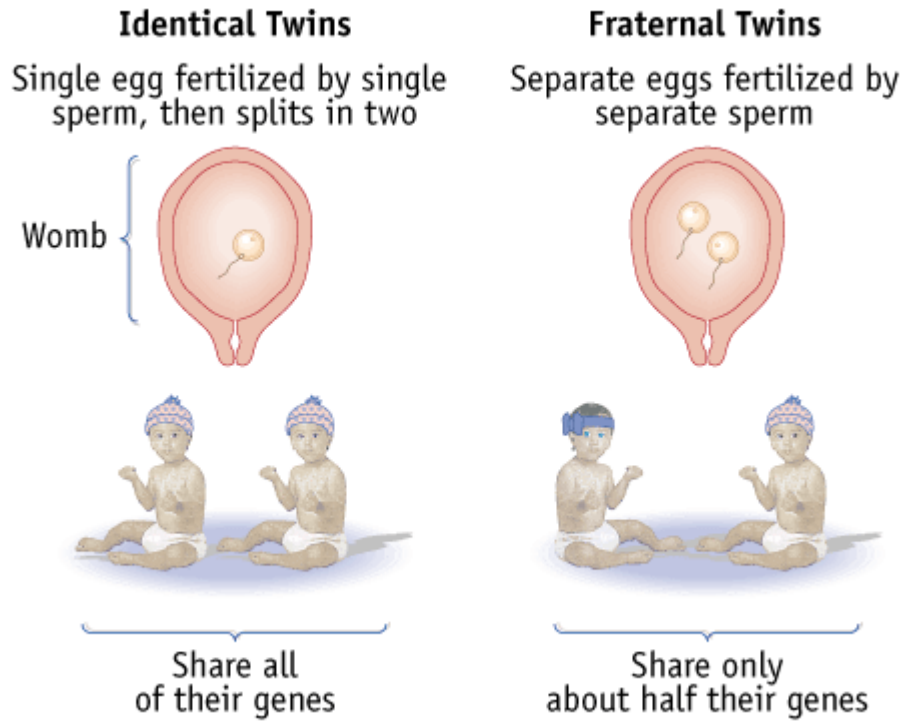
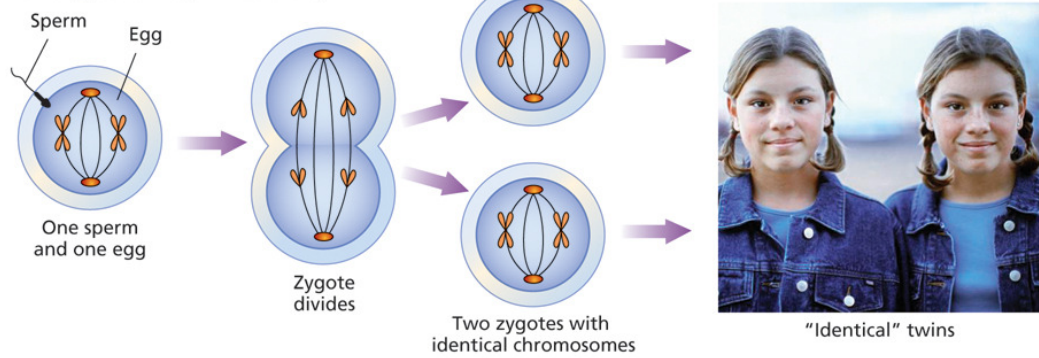


