



# Thinking patterns for the novice clinician

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# Why discuss thinking patterns?

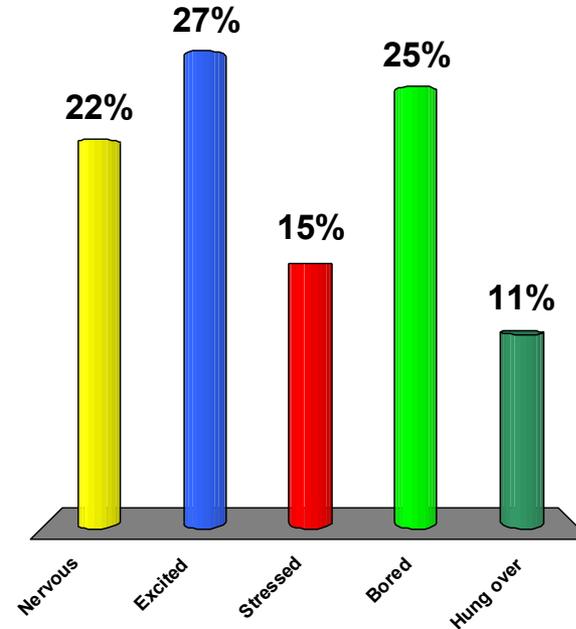




**RVC**

# When I arrived at college today I was feeling .....

1. Nervous
2. Excited
3. Stressed
4. Bored
5. Hung over



# 2 months after graduation

- You started your new job in a lovely veterinary practice in your home town a few weeks ago
- It's a busy Saturday morning and the waiting room is full
- Your next patient is a dog called Spencer



# Spencer



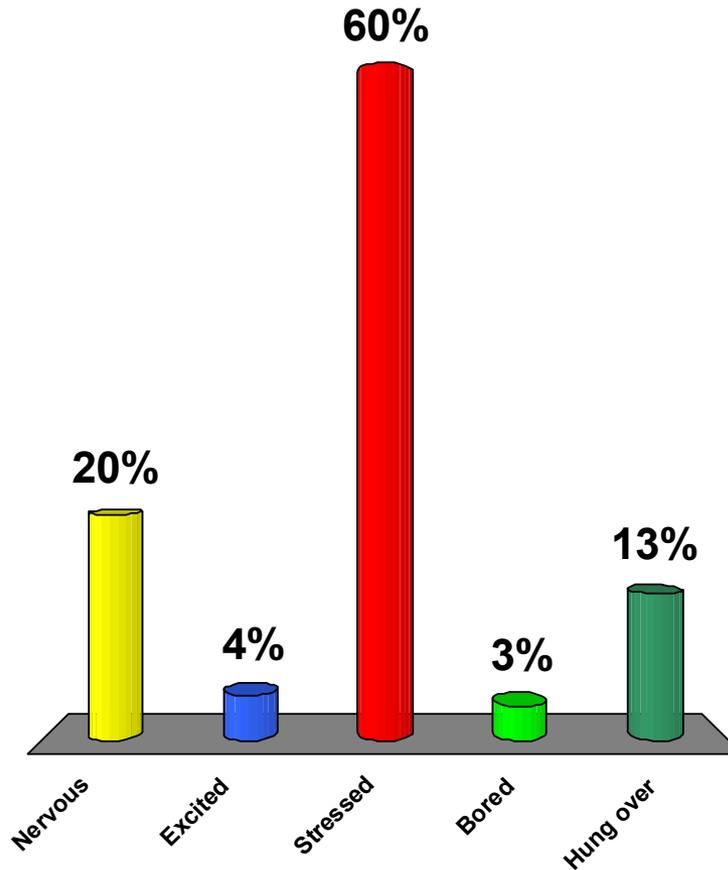
# Spencer

- › 5 year old male Border collie
- › Vomiting for 3 days
- › Losing weight for 4 weeks
- › Intermittent diarrhoea for 4 weeks
- › Decreasing appetite for 4 weeks
- › Very weak when examined in consult – he looks terrible!
- › The owner is your old science teacher from school and also your boss's best friend
- › Your boss is currently climbing Mount Everest and cannot be contacted
- › The other vet working today is in surgery performing a difficult operation



# How do you think you would feel?

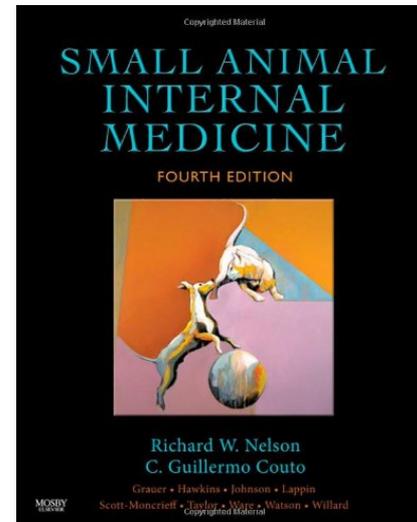
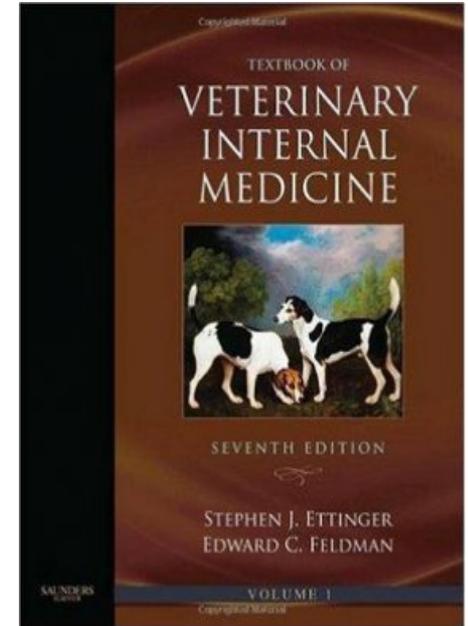
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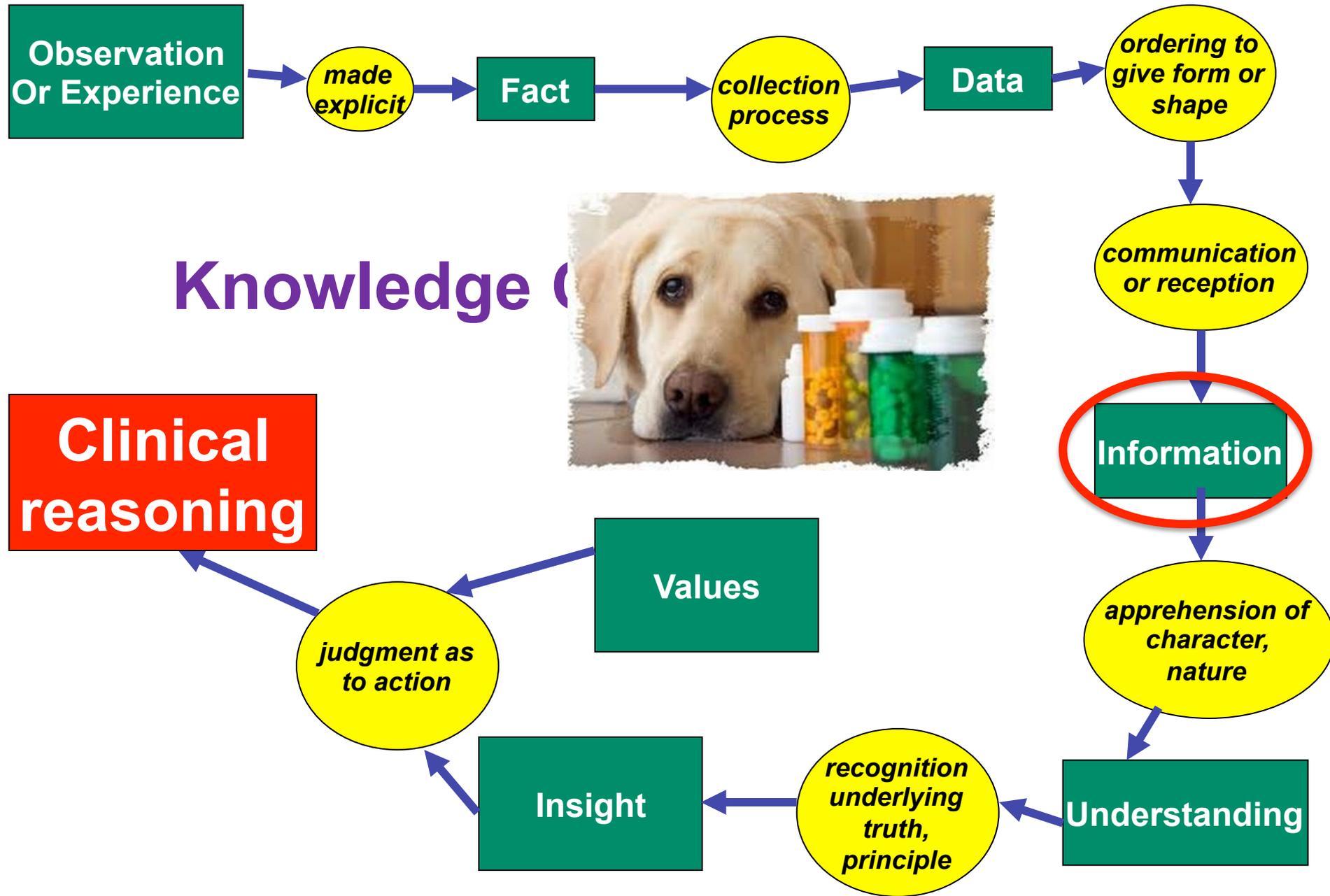


- What skills and knowledge do you think you would need to be able to save Spencer?



