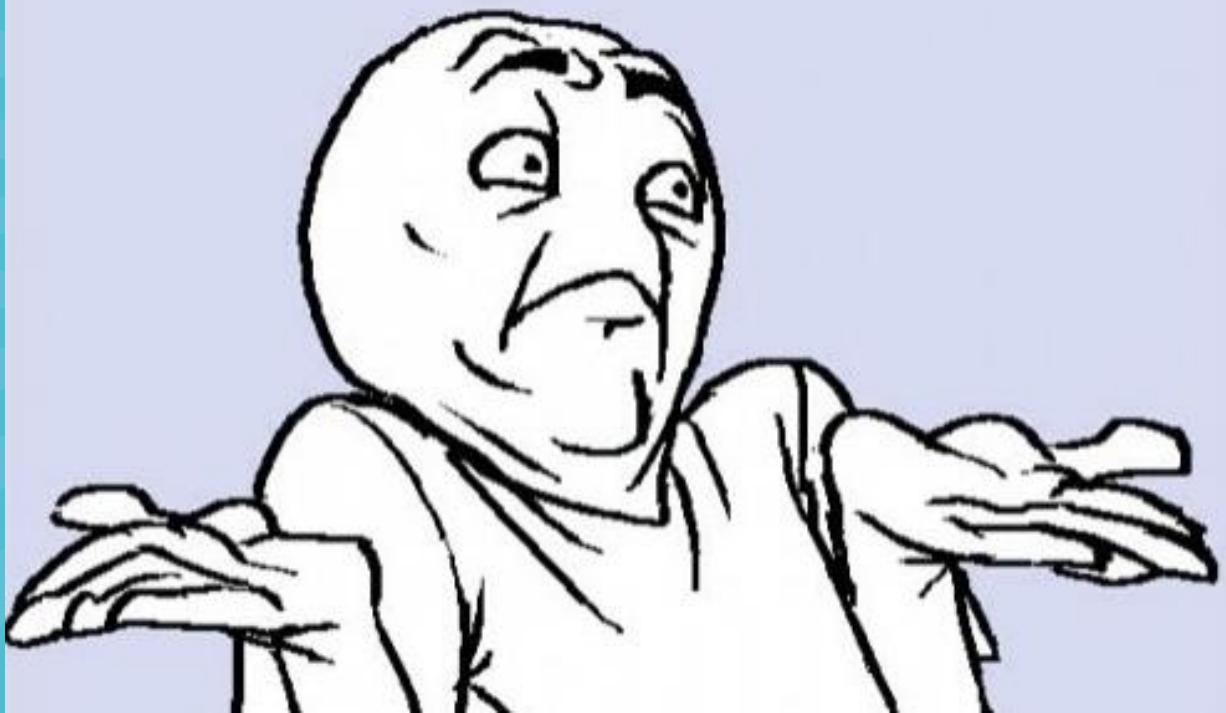




Critical thinking =  
berpikir keras  
karena penting?



Well...ummm...





ti  
cri  
ca\

# Thinking

Kita pahami dulu 1 kata yang ini



Apa itu  
Thinking?



Sekarang main dulu  
yuk, coba jawab singkat  
(<2 detik)  
hal-hal berikut

$$2+2+2=$$

$$27+3+51+48+17=$$

Aku dan kau,  
Suka .....

Berapa banyak “a”?  
aaa

Berapa banyak “a”?  
garuda panCasila

Berapa banyak “a”?  
lebensabschnittpartner

Apapun makanannya  
Minumnya...

Bumi berputar  
berapa kali sehari?

Pensil dan buku harganya 2500,  
buku harganya lebih 1000 dari  
pensil, berapa harga pensil?

Yang warna hijau mungkin berklorofil  
Rumput hijau  
Rumput mungkin berklorofil?

A bilang B bohong,  
padahal kalau B jujur, A bohong  
Ternyata B bohong  
A jujur?

$1=5$

$2=8$

$3=123$

$4=2343$

$5=?$

Orang pintar minum...

Yak cukup dulu,  
bisa jawab benar berapa?



System 1: cepat, otomatis, emosional, tak sadar



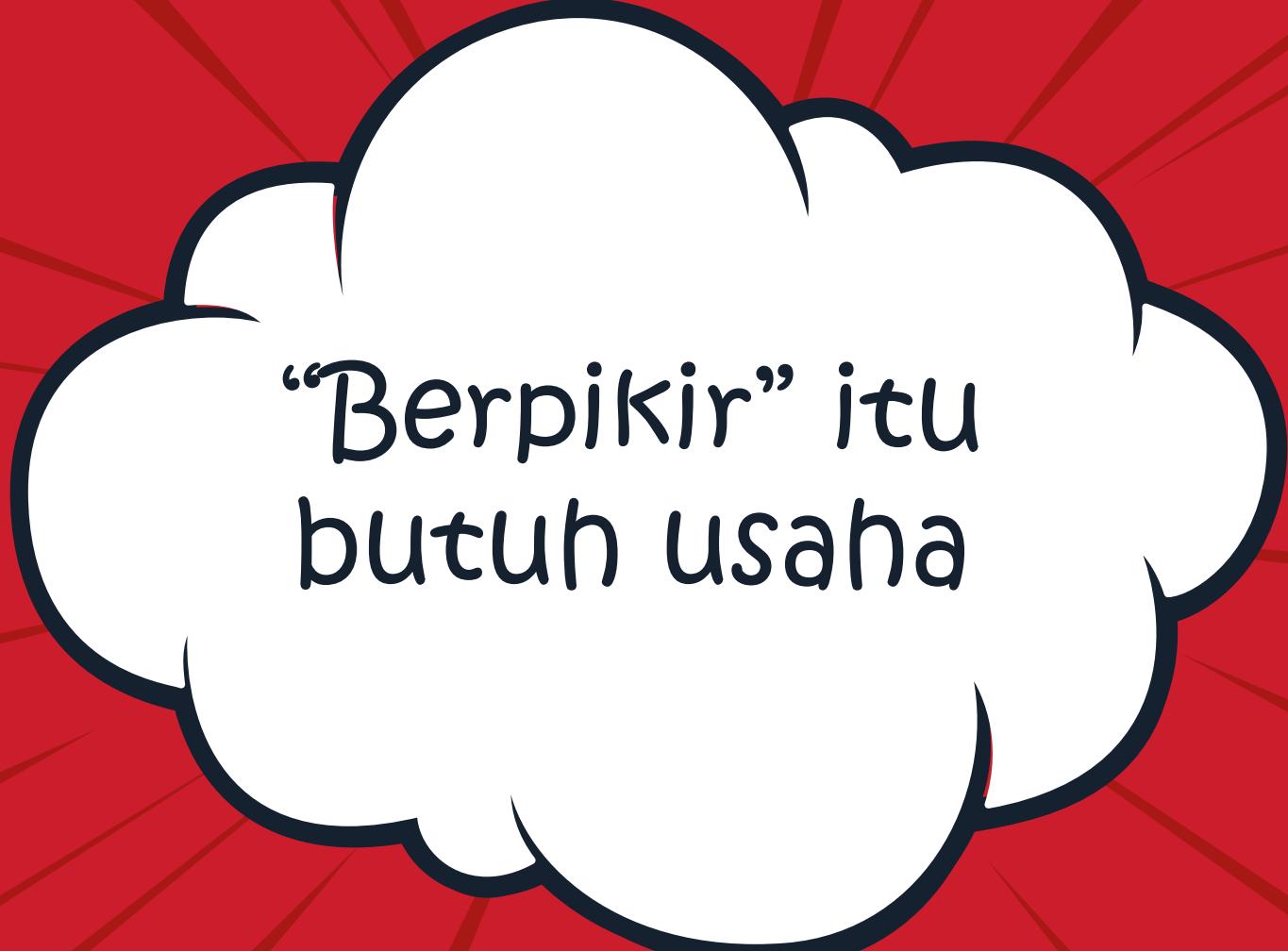
System 2: lambat,  
malas, butuh usaha,  
Sadar, logis

THINKING,  
FAST AND SLOW



DANIEL  
KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS



“Berpikir” itu  
butuh usaha

# No thinking



# Looks like thinking

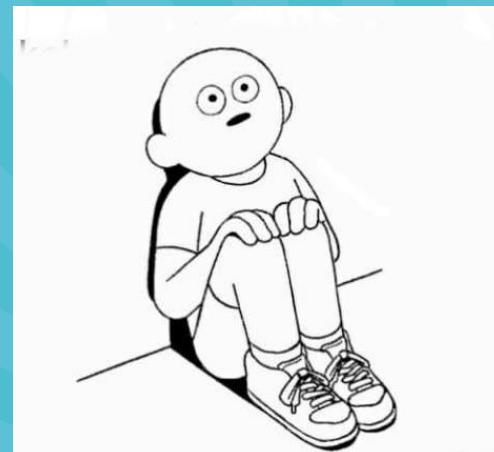
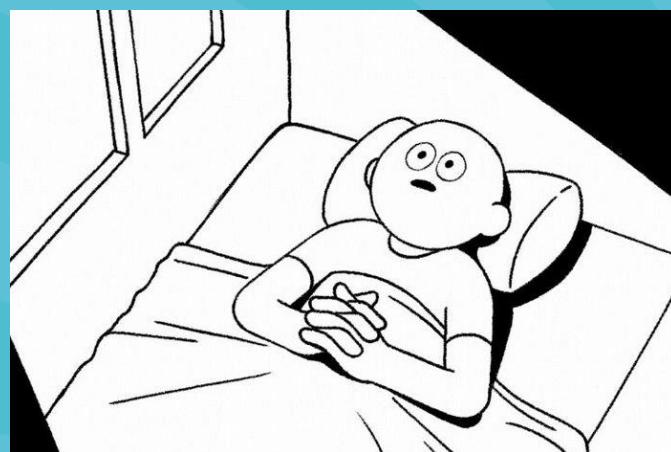


# Real Thinking





overthinking



No thinking

Real thinking

Looks like  
thinking



System 1

overthinking



System 2



Bagaimana  
sebenarnya  
berpikir?

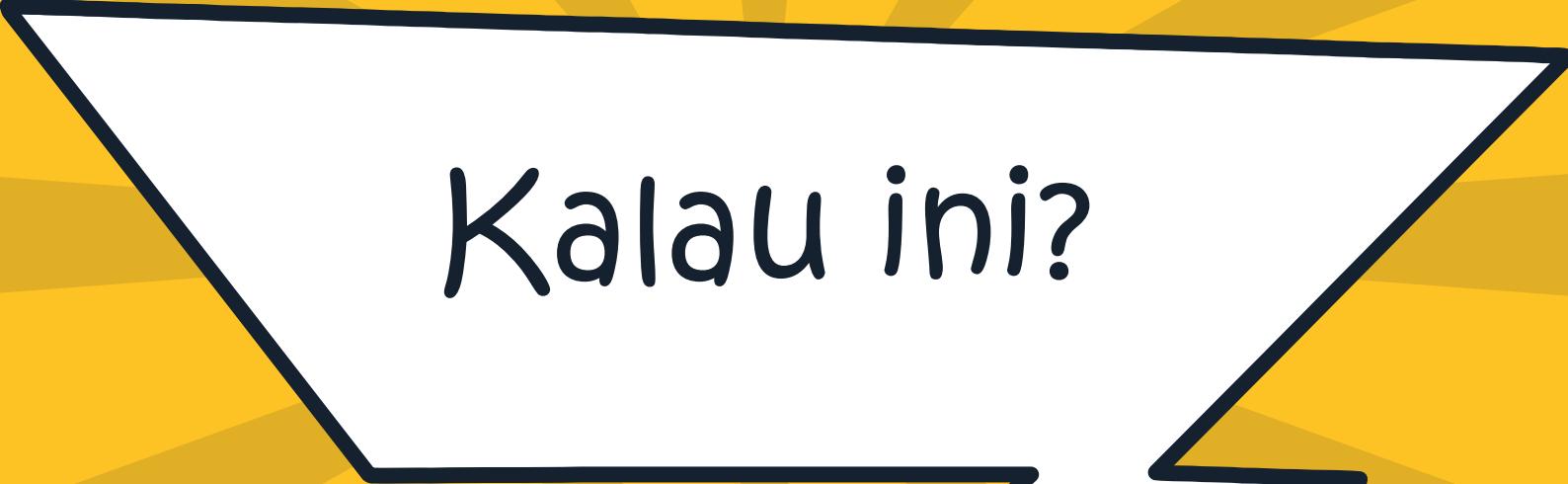


Mikir apa  
waktu lihat  
foto ini?



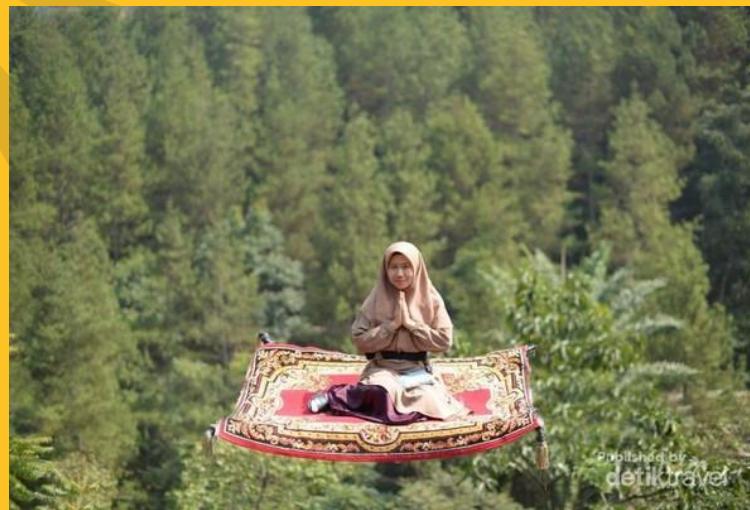


PikiranRakyat



Kalau ini?