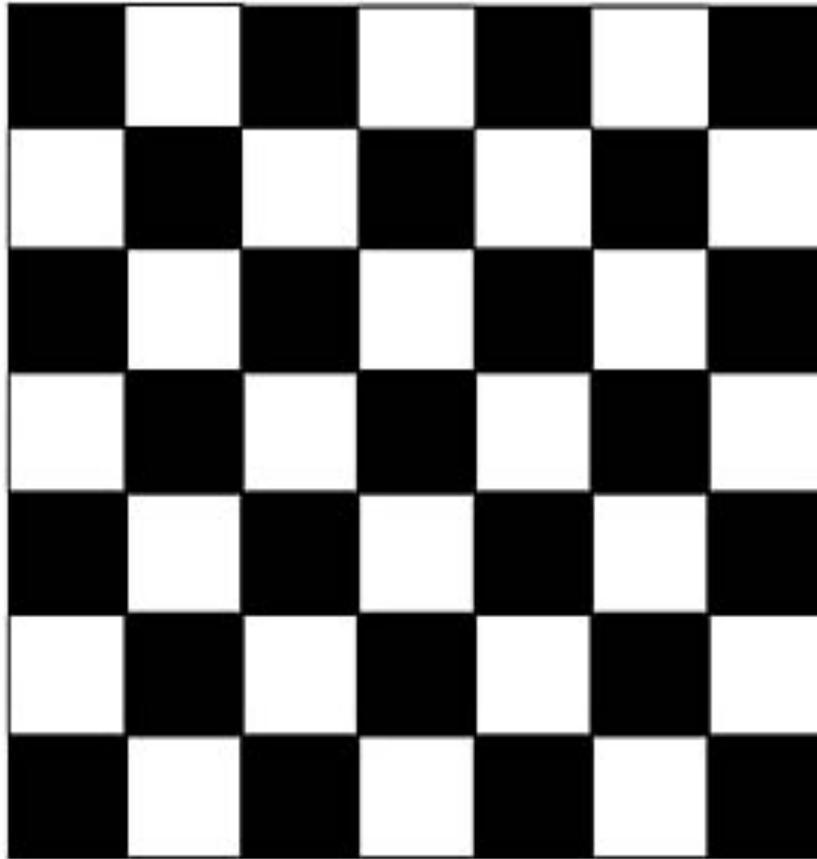
# Surely facts are enough?



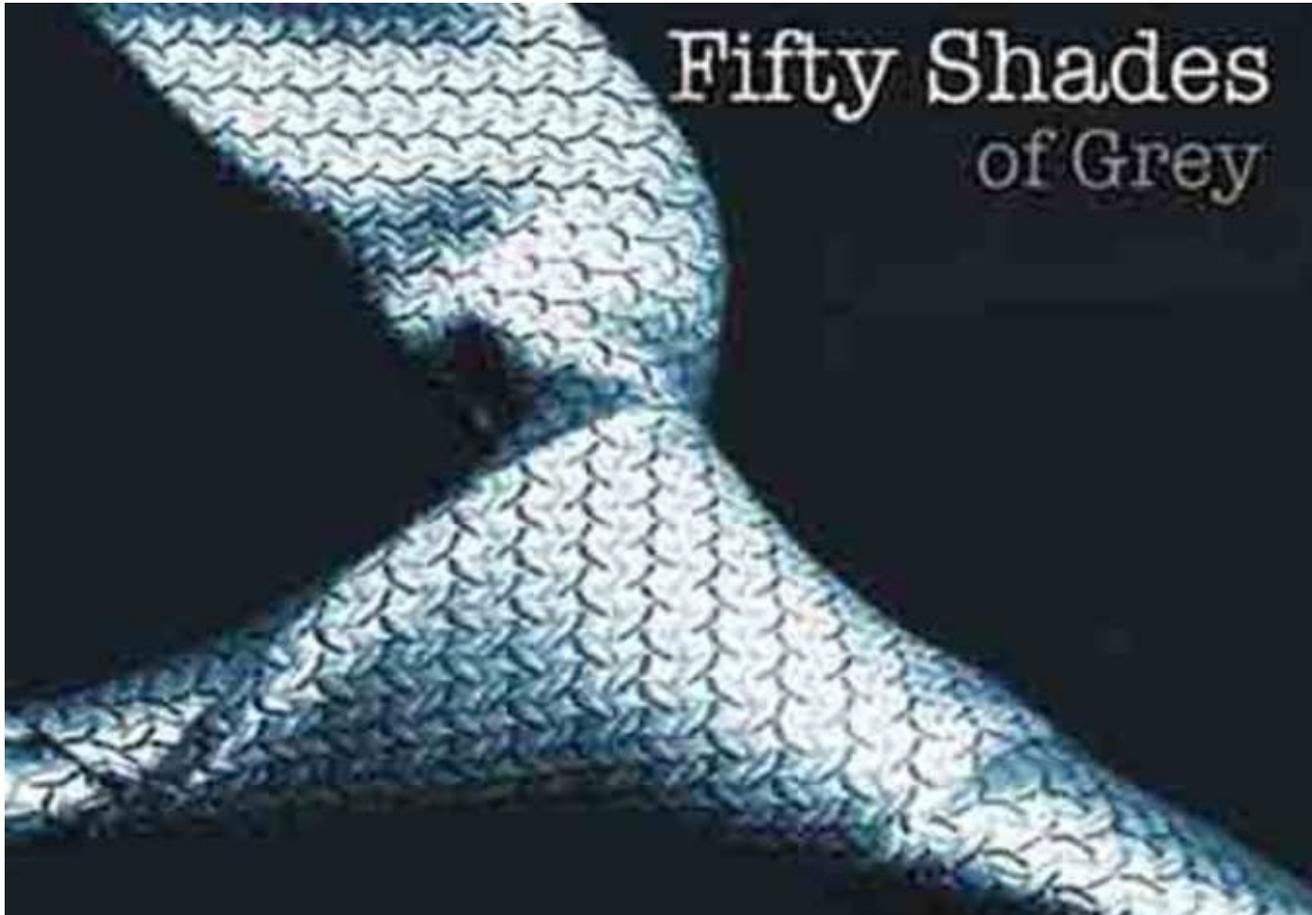


# Pre-clinical students often think

.....



But clinical practice and reasoning is often .....





LIFE  
BEGINS  
AT  
THE  
END  
OF  
YOUR  
COMFORT  
ZONE.