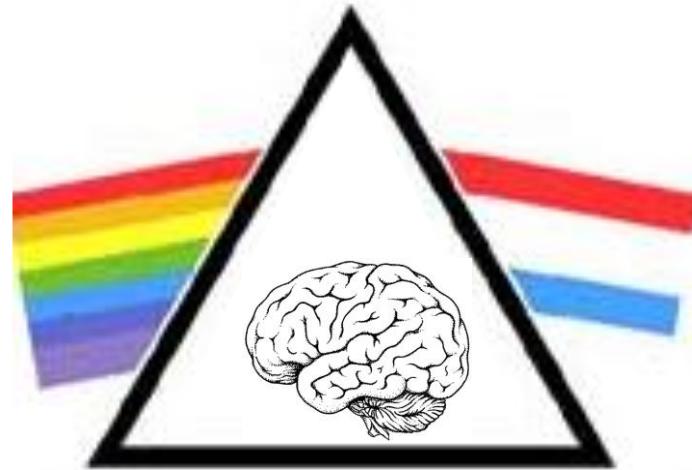






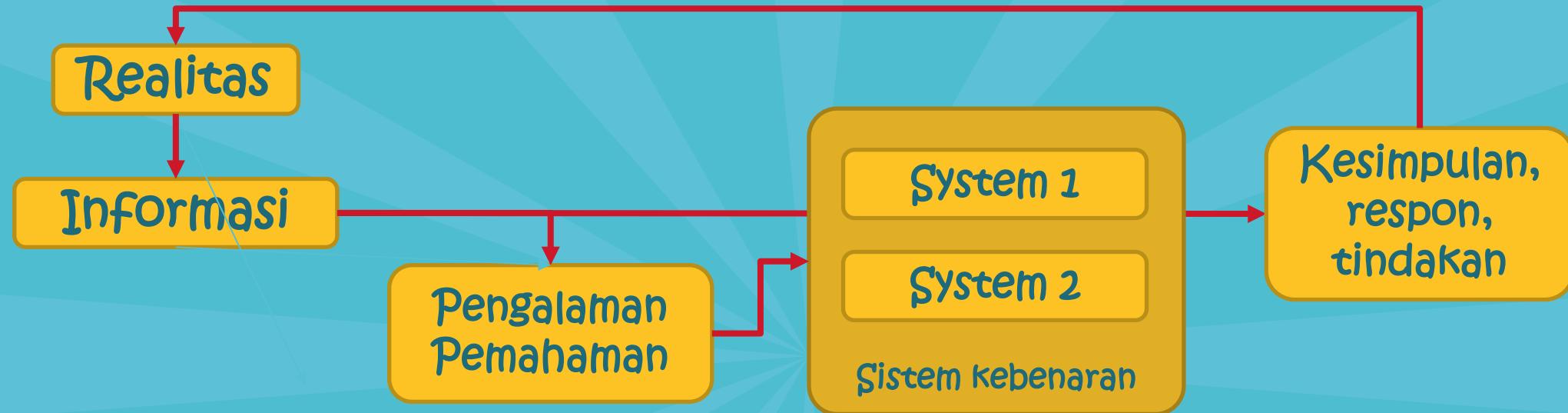
Setiap informasi pasti “disaring” sebelum masuk pikiran

## Mental filter

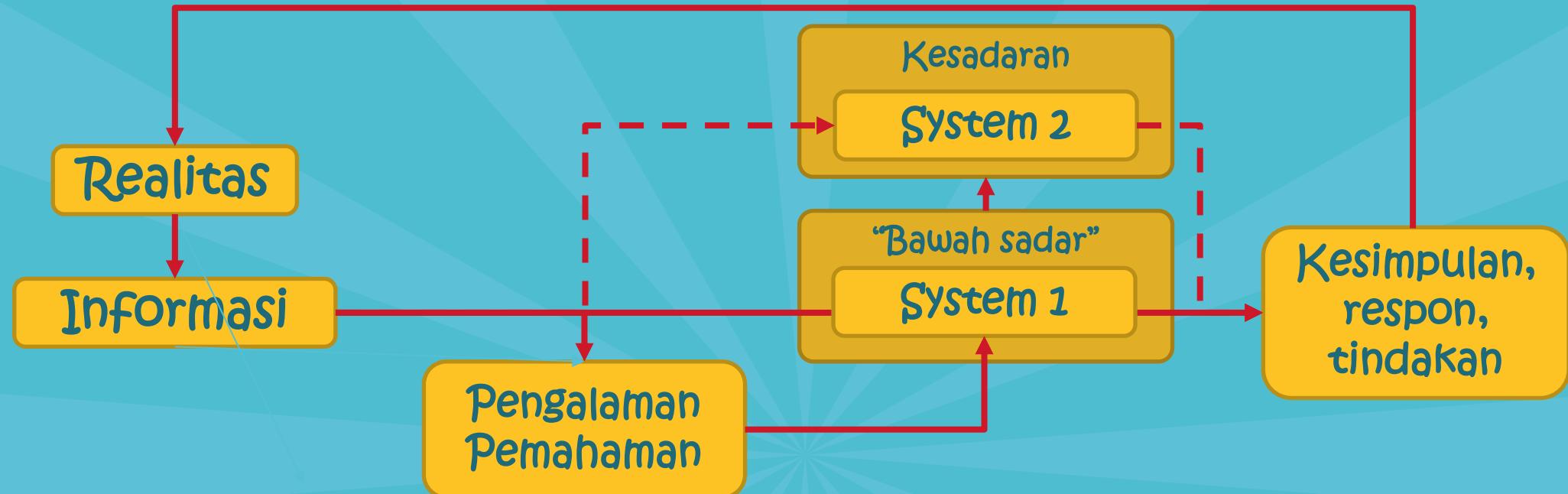


Ada banyak istilahnya,  
Kali ini kita sebut ia  
“sistem kebenaran”





Setiap hari detik kita menerima informasi.  
Sistem kebenaran kita juga terperbarui terus



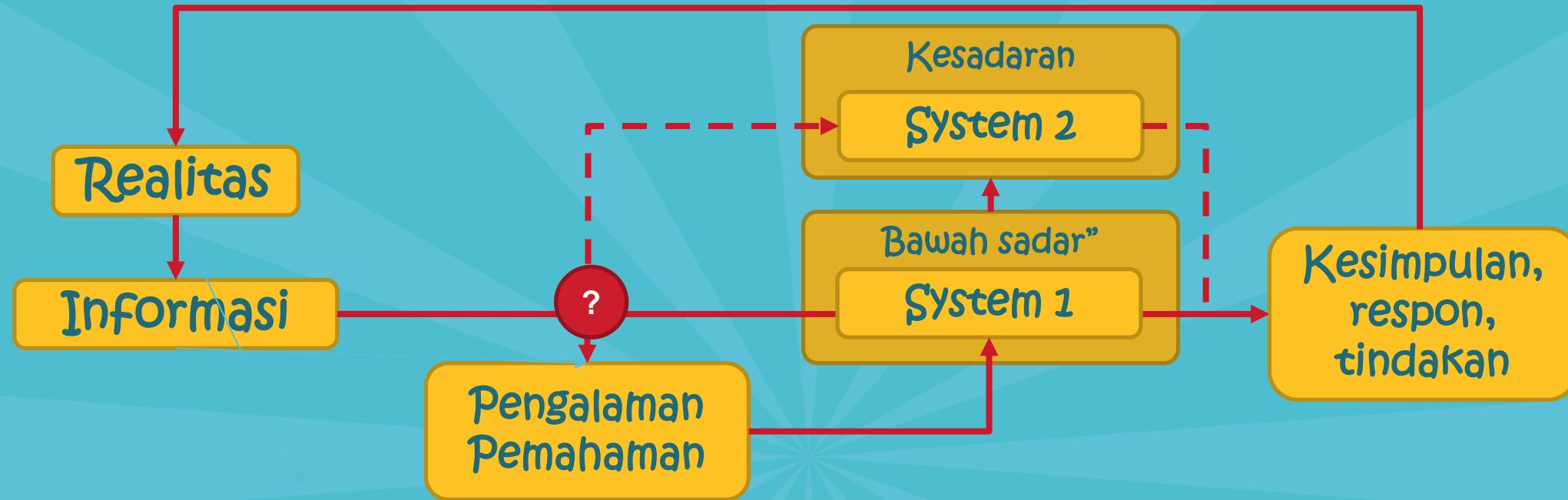
System 2, sistem yang “logis”, hanya aktif dalam kesadaran, kecuali jika ada “benturan” pada system 1



Sistem 2 memang harus selalu dipaksa, dikondisikan, didorong, dimotivasi, ditekan, agar mau kerja



Caranya?

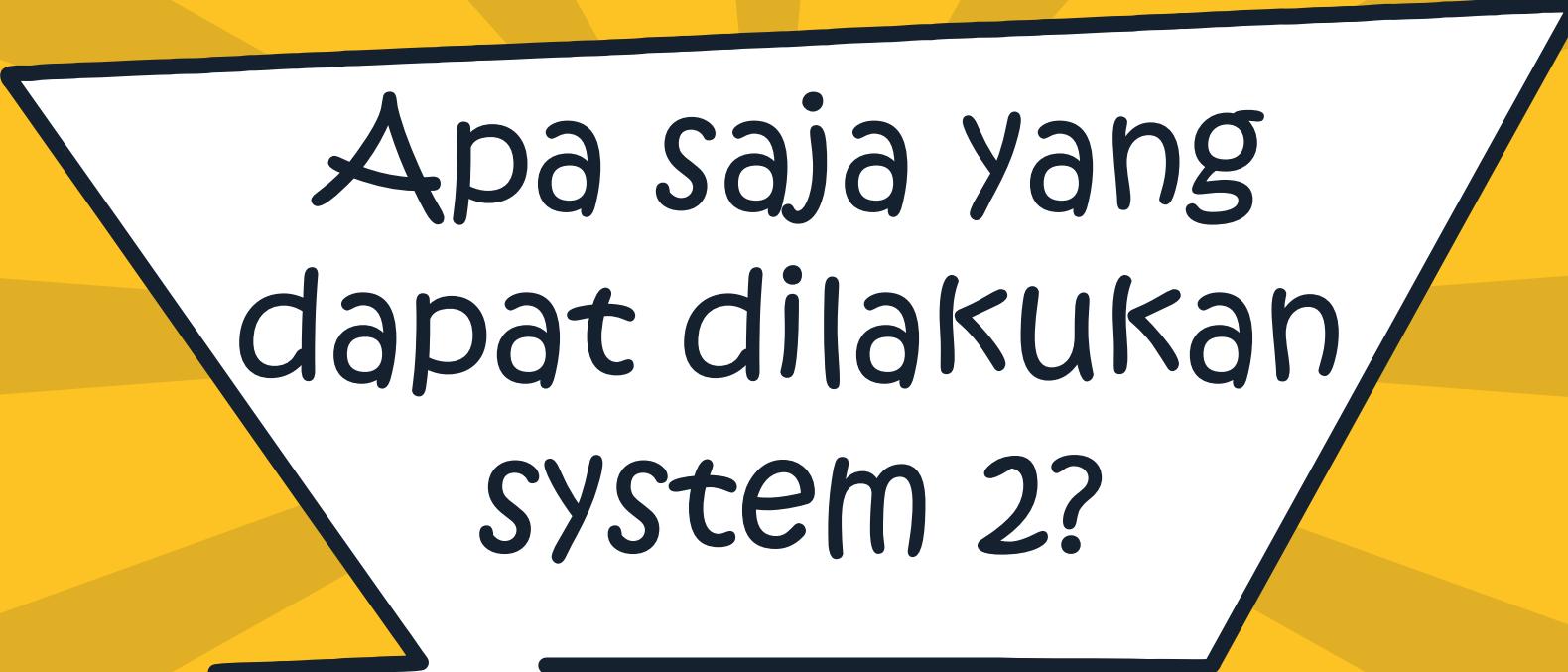


?

Bertanya, menjadi pengarah agar  
informasi baru selalu masuk ke system 2



bertanya adalah langkah awal berpikir



Apa saja yang  
dapat dilakukan  
system 2?



Observasi



Sistem  
kebenaran

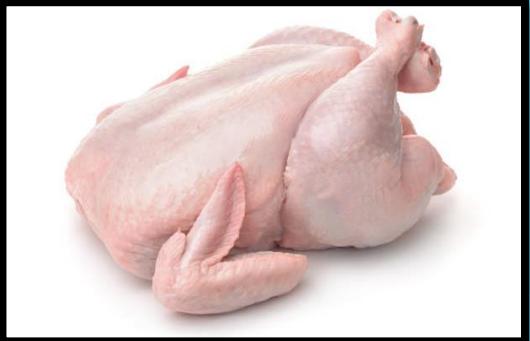
Masalah,  
pertanyaan,  
dll

Dipecah!  
a.k.a analisis

Sub-masalah

Sub-masalah

Sub-masalah



Yuk main pasang-pasangan



Setiap objek, ada alat  
“analisis”-nya sendiri



A large red circle containing a white exclamation mark, positioned at the top center of the white box.

!

If the only tool you have is a hammer, you tend to see every problem as a nail

Abraham Maslow

# Beberapa pisau analisis umum

## The 5 Whys

Define the Problem

Why is it happening?

Why is that?

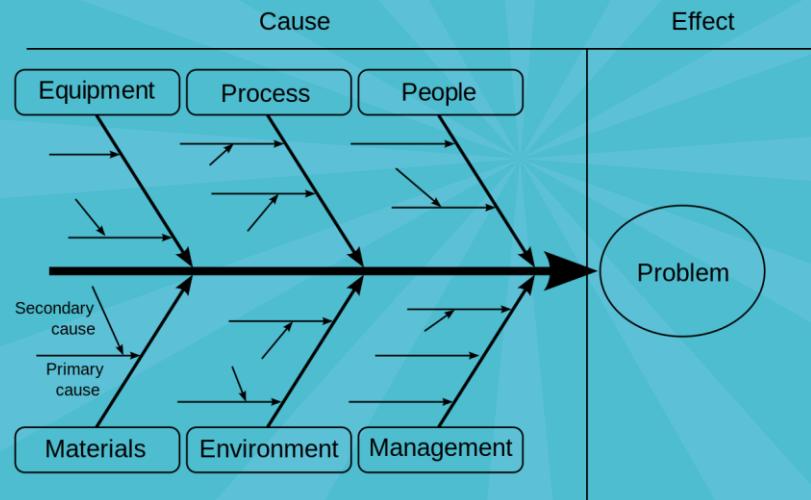
Why is that?

Why is that?

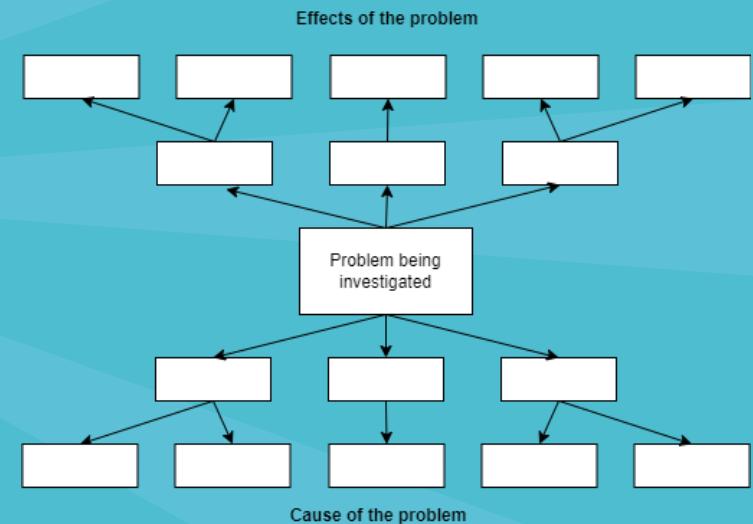
Why is that?