-NEALE DONALD WALSCH-

“

*If you don't understand  
yourself, you don't  
understand anybody  
else.*

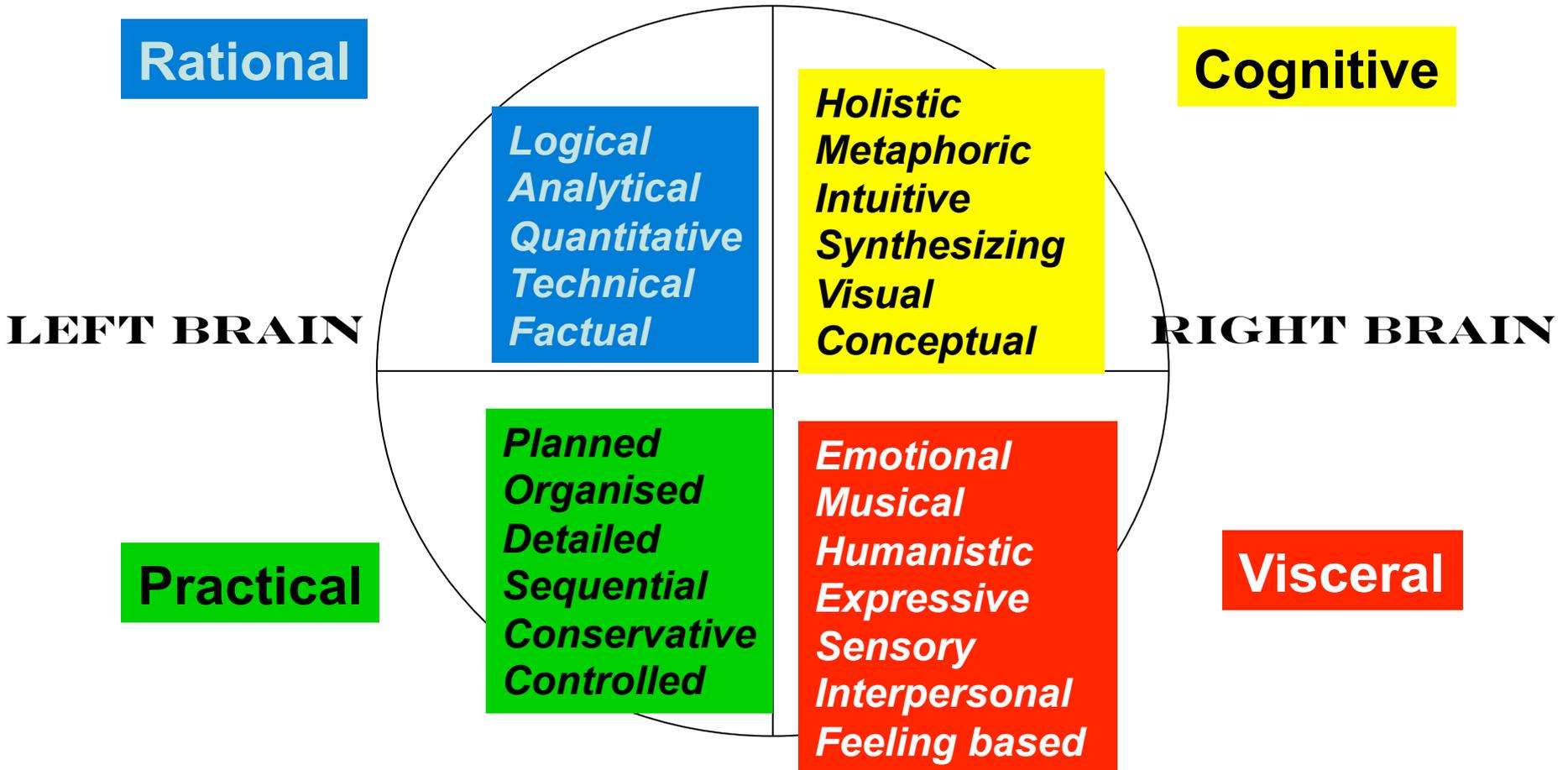
- Nikki Giovanni -

”

OkDay.com

# Thinking/learning style description

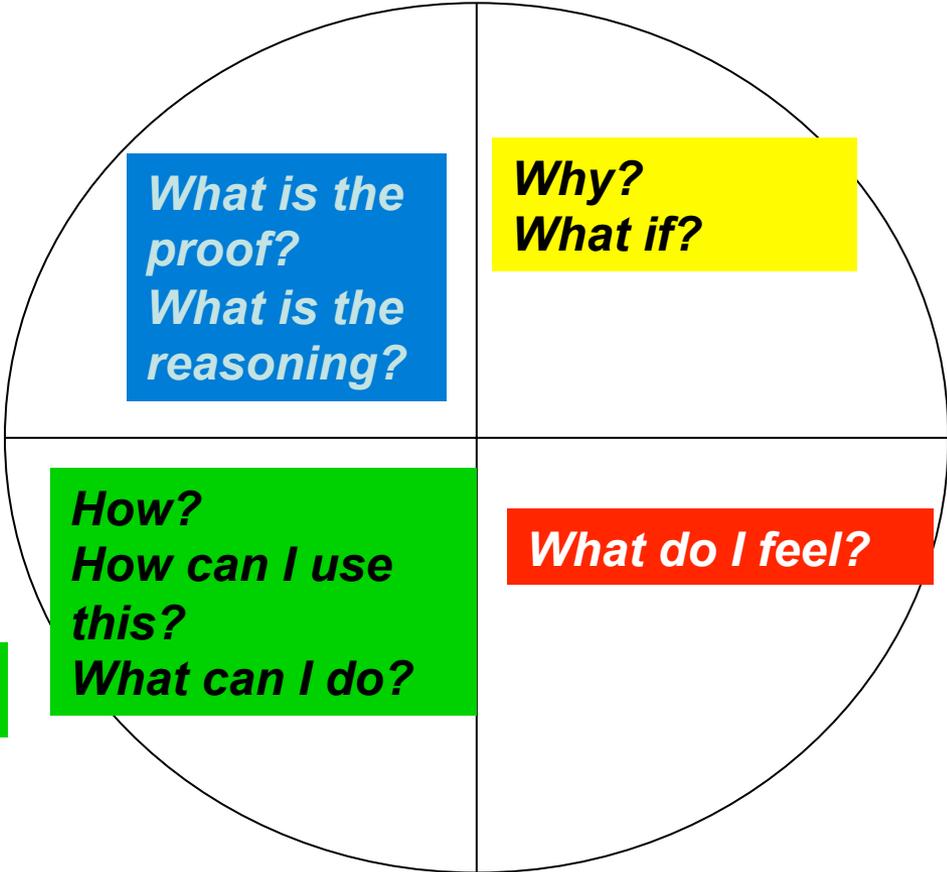
# Our four thinking selves



Each style poses different questions

**Rational**

**Cognitive**



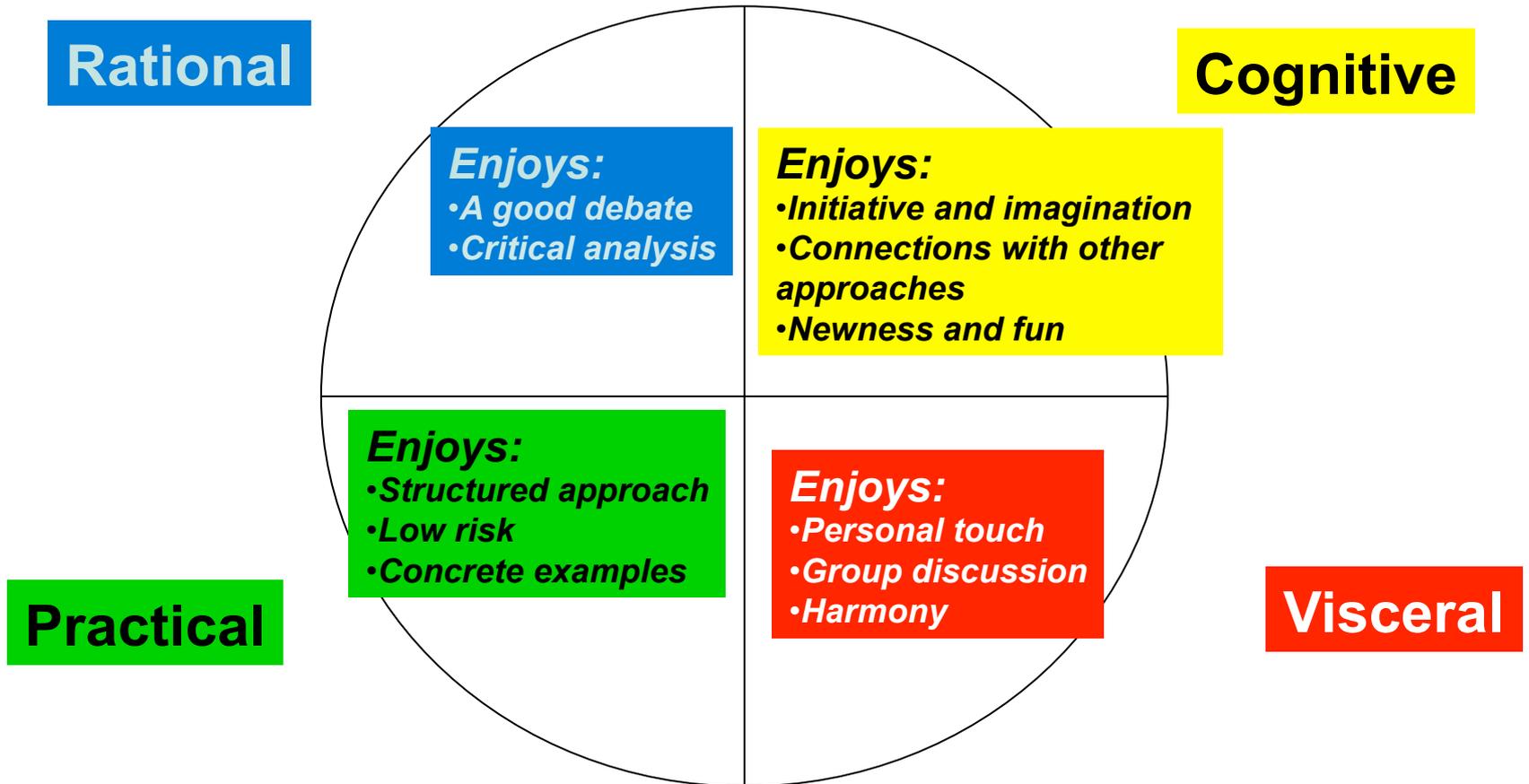
**Practical**

**Visceral**

They have different preferred thinking/learning activities



They enjoy different activities



They expect different teaching/  
learning approaches

**Rational**

**Expects:**

- *Brief, clear, concise information*
- *Well articulated ideas*
- *Logical format*
- *Accuracy*
- *Certainty*

**Cognitive**

**Expects:**

- *Overview*
- *Conceptual framework*
- *Analogies/metaphors*
- *Visuals*

**Practical**

**Expects:**

- *Step by step unfolding*
- *Detailed program*
- *Punctuality*
- *Explanation of how*

**Visceral**

**Expects:**

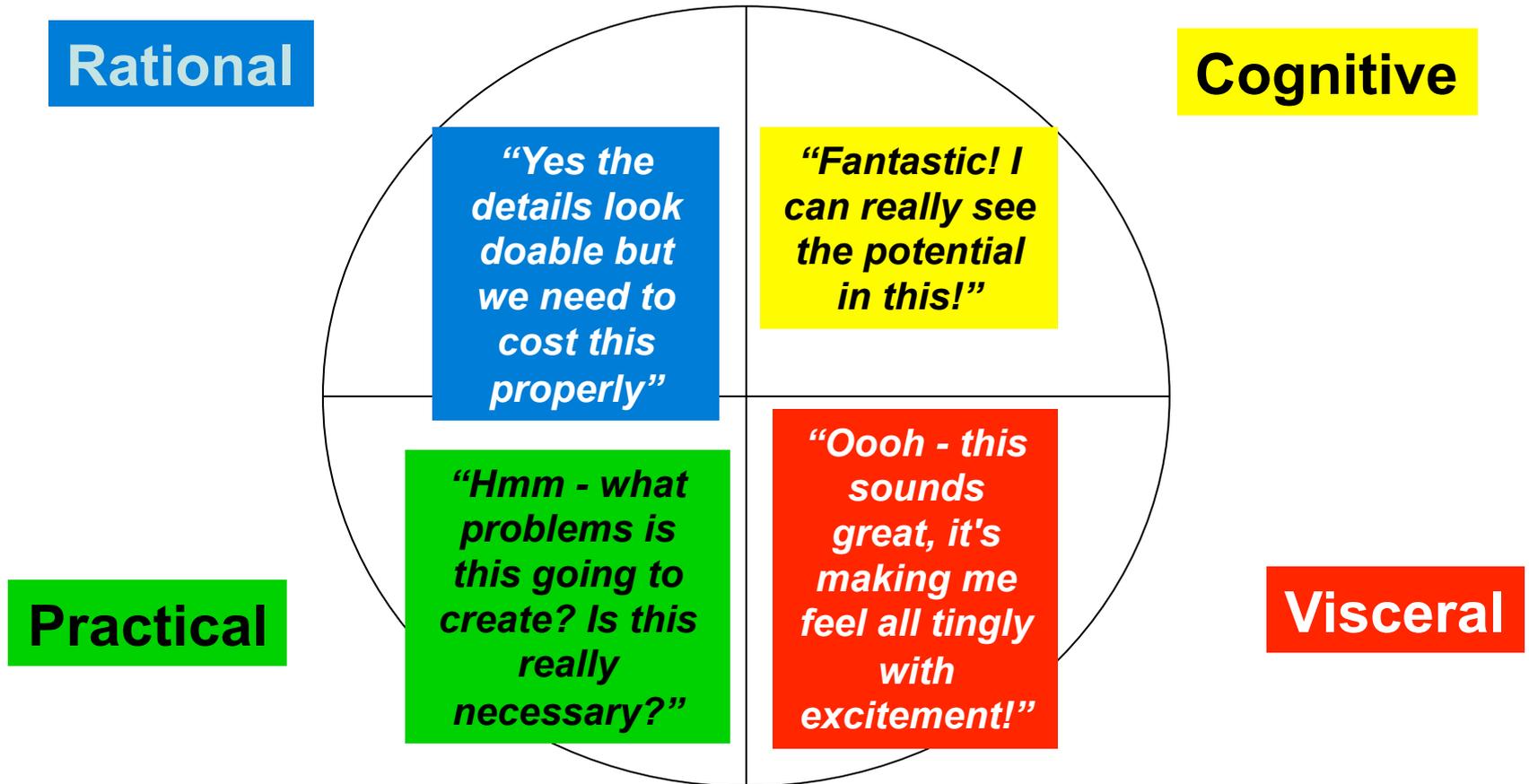
- *Involvement with others*
- *Personal anecdotes*
- *Experiential approach*
- *Feelings considered*

# What work do you like to do?

<b>Working solo</b>	<b>Being in control</b>	<b>Getting people to work together</b>	<b>Taking risks</b>
<b>Analysing data</b>	<b>Having an ordered environment</b>	<b>Expressing ideas</b>	<b>Inventing solutions</b>
<b>Making things work</b>	<b>Paperwork tasks</b>	<b>Building relationships</b>	<b>Providing vision</b>
<b>Putting things together</b>	<b>Preserving the status quo</b>	<b>Teaching</b>	<b>Having variety</b>
<b>Solving tough problems</b>	<b>Planning things out</b>	<b>Listening and talking</b>	<b>Bringing about change</b>
<b>Explaining things</b>	<b>Administrating</b>	<b>Working with people</b>	<b>Opportunity to experiment</b>
<b>Clarifying issues</b>	<b>Getting things done on time</b>	<b>Being part of a team</b>	<b>Selling ideas</b>
<b>Logical processing</b>	<b>Structured tasks</b>	<b>Helping people</b>	<b>Persuading people</b>
<b>Being challenged</b>	<b>Attending to detail</b>	<b>Expressive writing</b>	<b>Designing</b>
<b>Analysing and diagnosing</b>	<b>Providing support and stabilising</b>	<b>Counselling</b>	<b>Imagining</b>

# Reaction to a “big new idea”

# The big idea!



Which thinking learning style suits you best?

If you had to choose one - which is your favourite colour?