Root Cause

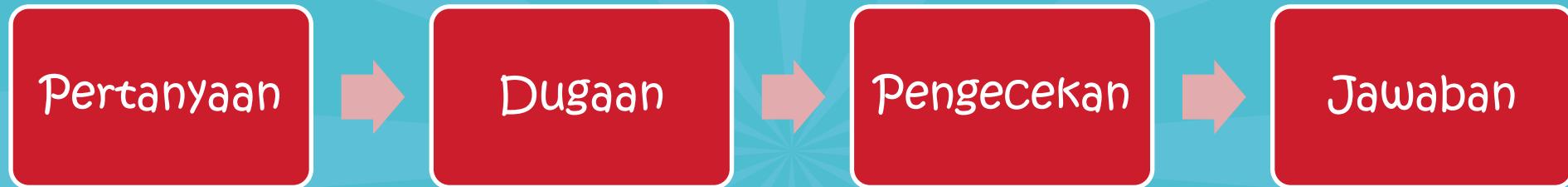
## Fishbone Diagram



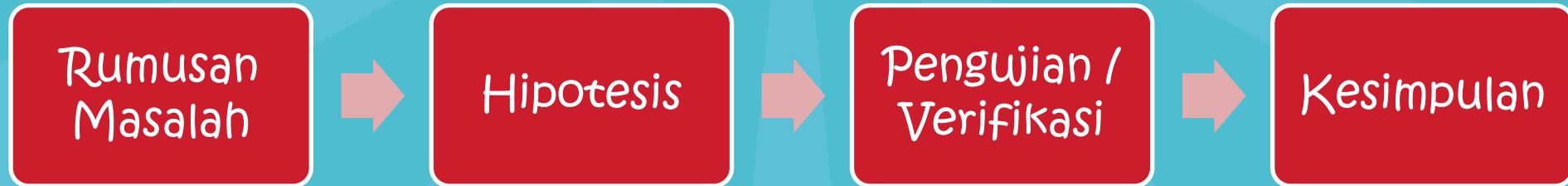
## Problem tree



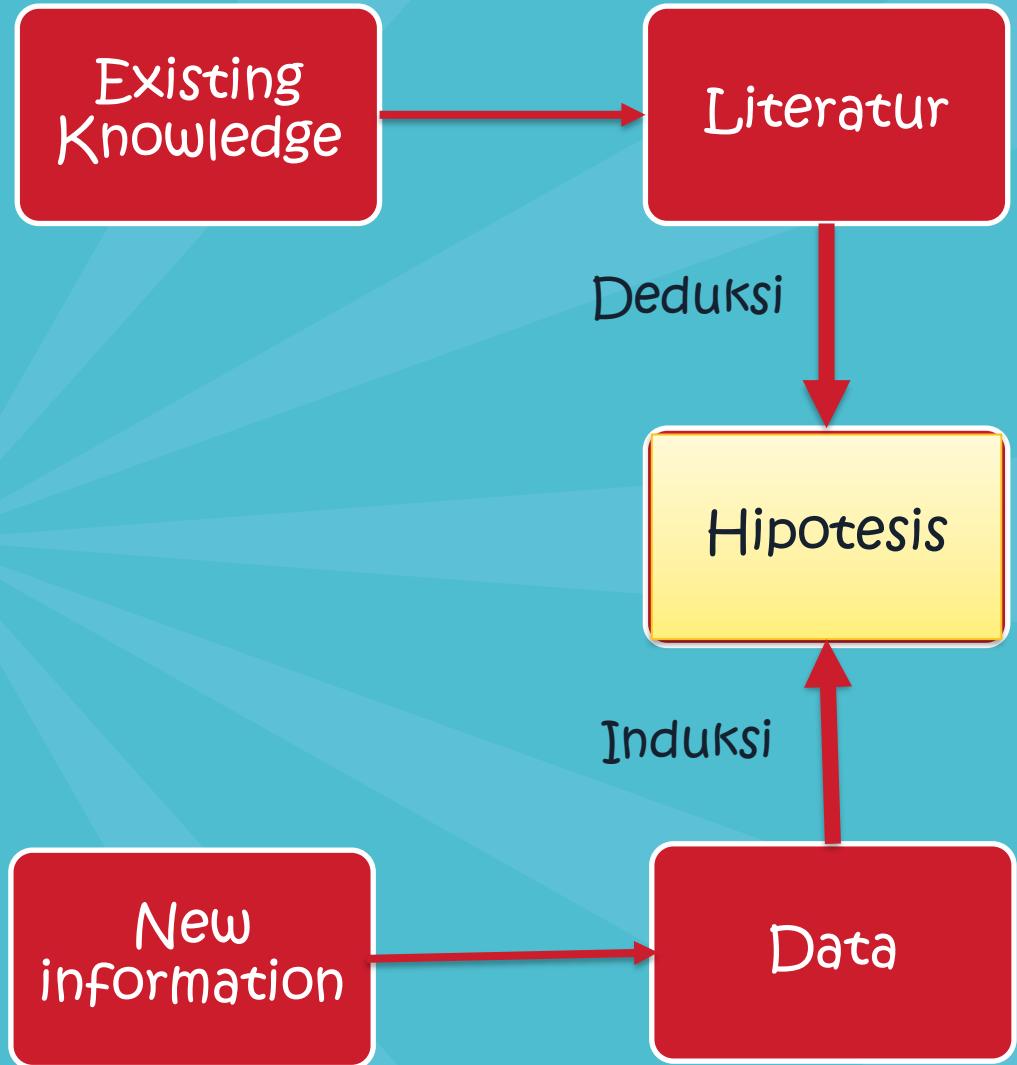
Setiap sub-masalah pada dasarnya  
adalah pertanyaan

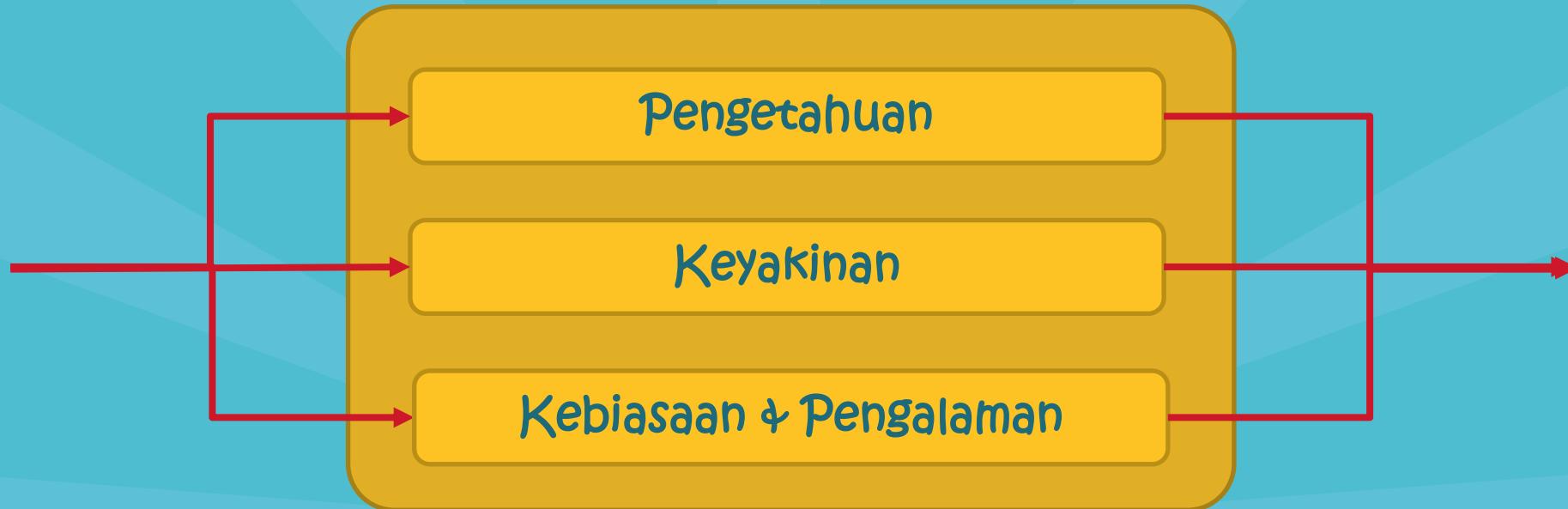


Kalau pakai bahasa penelitian



Hipotesis  
dapat diuji  
dari 2 arah





System 2 pun memiliki filter  
Sering menghasilkan kekeliruan berpikir, yang  
datang dari 3 pintu