✓ **Yellow**

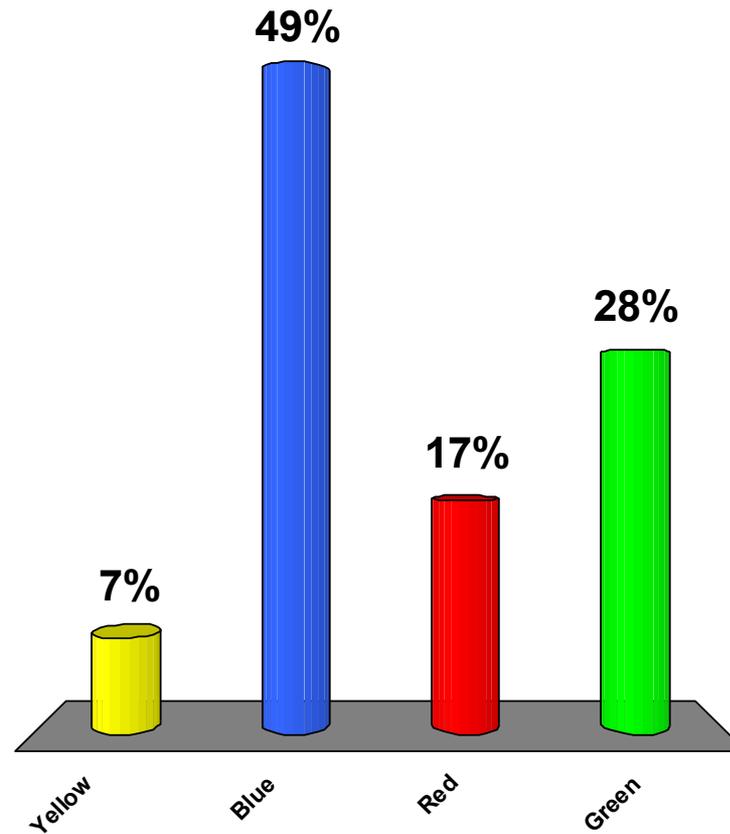
✓ **Blue**

✓ **Red**

✓ **Green**

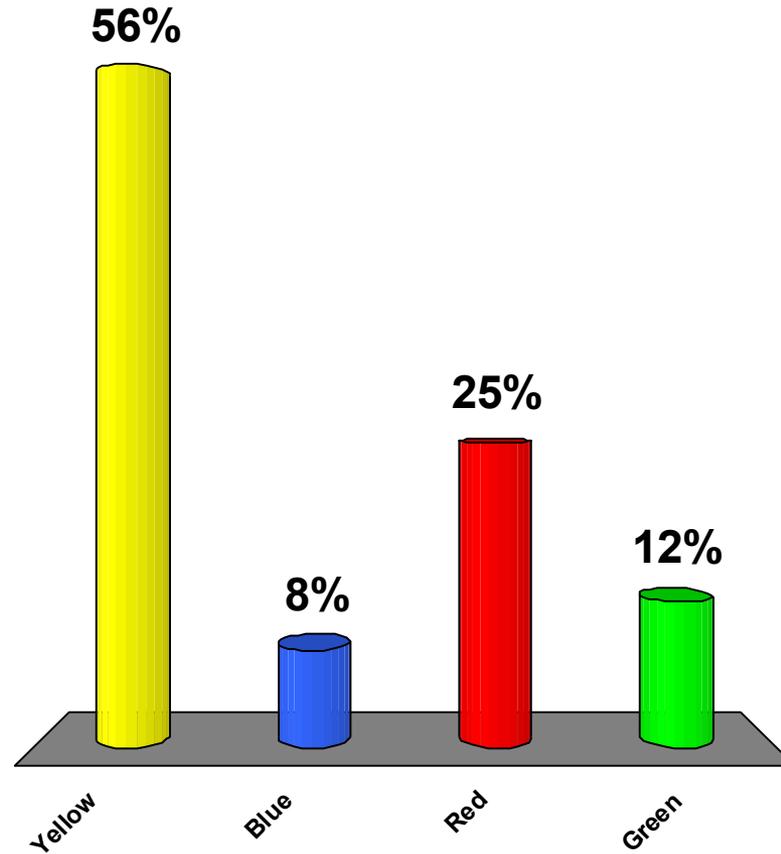
If you had to choose one - which is your favourite colour?

1. **Yellow**
2. **Blue**
3. **Red**
4. **Green**



# Which is your least favourite colour?

1. **Yellow**
2. **Blue**
3. **Red**
4. **Green**

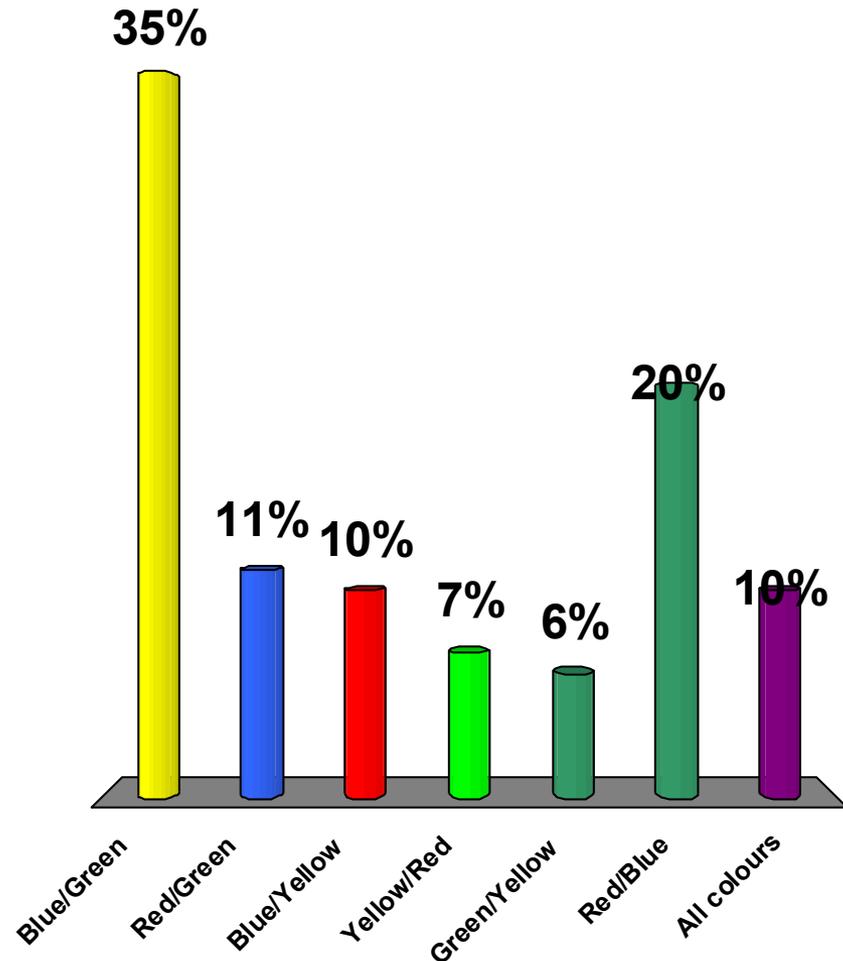


# Which thinking/learning style/ styles do you prefer?

- Most people identify most strongly with a combination e.g.
  - **Blue/Green**
  - **Red/Green**
  - **Blue/Yellow**
  - **Yellow/Red**
  - **Green/Yellow**
  - **Red/Blue**
  - **All colours**

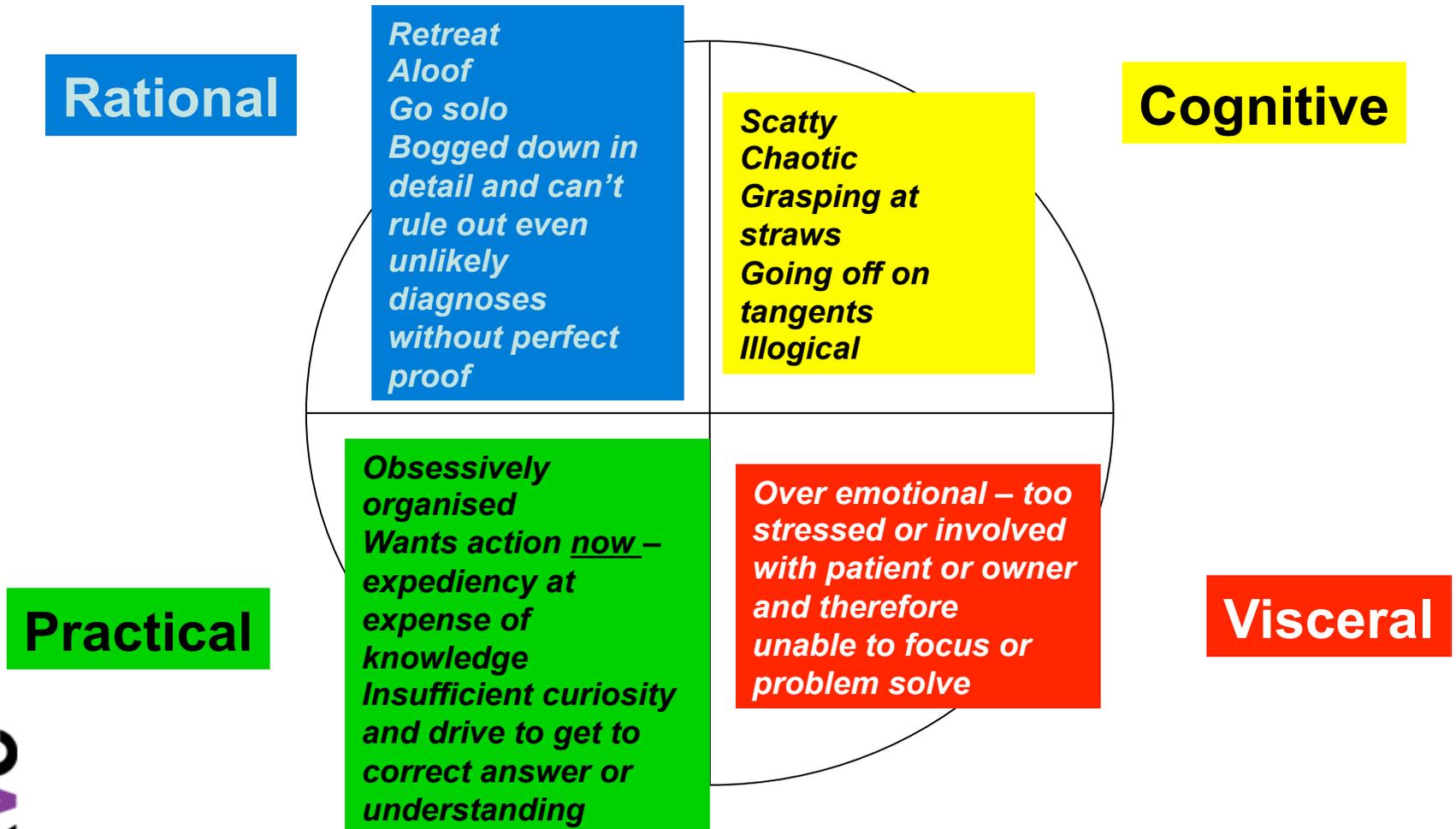
# Which is your favourite combination?