## Kekeliruan di input



### Ignorance

- Dianggap kemungkinan besar salah/benar karena sulit/gagal dimengerti

### Ad hominem

- Atribusi subjek terhadap argumen

### Equivocation

- Tidak konsistennya definisi

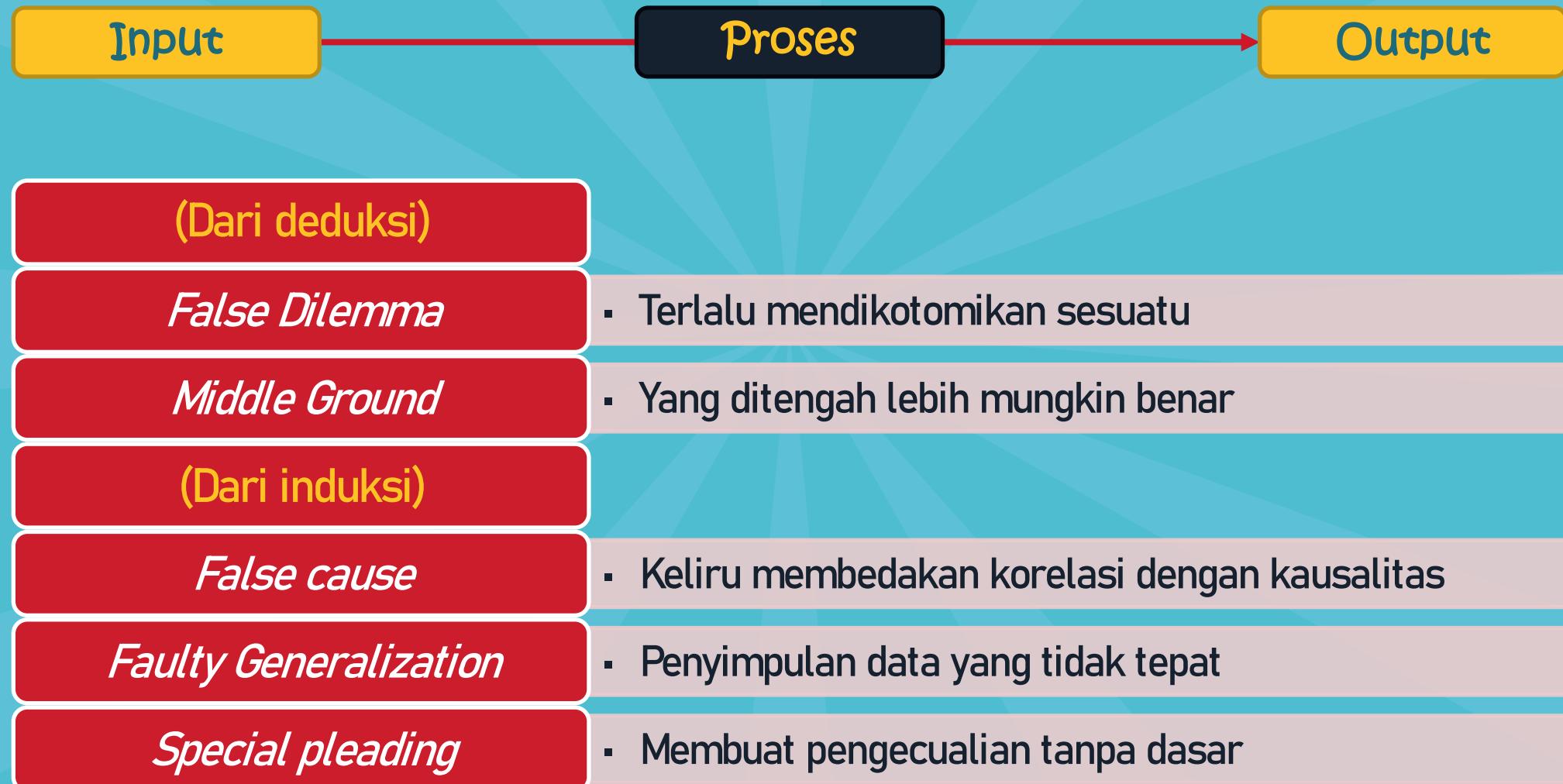
### Anecdotal

- Berbasis pengalaman pribadi

### Texas Sharpshooter

- Pilih-pilih Data

## Kekeliruan di proses



## Kekeliruan di output



Loaded  
Question

- Pertanyaan yang mengandung asumsi

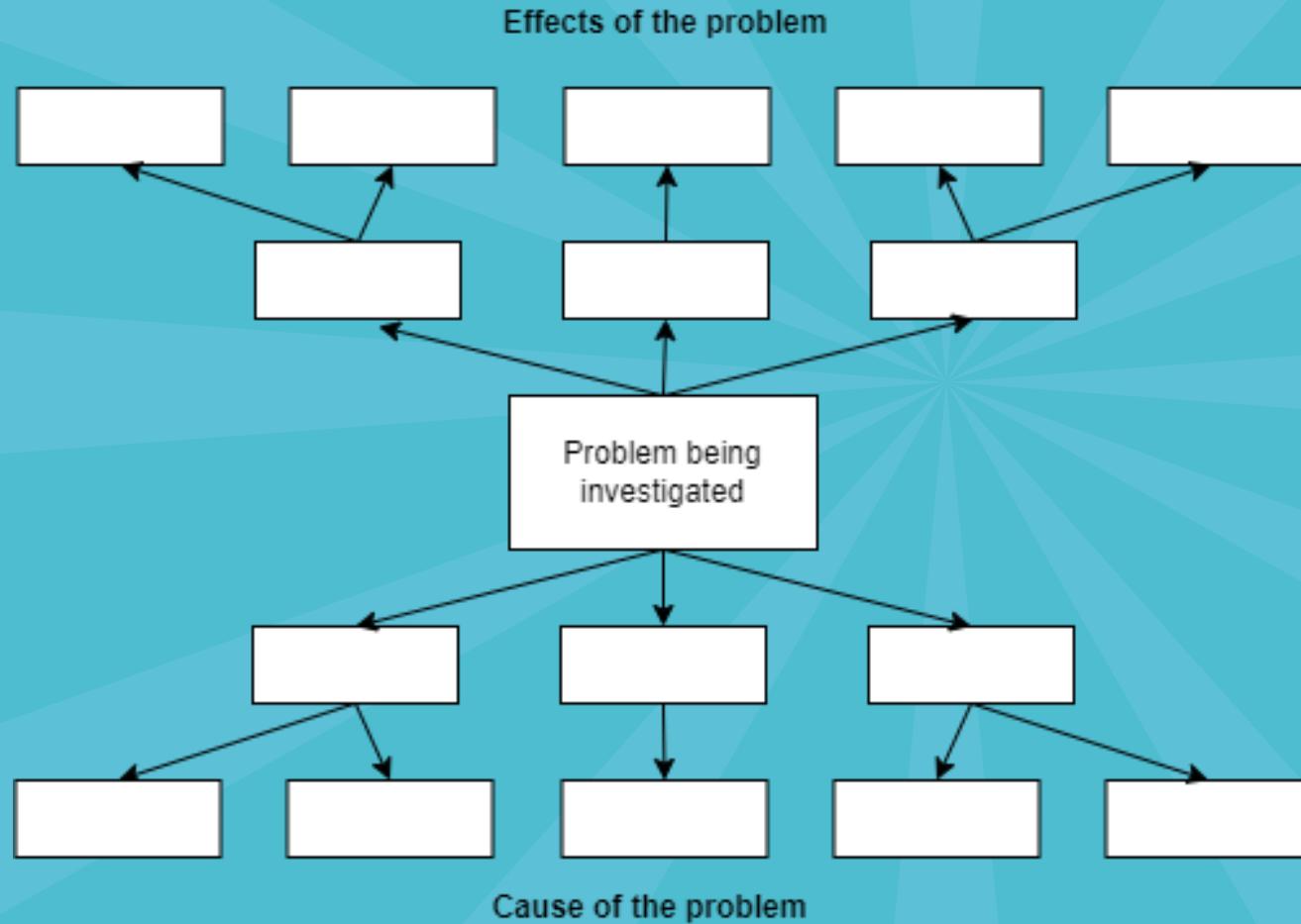
Appeal to  
emotion

- Memanipulasi emosi atau perasaan

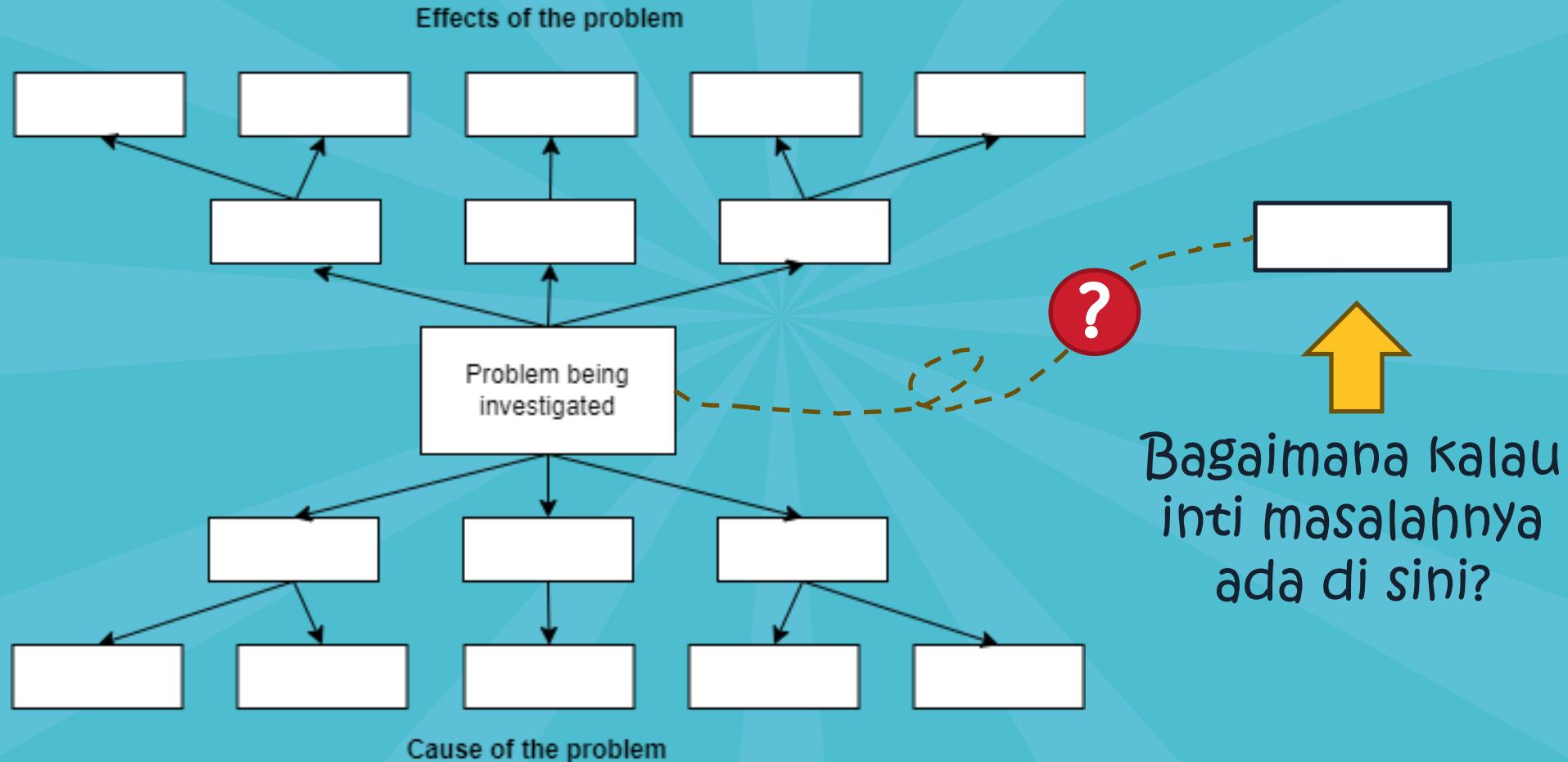
Many questions

- Melempar pertanyaan bertubi-tubi

# Misal sudah ada pemetaan masalah hasil analisis



# Misal sudah ada pemetaan masalah hasil analisis



Observation

Analysis 1

Analysis 2

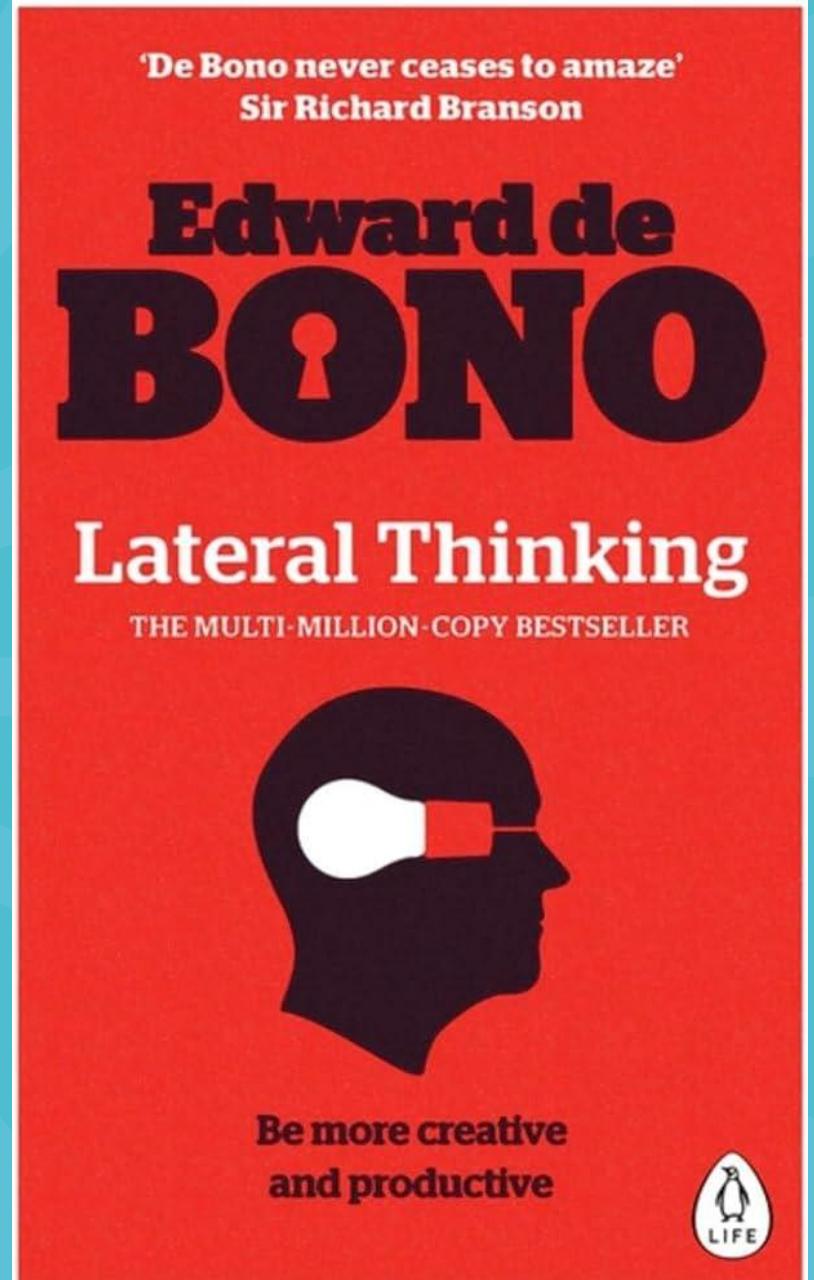
Analysis 3

Conclusion

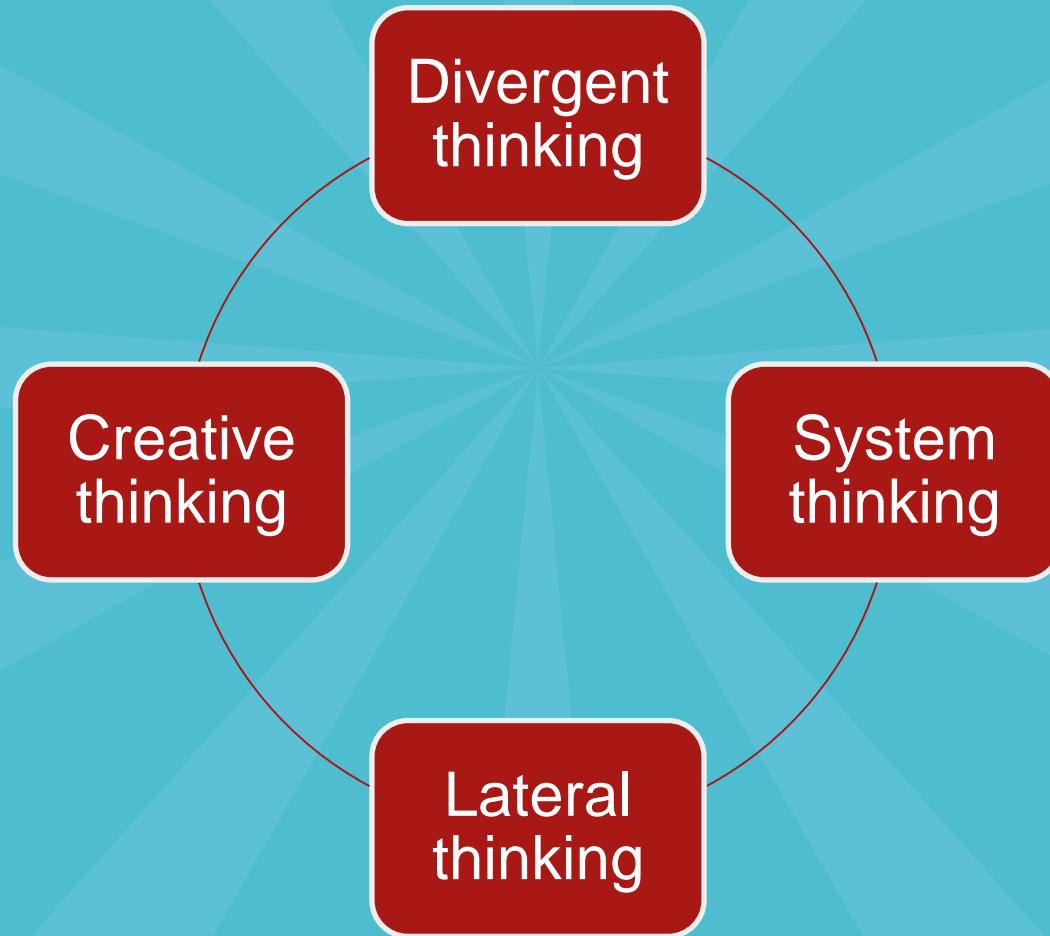
Berpikir runtut dan beralur  
sering disebut “vertical  
thinking”

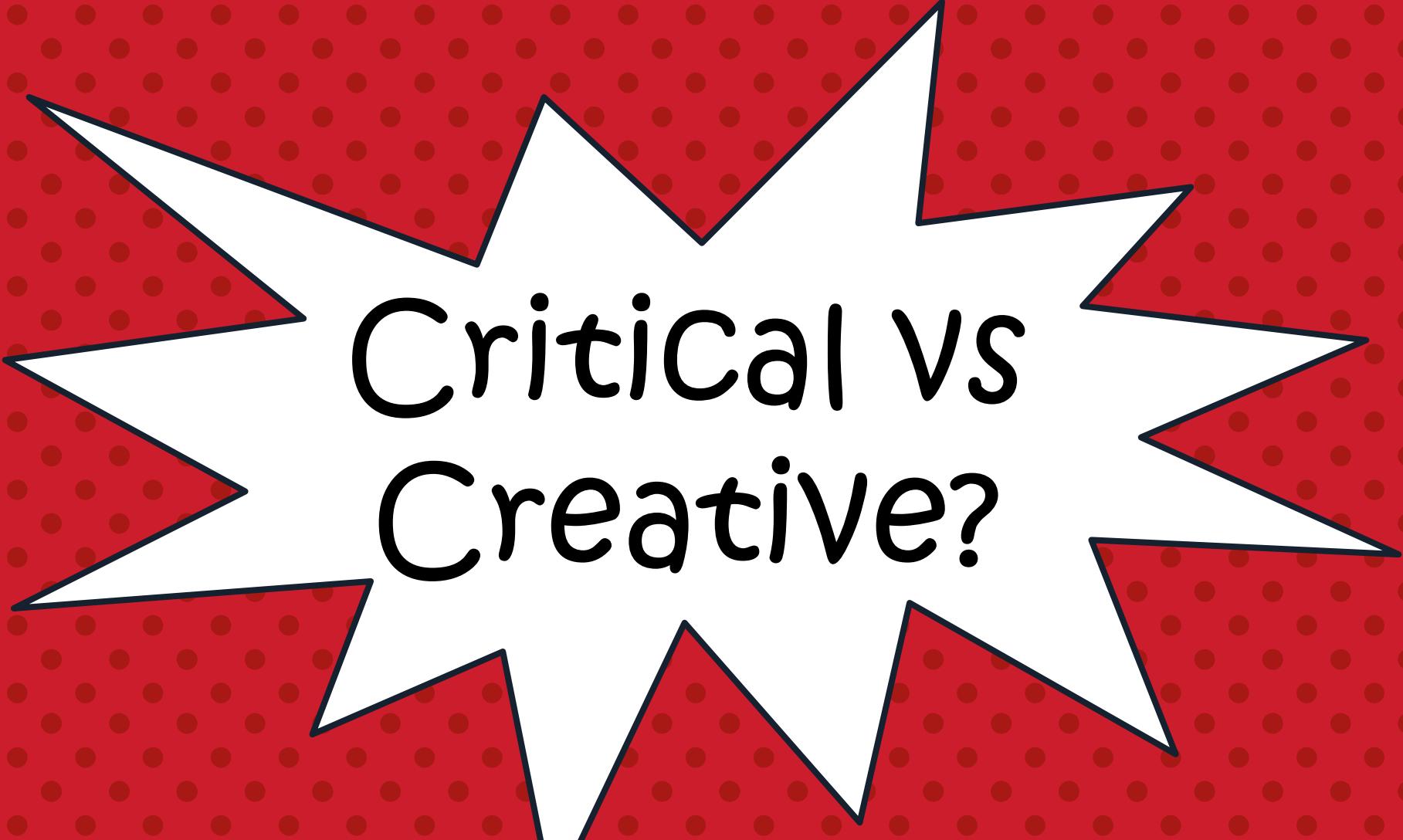
Padahal mungkin saja ada  
jalan lain “di luar jalur”

Berusaha keluar dari jalur, adalah cara berpikir “menyamping” atau lateral



# Lateral thinking adalah salah satu bentuk dari berpikir kreatif





Critical vs  
Creative?





Apa yang terlihat?



Apa yang terlihat?

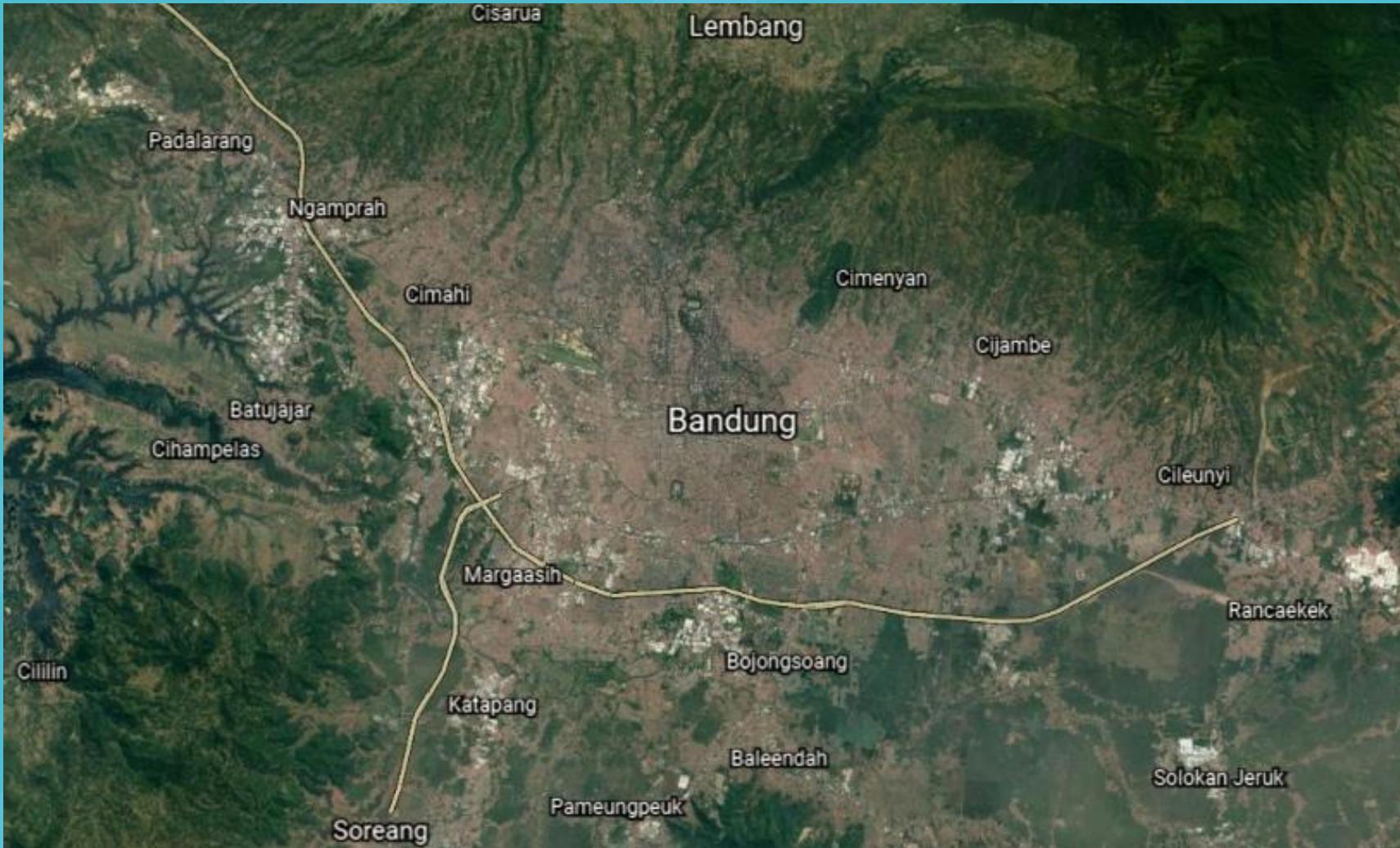


Apa yang terlihat?





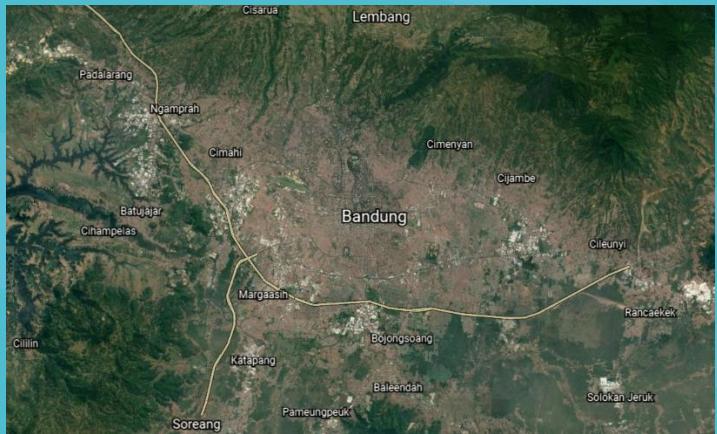
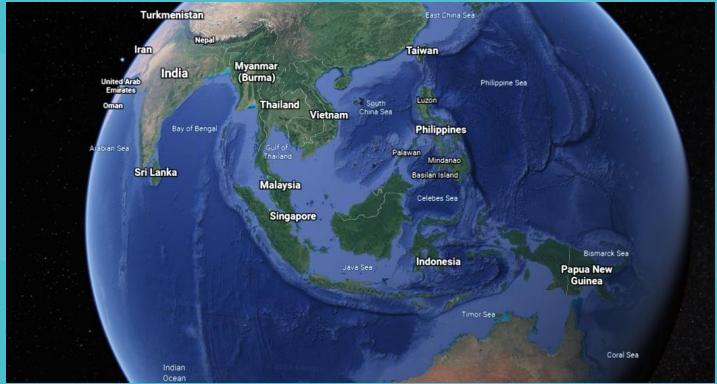
Bandung terlihatkah?  
Bumi bulatkah?



Bandung terlihat kah?  
Kalau gedung sate?  
Bumi bulat kah?



Gedung sate sekarang terlihat?  
Kota Bandung sendiri?



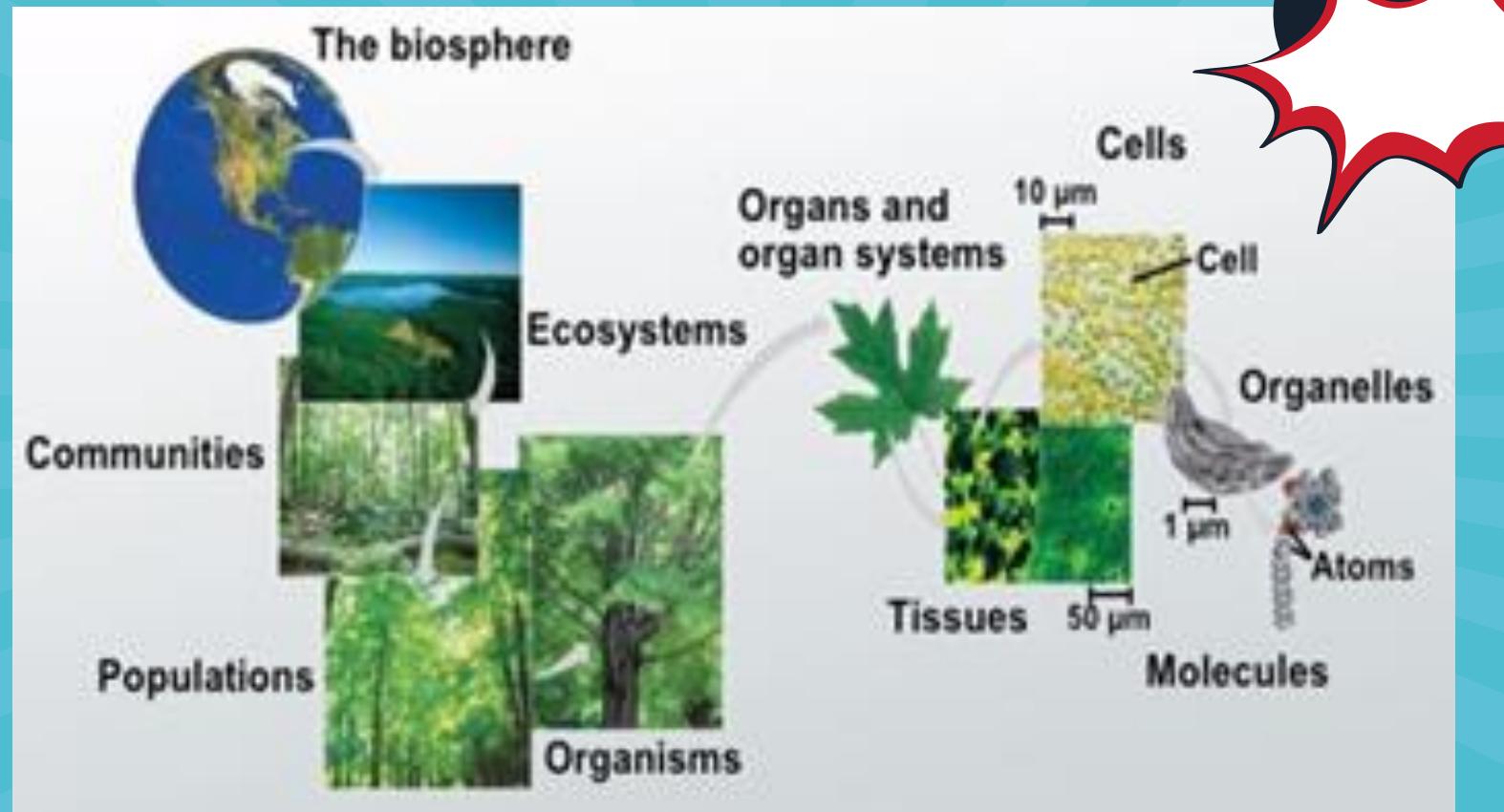
Kontekstual,  
holistic, *eagle*  
*view*, abstrak

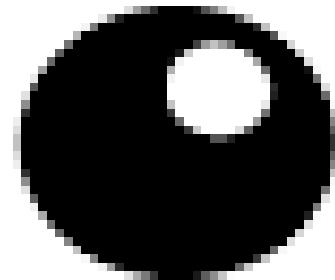
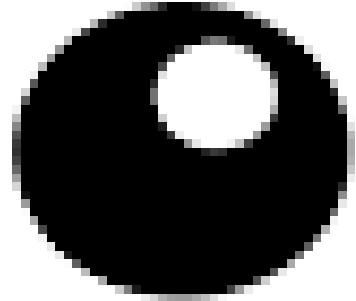


Tekstual,  
rinci,  
particular,  
*frogview*,  
konkrit

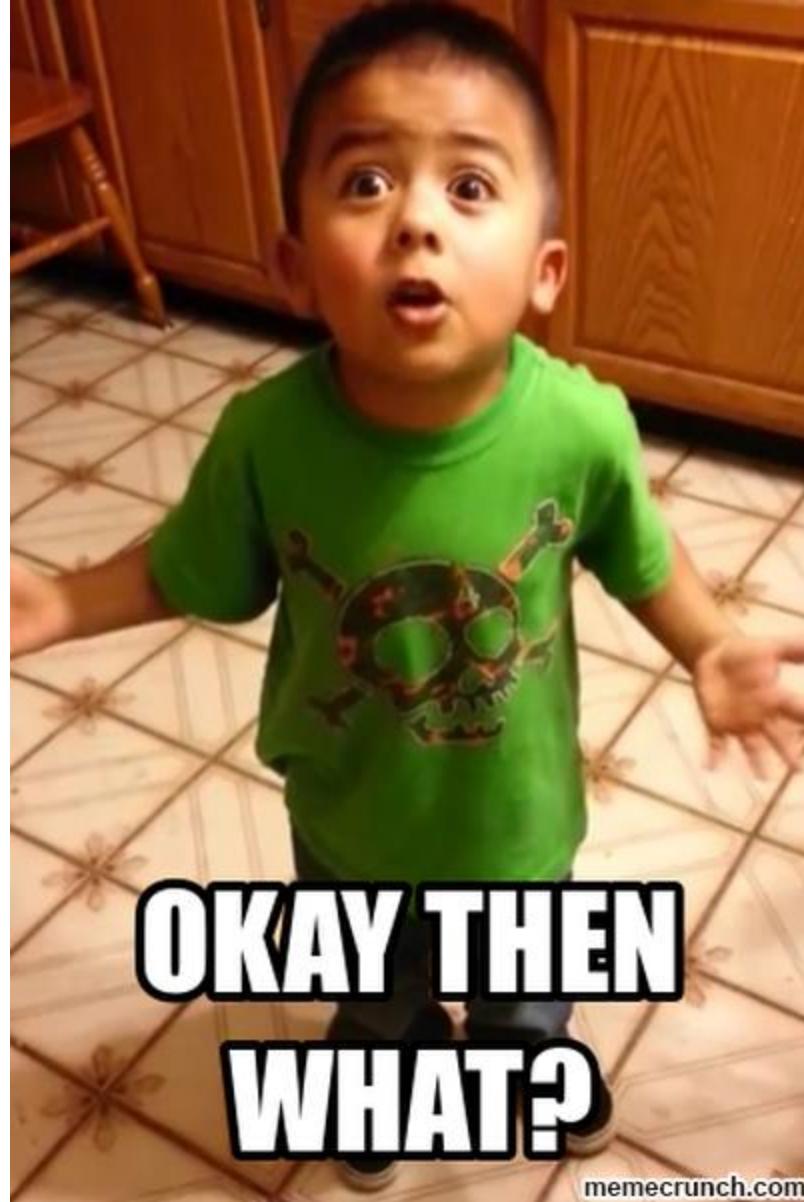
# Emergent properties

Kumpulan dari objek dalam satu kesatuan akan memunculkan sifat-sifat baru (*emerge*)

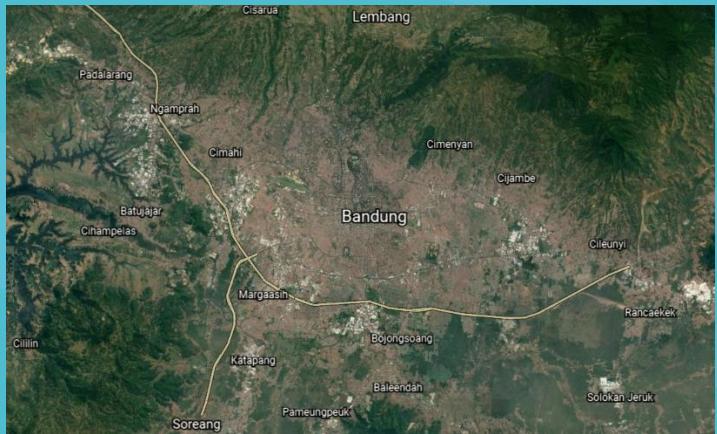
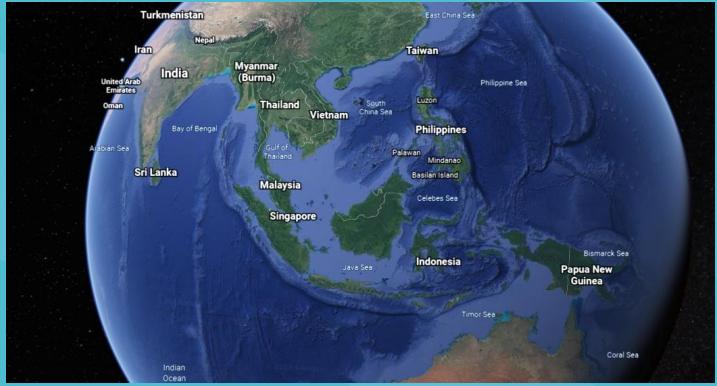




whoa...