1. Blue/Green
2. Red/Green
3. Blue/Yellow
4. Yellow/Red
5. Green/Yellow
6. Red/Blue
7. All colours



What is the downside of each style?

# The extremes/under pressure



# What tools do we need to practice good medicine?

- Considering the range of cases seen in general practice



# What tools do we need to practice good medicine?

## Essential for all cases

- Define and refine the problem
  - History
  - Physical examination



# What tools do we need to practice good medicine?

## Essentials for many cases

- Define and refine the system/location/lesion
  - Standard clinical path
    - Biochemistry
    - Haematology
    - Parasitology



# What tools do we need to practice good medicine?

## Essentials for some cases

- Focused clinical pathology e.g.
  - BAST, PLI, TLI
  - Ionised calcium
  - Endocrine testing
  - Faecal exam
- Diagnostic imaging
- Dietary trial



# What tools do we need to practice good medicine?

## Essentials for a few cases

- Facilities for biopsy
  - Ultrasound guided
  - Laparoscopic
  - Exploratory laparotomy
- Histopathology



# What tools do we need to practice good medicine?

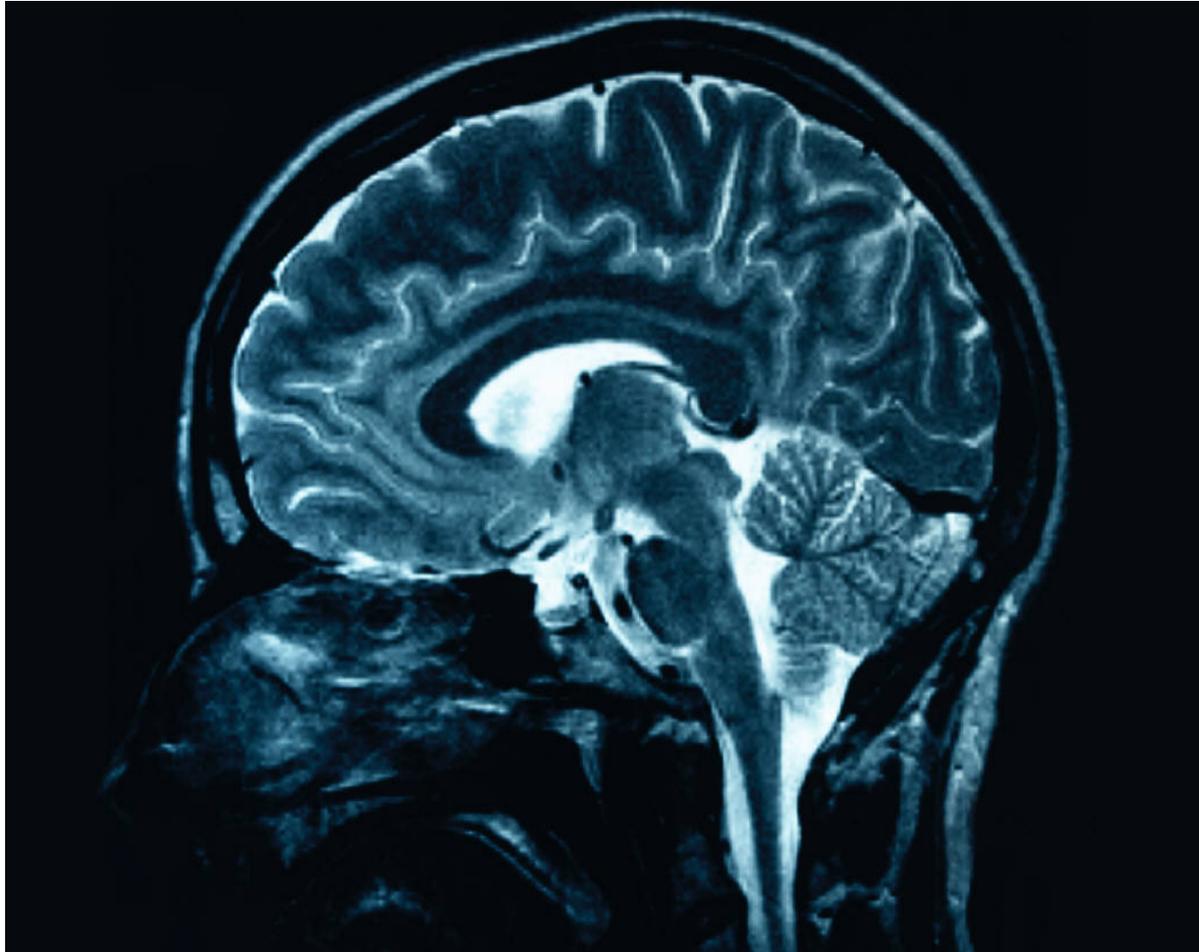
**Essential for a small number of cases**

- Endoscope
- MRI
- CT scan

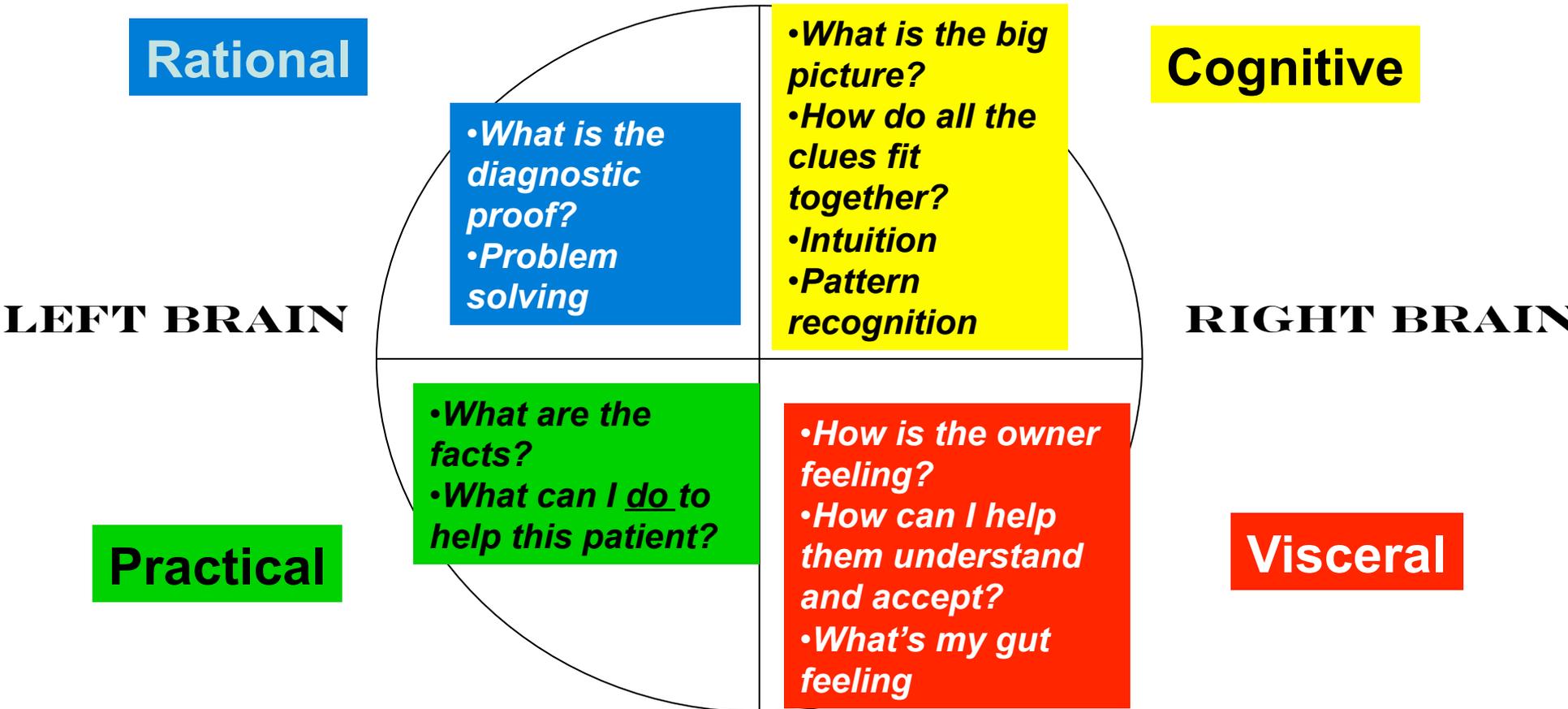


And THE most important tool is your

.....