**OKAY THEN  
WHAT?**



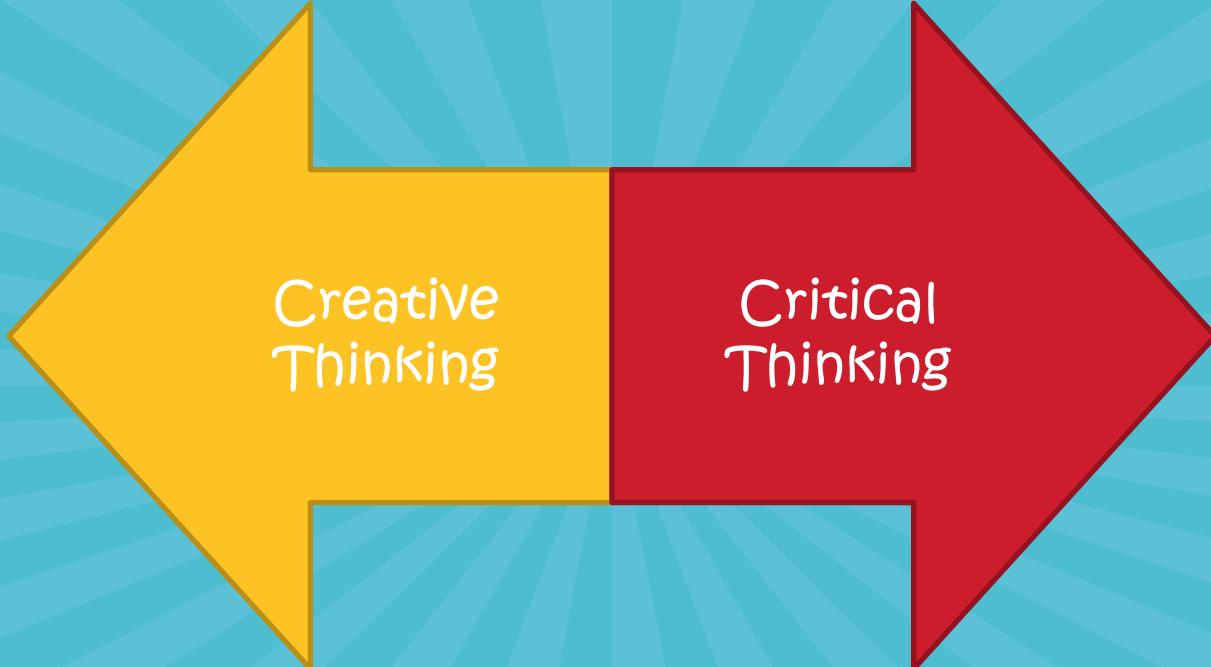
“Creative”



“Critical”



- Create
- Ideate

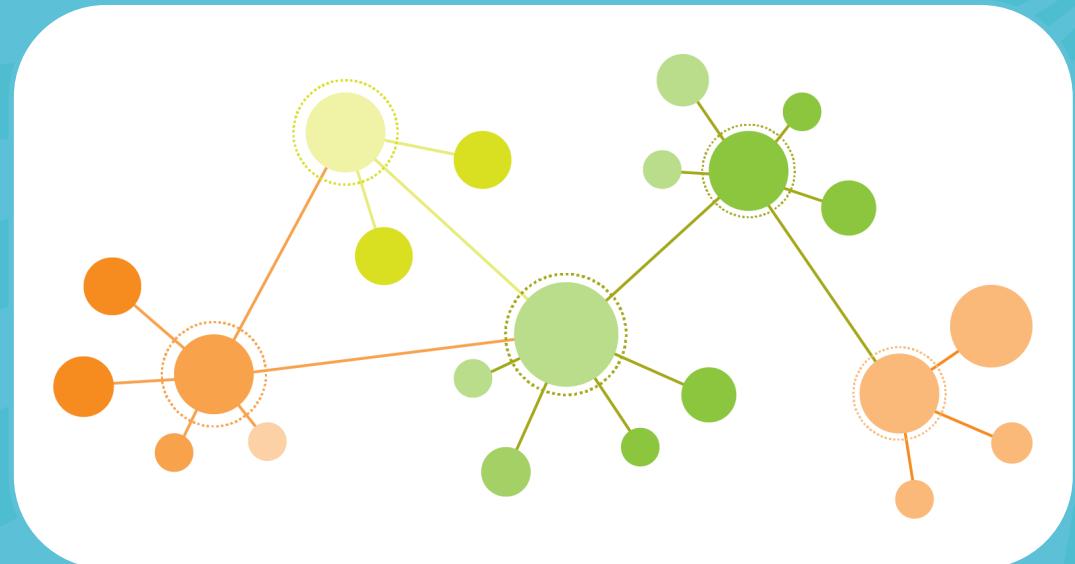


- Break Down
- Conclude



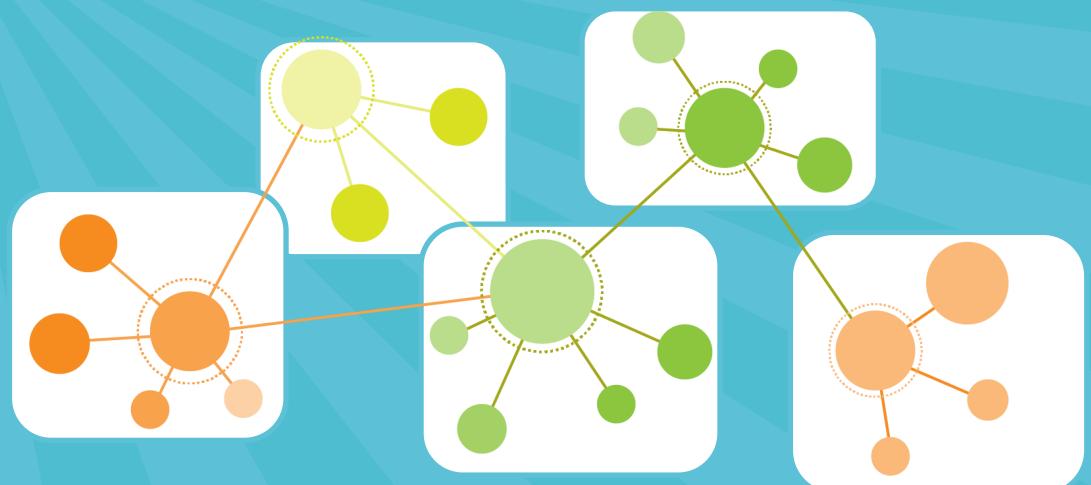
## Creative Thinking

Sintesis, organistik-holistik,  
mengoneksikan, membangun  
menghubungkan,  
menciptkan, menyatukan,  
divergen



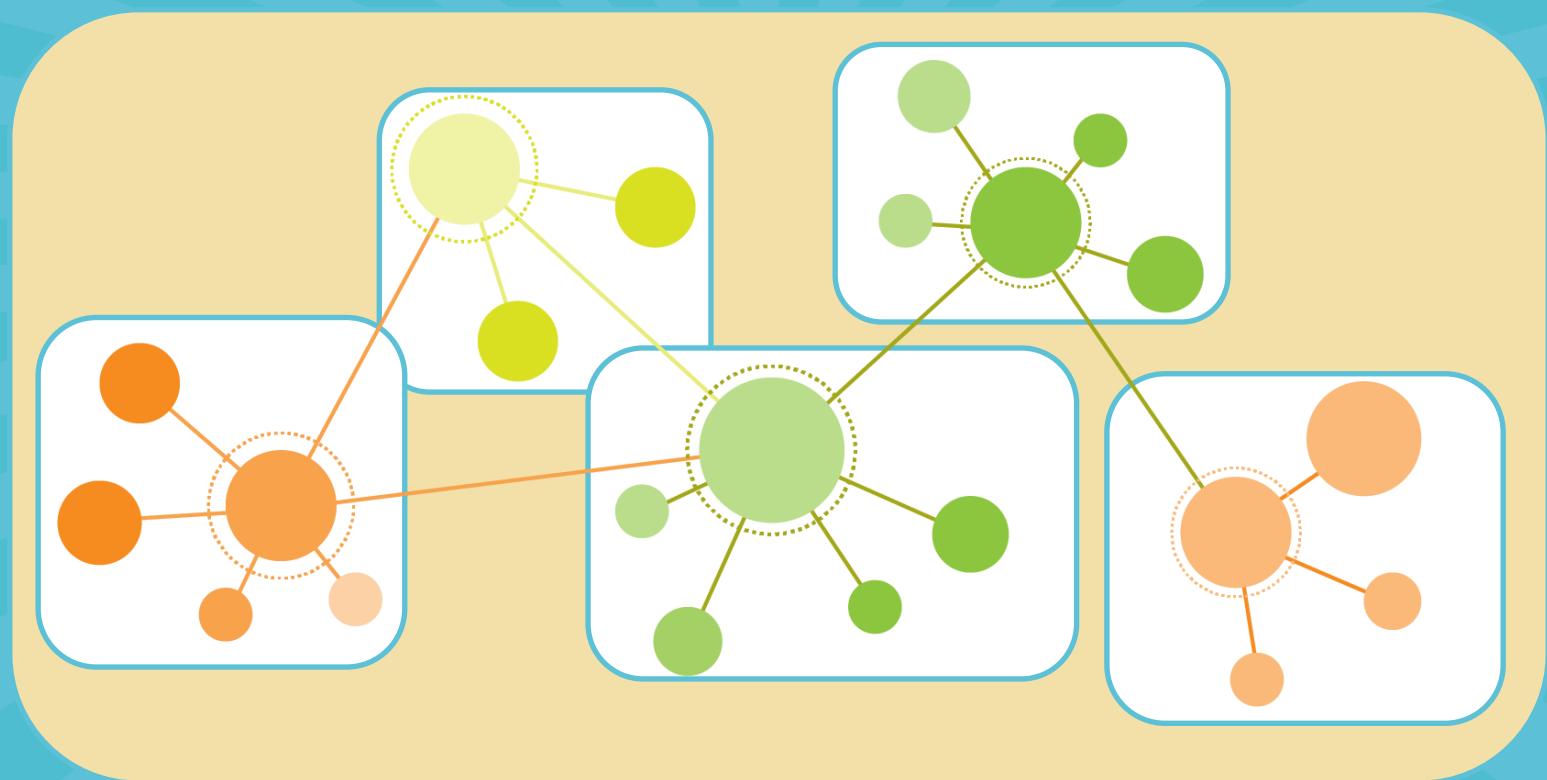
## Critical Thinking

Analisis, mekanistik  
Memilah/memecah  
Merinci, meneliti,  
membongkar, menelaah  
Mengelompokkan  
konvergen



# Thinking

Memahami secara bersamaan  
keseluruhan sekaligus detail



Frog  
Leap  
(Intuisi,  
creative  
thinking)



Gagasan umum

Deduksi &  
Analisis  
(Logika,  
critical  
thinking)