# What do we need for our medical cases?



So we need all styles!



# So we need all styles!

- **Blue/Green** works best with problem-based clinical reasoning
  - Vet school teaching mostly in the blue/green zone so we have all developed some to survive
  - Blue/green is fundamental to reinforce and enhance the potential of yellow (intuition, pattern recognition) in solving clinical problems

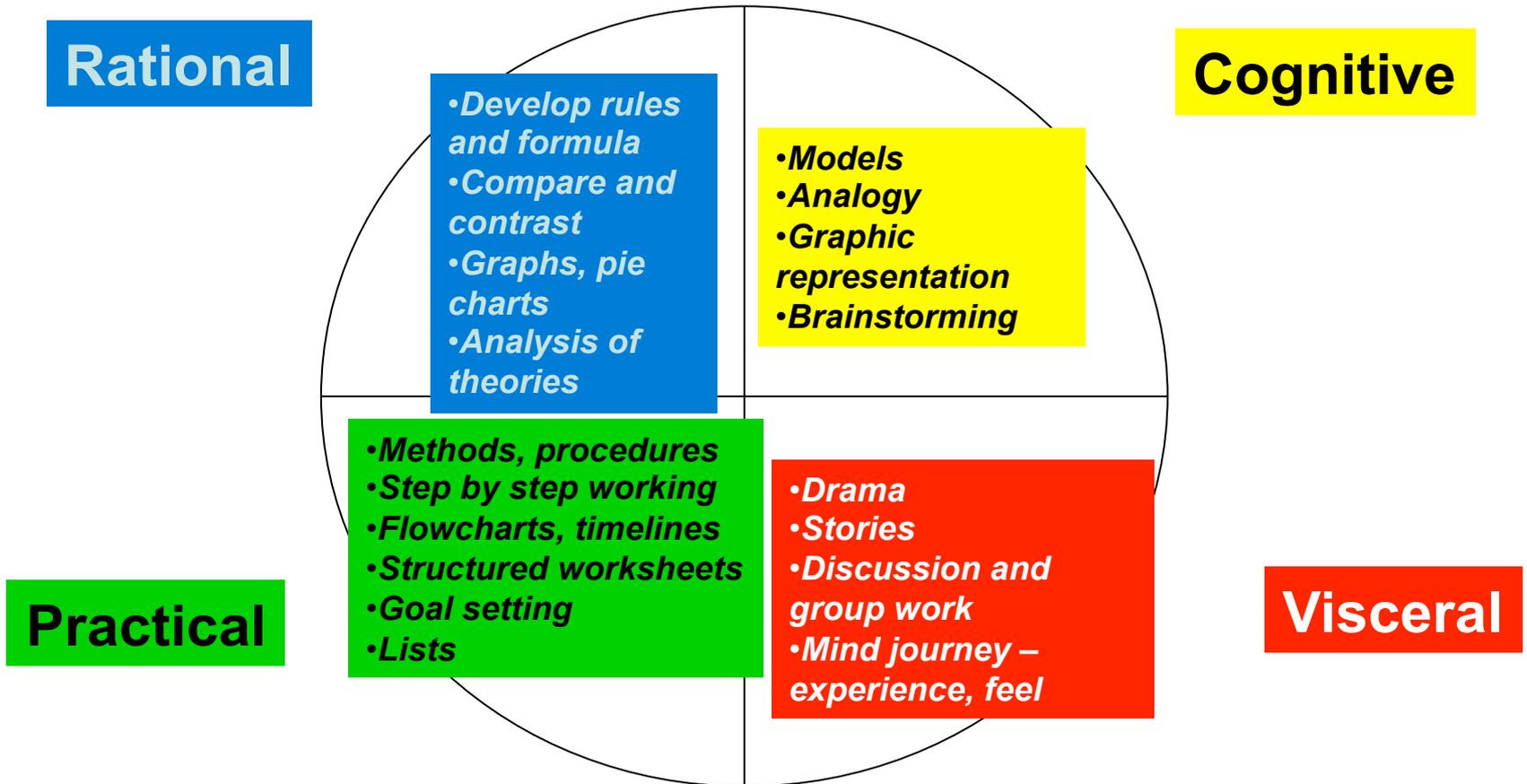
# So we need all styles!

## ➤ **Red** essential in clinical practice

- Some are natural reds
- Some are learned reds
- Some will go into other areas of practice that require much less red
  - Pathology
  - Radiology
  - Surgery 😊



# Strategies to promote integral learning



# How successfully can we develop our “weaker” style?

> **Green** - relatively easily if needed for survival in your job

- But it can feel painful – especially if you hate lists and deadlines and like to procrastinate!

# How successfully can we develop our “weaker” style?

## > **Blue** – a little more difficult

- Need to mentally focus and concentrate on details
- Requires mental discipline
- Logical problem-based approach centred here

# How successfully can we develop our “weaker” style?

> **Red** – most of us learn enough to survive in practice

- Though it comes more naturally to some than others



# How successfully can we develop our “weaker” style?

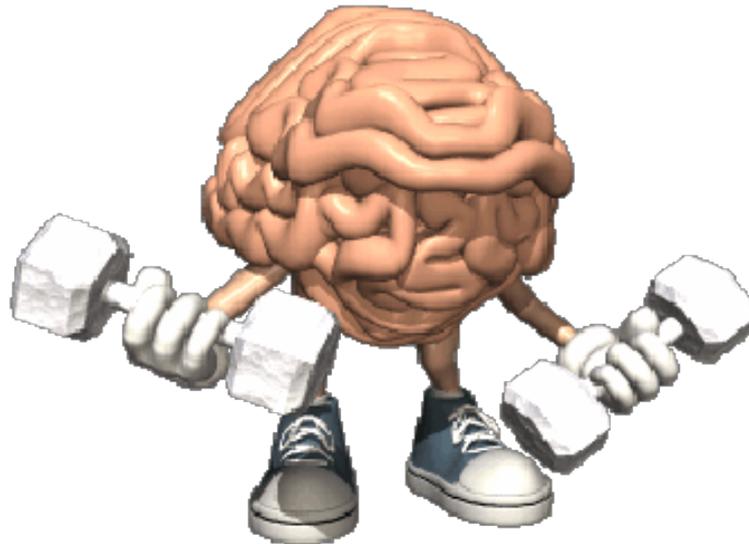
## > **Yellow** – very difficult

- Hard to see the really big picture when you are grounded in the reality of the details
- Risk taking very hard for many
- Intuition cannot be taught
- Pattern recognition uses more parts of the brain than any other mode of thinking