Konsep rinci

# Saintis

Creative Thinking

Critical Thinking

# Teknik

Creative Thinking

Critical Thinking

# Desain

Creative Thinking

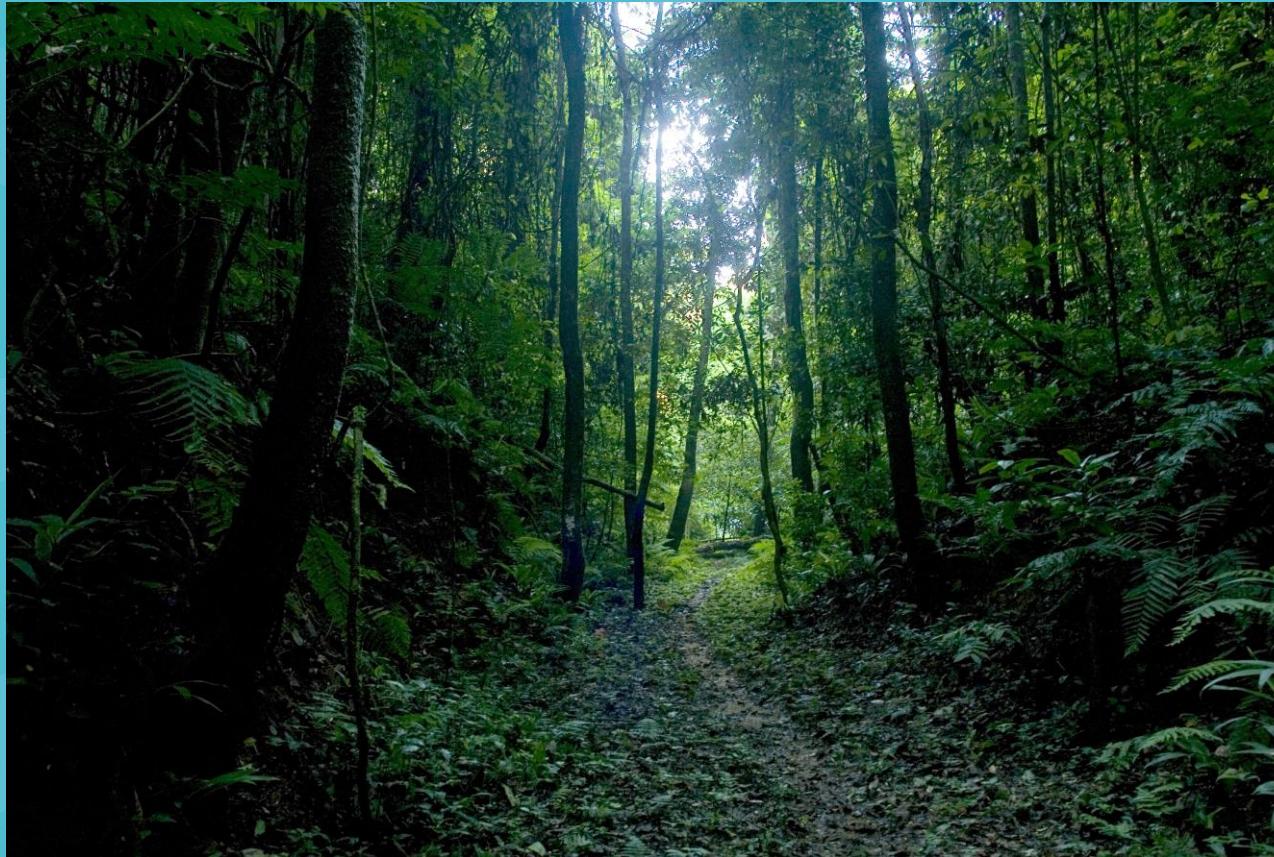
Critical Thinking

# Seniman

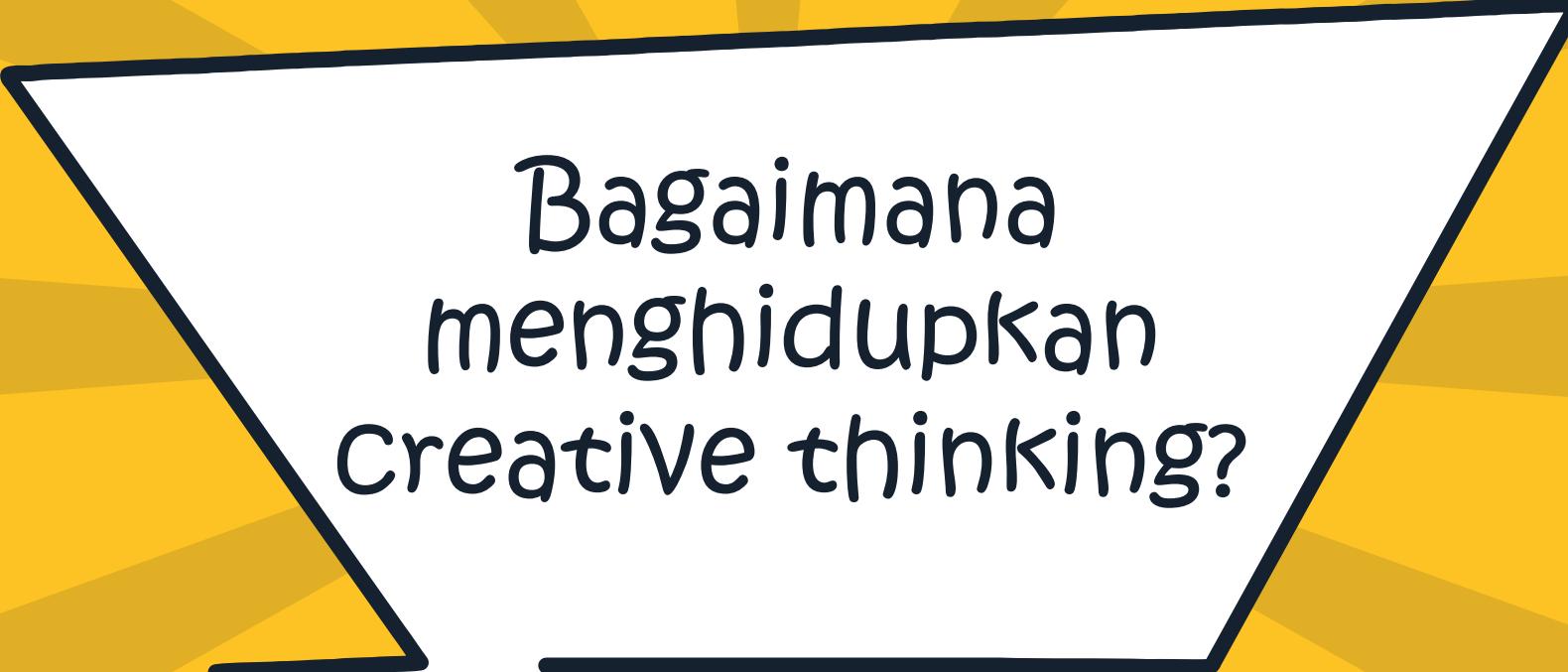
Creative Thinking

Critical Thinking

Bagi para pemikir vertikal (kritis), perlu belajar “belok” agar bisa memiliki peta lebih lengkap



Bagi para pemikir kreatif, perlu belajar “lurus” agar memiliki arah yang lebih jelas



Bagaimana  
menghidupkan  
creative thinking?



Inti dari creative/lateral thinking adalah bagaimana menemukan alternatif

Simulasi pikiran / What-if

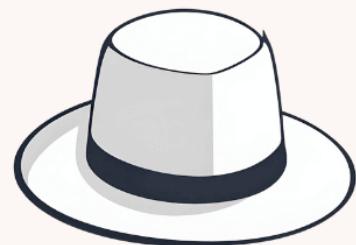
Abstraksi dan Analogi

Rotasi aktivitas / lingkungan

Teknik Aleatori (random entry)

Stimulus eksternal

Diam



## The white hat

Data, facts & information

What we know, and what we ought to find out



## The red hat

Feelings, reactions + vibes

How we feel: gut instincts, honest emotions, intuition



## The blue hat

Manages the process

Listens, directs attention, integrates, moves forward



## The green hat

Creativity & surprise

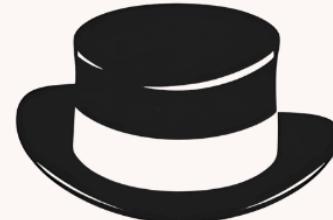
Alternatives, reframing, out-of-the-box ideas, what-ifs



## The yellow hat

Sunshine & positivity

Optimism, possibilities, upsides, potential



## The black hat

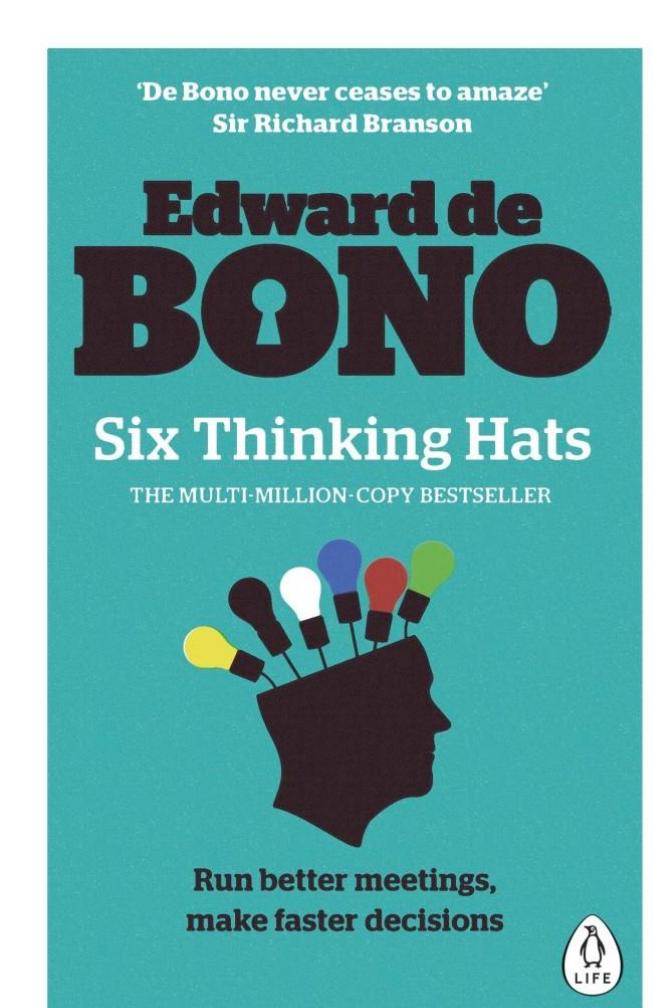
Caution & skepticism

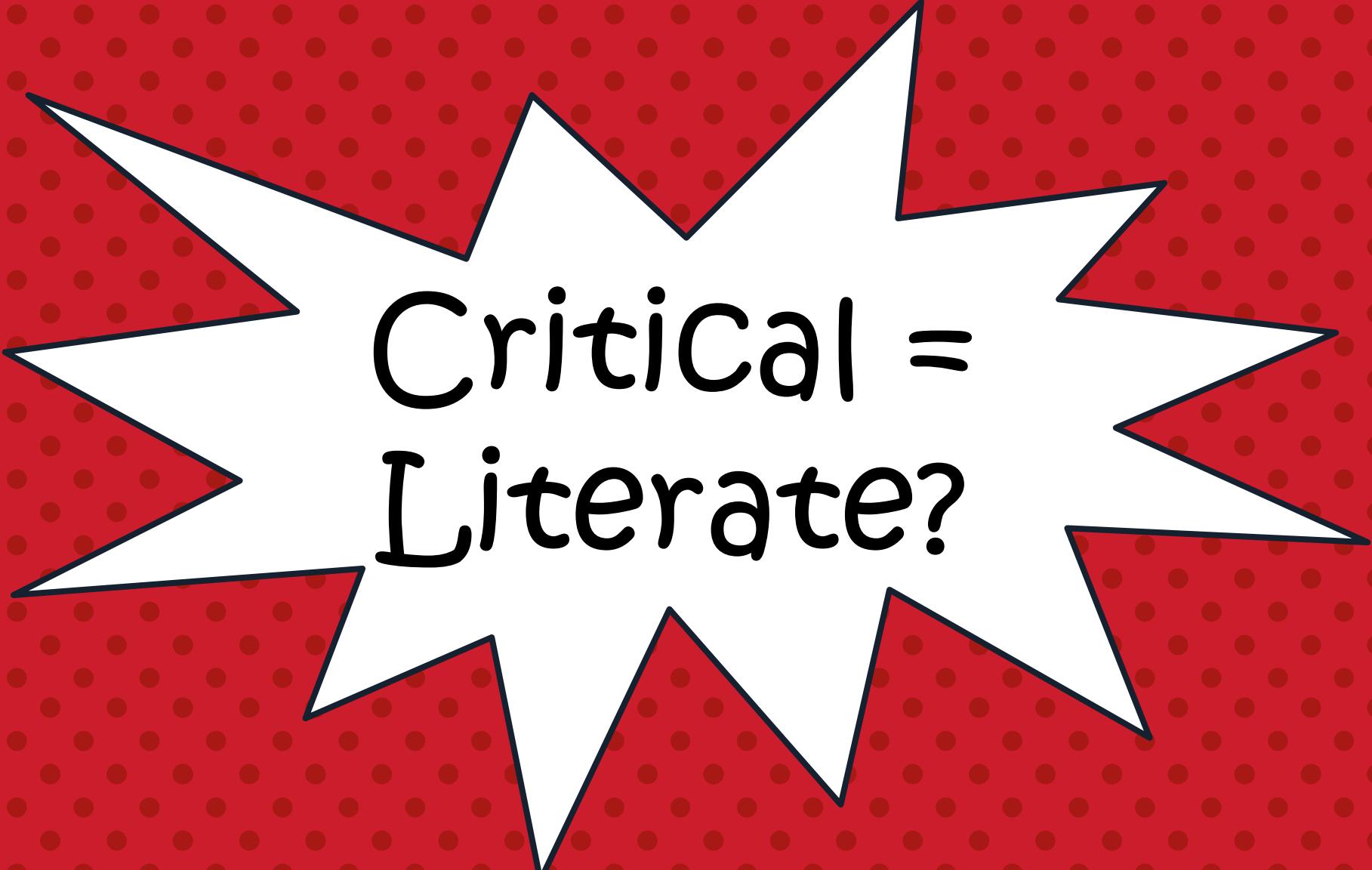
Dangers, threats, risks, drawbacks, worst-case scenarios

A concept by  
Edward de Bono, 1985.

BiteSize Learning

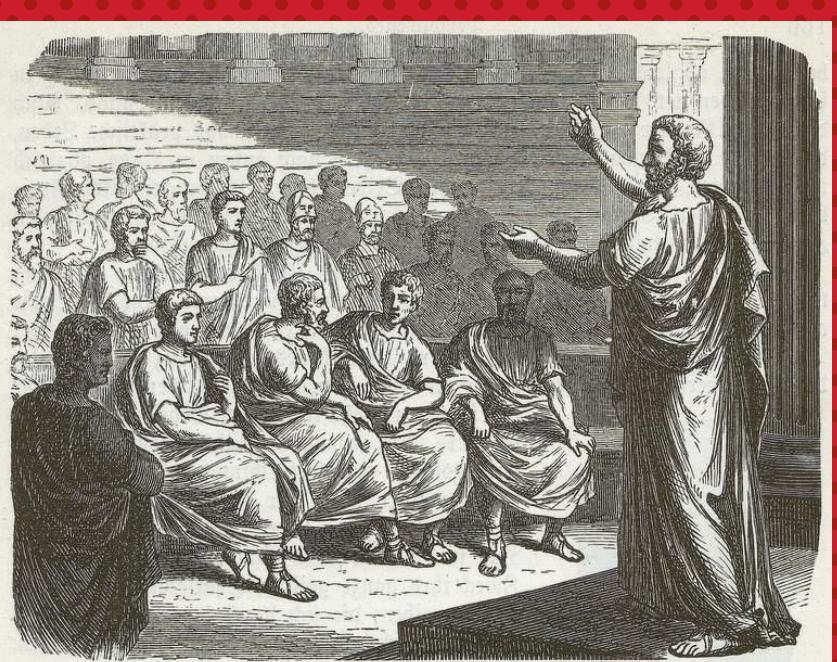
Metode





Critical =  
Literate?

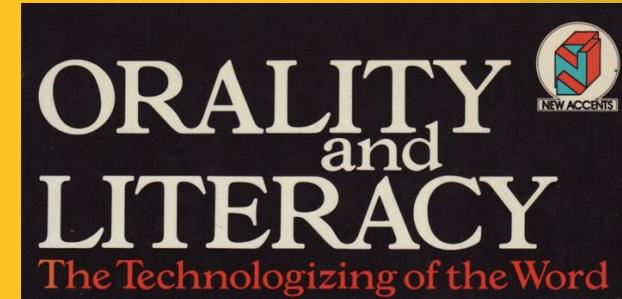




# Kelisanan



# Literasi



Cicero thought of, however, as itself a text), and Josephus even suggested that Homer could not write, but he did so in order to argue that Hebrew culture was superior to very ancient Greek culture because it knew writing, rather than to account for anything about the style or other features in the Homeric works.

From the beginning, deep influences for what we have in the Homeric poems have been offered with regard to the Iliad and the present. They have been derived from antiquity, the truest, the most important, the most interesting. To interpret the Homeric poems to be done, it has been interpreted as the most important, the best, the most congenial. Even when the Homeric Movement was at its height, scholars and critics still tried to impute to primitive qualities that they themselves found congenial. More than any other school, the American classicist Milman Parry's work has undercutting this cultural chauvinism so as to go into the Homeric poems on their own terms, even when those ran counter to the received view of what poetry and poets ought to be.

**Walter J. Ong**



### Aspek Derivat

Indra Utama

Kehadiran informasi

Struktur Pikiran

Basis ilmu

Transfer ilmu

Interaksi

Wujud informasi

Sifat Pengetahuan

Identifikasi diri

Komunikasi sosial

### Budaya Literasi

Critical

Penglihatan

Awet

Abstrak

Logika

Eksplisit

Termediasi

Terisolasi (objek)

Tekstual

Individual

Dialektis

### Tradisi Lisan

Creative/Lateral

Pendengaran

Temporal / Seketika

Konkrit

Memori

Implisit (naratif)

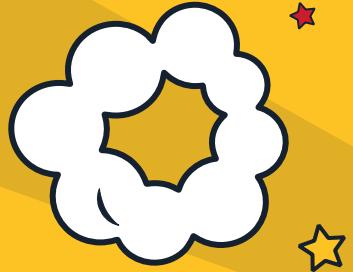
Langsung

Holistik (subjek)

Kontekstual

Komunal / Tribal

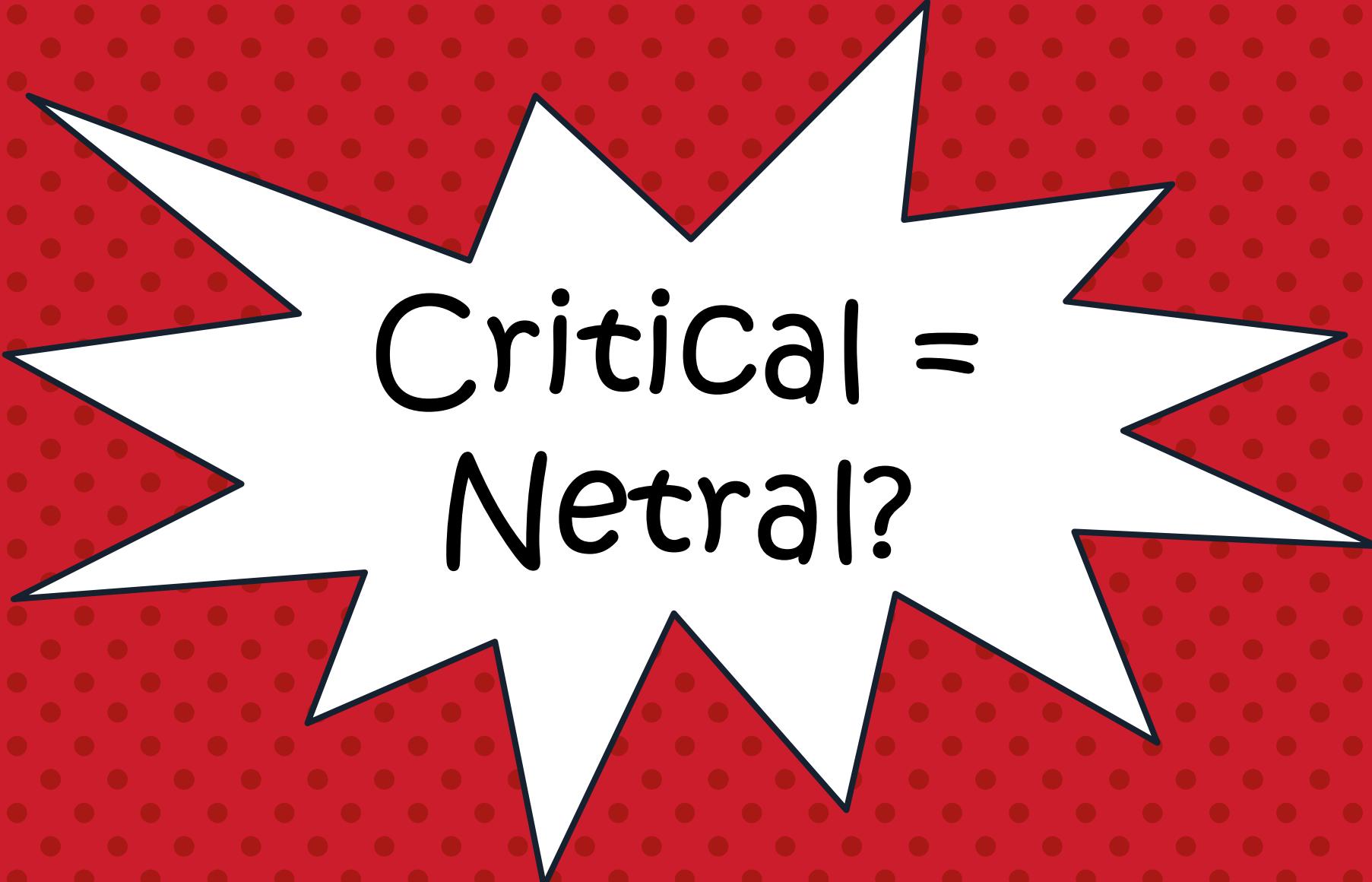
Reaktif



Buku mendorong dialog intim pikiran  
dengan teks; mengaktivasi system 2

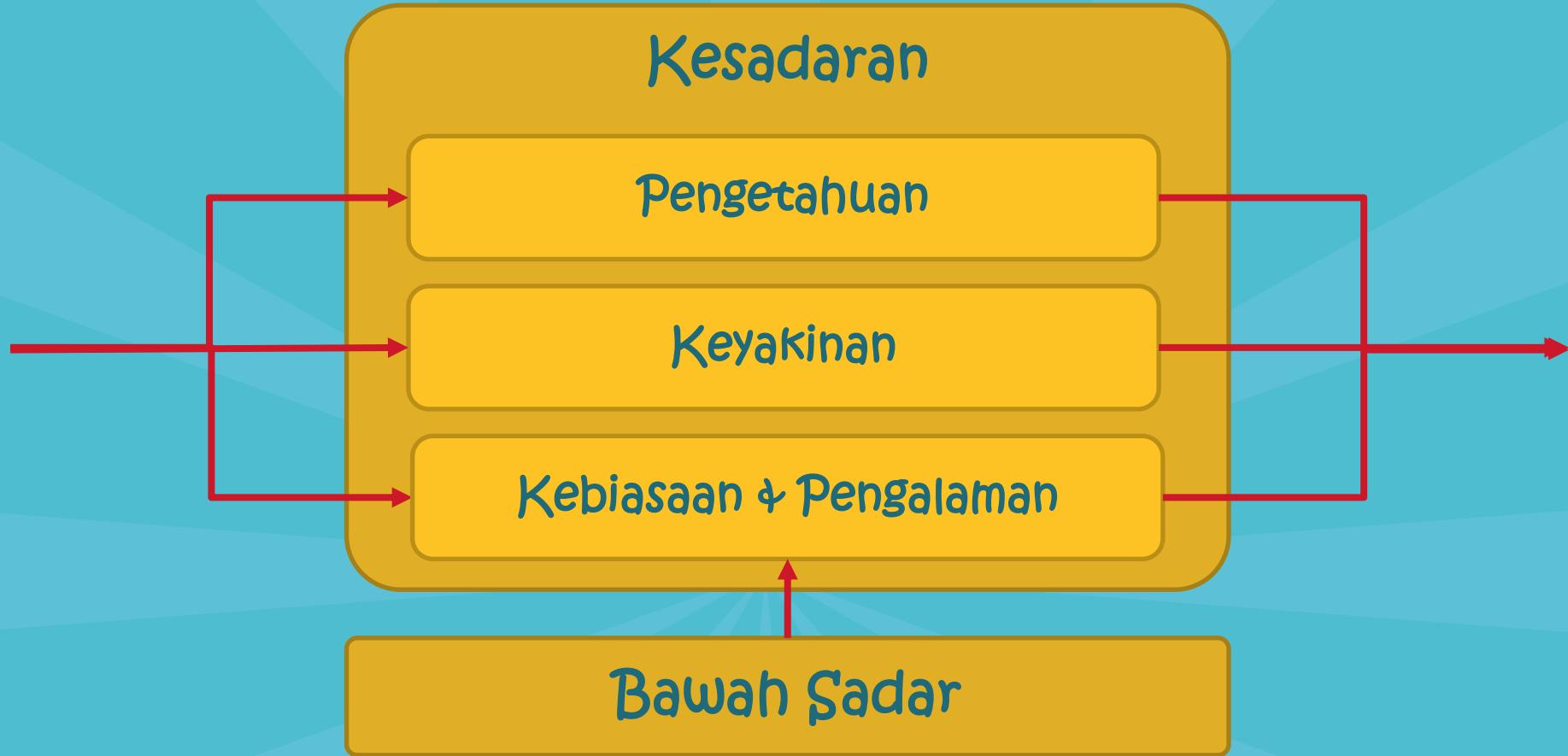


Televisi, radio, chat, youtube, media sosial  
Merupakan “kelisanan sekunder”  
Subjek secara pasif menerima informasi  
**Mematikan system 2**



Critical =  
Neutral?





Sistem 1 akan selalu memengaruhi sistem 2  
Menghasilkan bias kognitif

## *Confirmation bias*

- Cenderung mengaitkan dengan keyakinan yang sudah ada

## *In-group bias*

- Terbawa keyakinan kelompok

## *Anchoring*

- Terpengaruh *first judgement*

## *Availability heuristic*

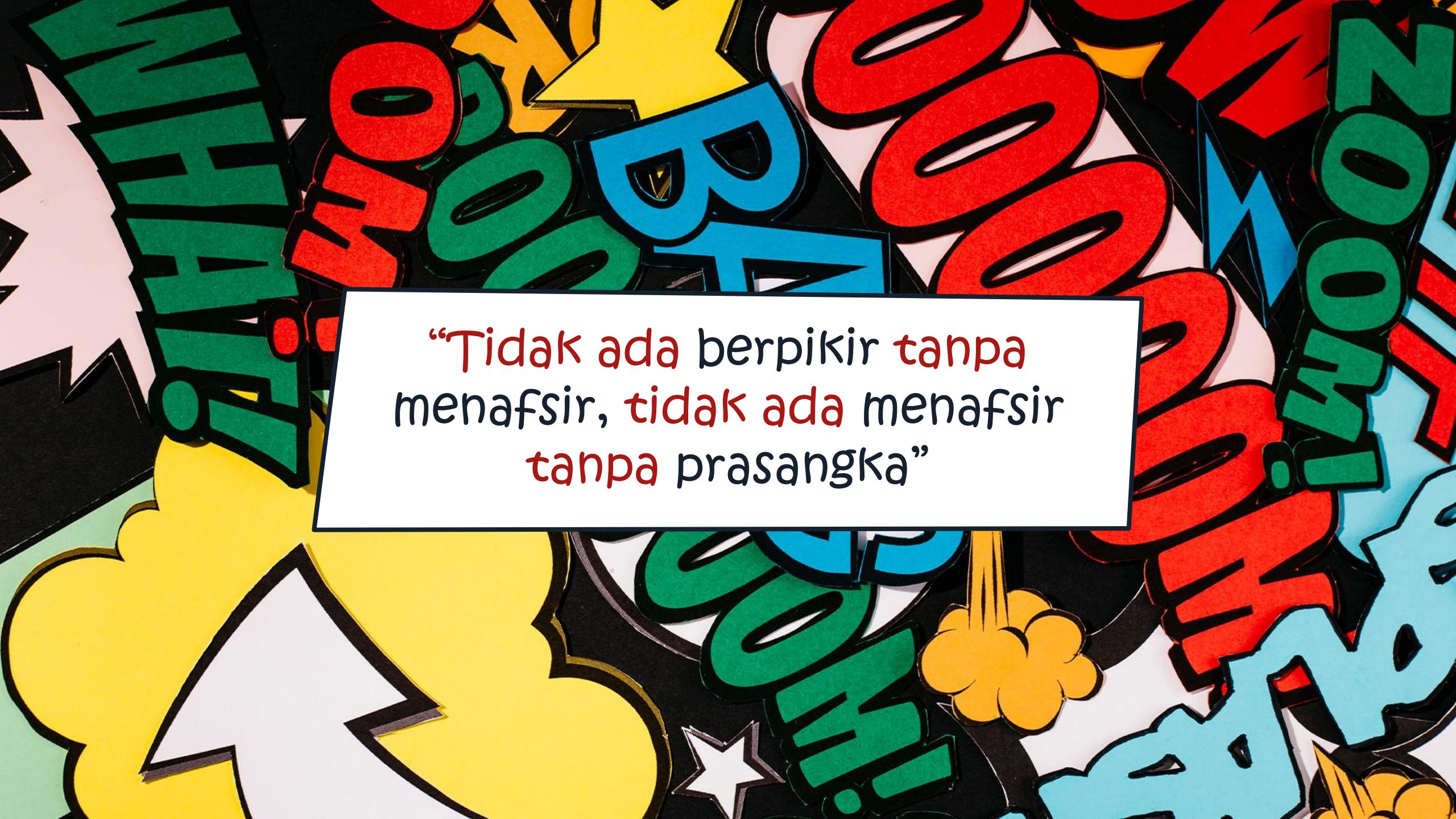
- Hanya melihat yang mudah dipikirkan

## *Halo effect*

- Terpengaruh kesukaan pada orang

Bias Kognitif

Sayangnya...



“Tidak ada berpikir tanpa  
menafsir, tidak ada menafsir  
tanpa prasangka”



## Bounded Rationality

rasionalitas yg dibangun manusia akan selalu terbatasi oleh persepsiya sendiri

# Bias kognitif melekat di system 1

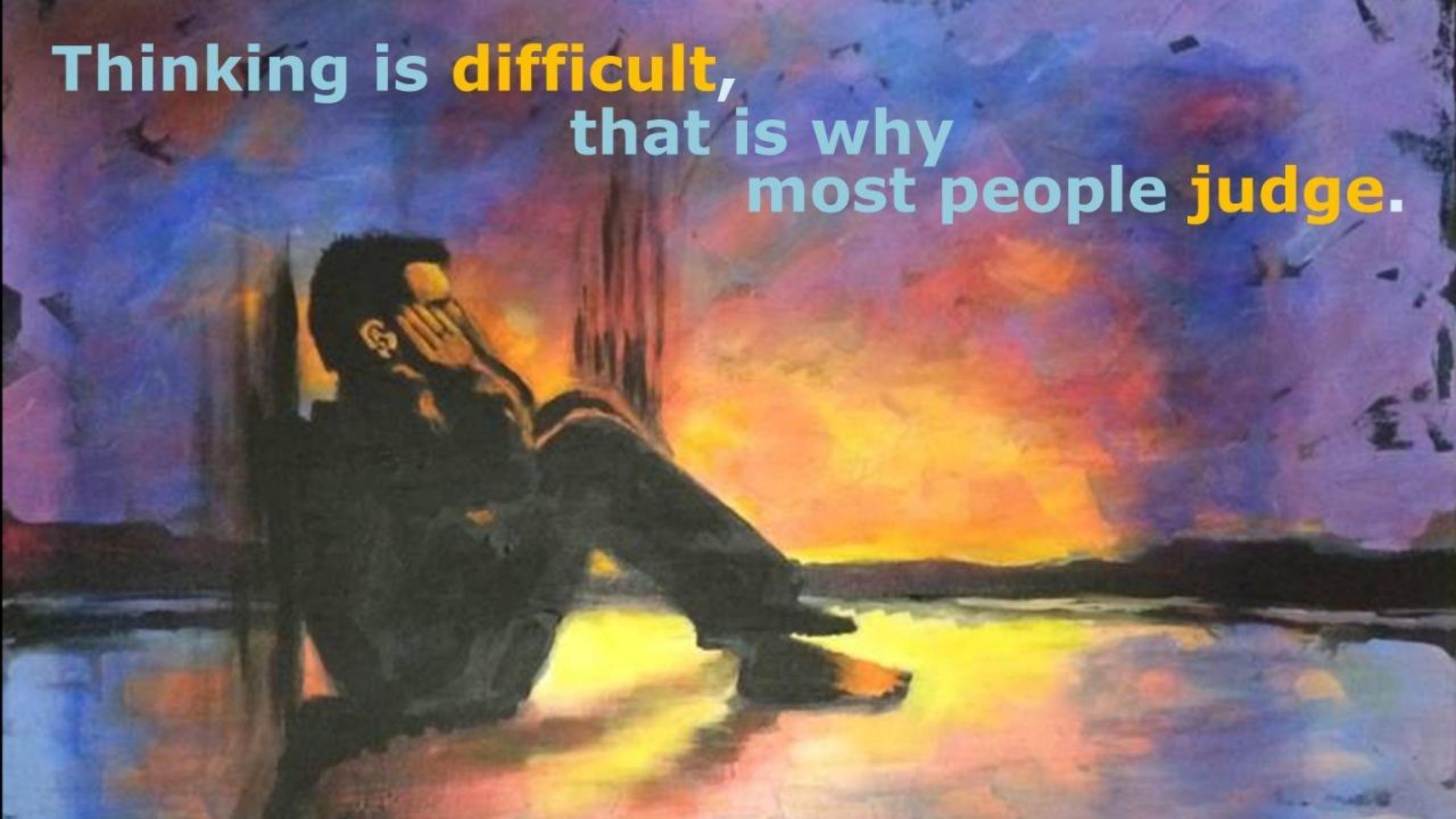


Bias kognitif hanya bisa dikurangi, dengan terus diidentifikasi oleh system 2



Berpikir memang  
membuat tidak  
nyaman

Tapi semakin sering dilakukan, bisa  
diambil alih oleh sistem 1



Thinking is difficult,  
that is why  
most people judge.

Oke, mungkin  
cukup dulu

Terima Kasih ^^



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