# Can the brain change?

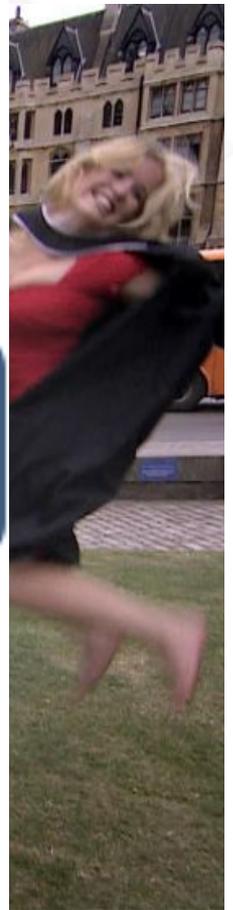
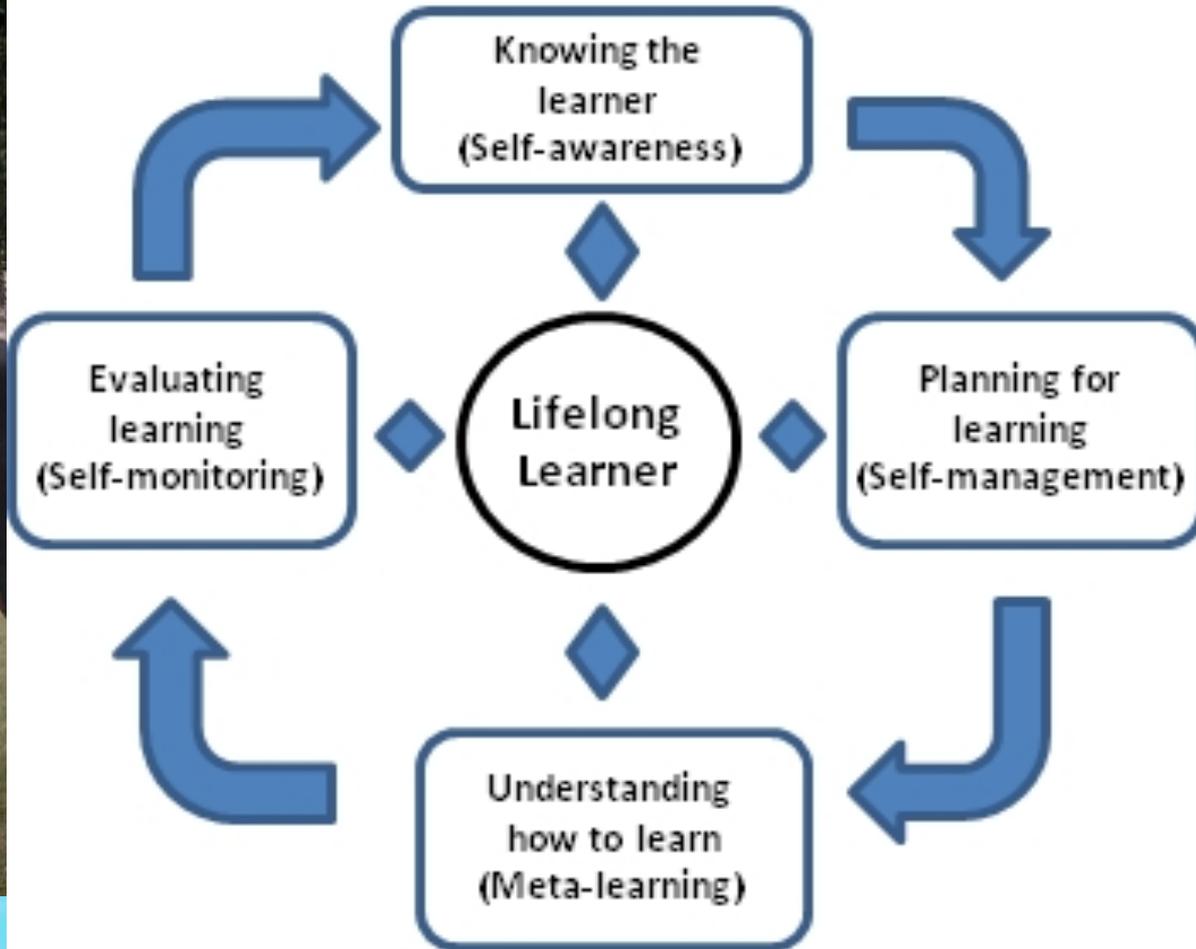
- The brain is like a muscle – it can grow and develop selectively depending on where you focus it



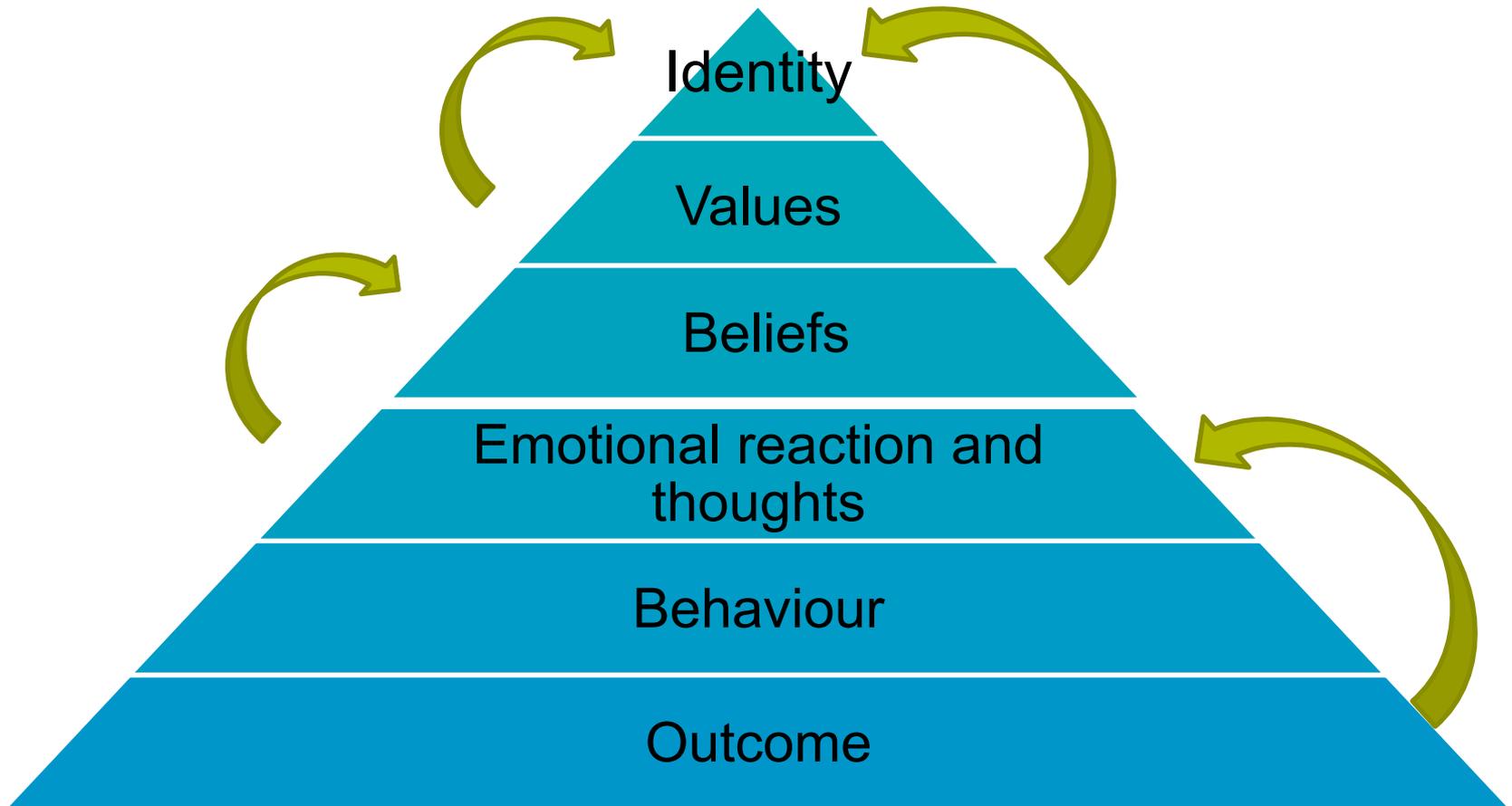
# Some other considerations ....

- Developing life long learning skills
- Mind sets
- The value (and difficulty!) of reflection

# Life long learning



# Neuro-logical levels



# Values and mindsets

- Developed by formative influences through life



# A word about mindsets

- Entity or fixed mindset believes ...
  - Intelligence = 35% effort + 65% ability
  - Intelligence is innate, stable and doesn't change
- Incremental or growth mindset believes ...
  - Intelligence = 65% effort + 35% ability
  - Intelligence is “growable”

# A word about mindsets

- Entity (fixed) mindset
  - Focused on identify
  - Priority – to prove learning
  - Praise around identity and outcome e.g. “Clever girl!” “Great result”
- Incremental (growth) mindset
  - Priority – to improve learning (become brighter)
  - Focused on what can be learned – skills
  - Praised around effort - “Your hard work to reach that goal”



**RVC**

# Mindsets

- › Each occurs with equal frequency in the population
- › Veterinary students?
- › We all can have different mindsets in different contexts e.g
  - In different areas of life
  - With different stressors

# A word about mindsets

- Entity (fixed) mindset
  - Failure means not good enough
  - Can tune out corrective feedback as feedback about errors can be distressing
- Incremental (growth) mindset
  - Failure means not worked hard enough
  - Detect, process and correct errors
  - FAIL = First Attempt In Learning

# And finally ... a word about reflection

- What?
  - What did I observe/do/discover?
- So what?
  - What did it mean?/What did I learn?
- Now what?
  - How will I use this in the future?/What has changed?