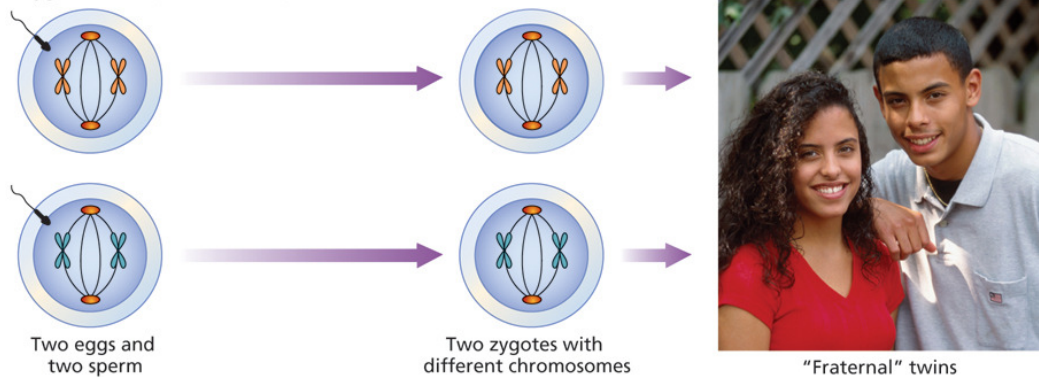
Monozygotic versus Dizygotic Twins



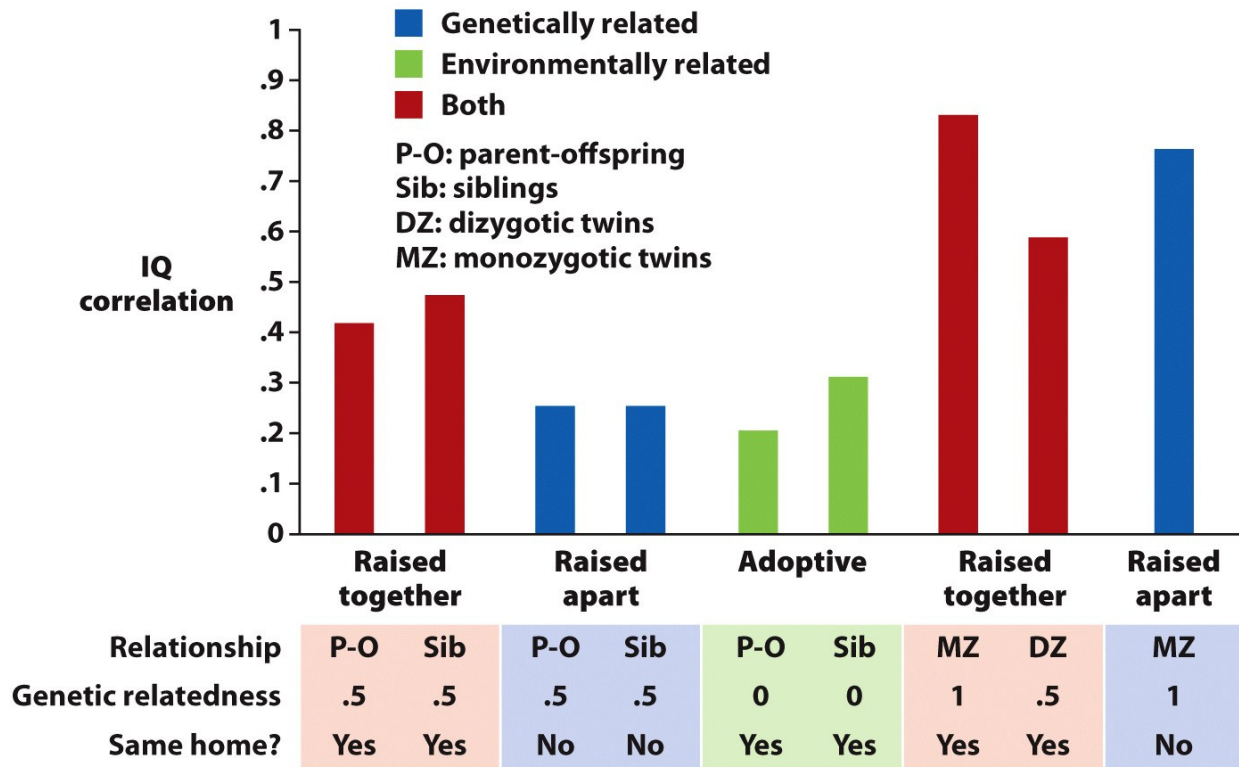
Monozygotic twins (1 in 250 births)



Dizygotic twins (1 in 150 births)



Where Does Intelligence Come From?



Psychological Science, 4/e Figure 8.36
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Where Does Intelligence Come From?

Table 10.3 (reformatted): Intelligence Test Correlations Between People with Different Relationships

Genetic overlap	Relationship	Reared or lived apart	Reared or lived together
0%	Adopted children	.00	.02
0%	Adoptive parent and child	.00	.19
0%	Adopted siblings	.00	.32
25%	Cousins		.25
50%	Biological parent and child	.24	.42
50%	Siblings	.24	.47
50%	Fraternal twins		.60
100%	Identical twins	.78	.86

Evidence for the Influence of Genetics on Intelligence

- As genetic overlap increases (reading from the top of the table to the bottom of the table), the correlation (similarity) of intelligence increases between siblings/parents increase.



Evidence for the Influence of the Environment on Intelligence

- As the environmental similarity increases (reading left to right of the table), so does the correlation of intelligence between siblings/parents increase.



Both genetic and environmental factors influence intelligence.

Explaining schizophrenia

Genetic factors:

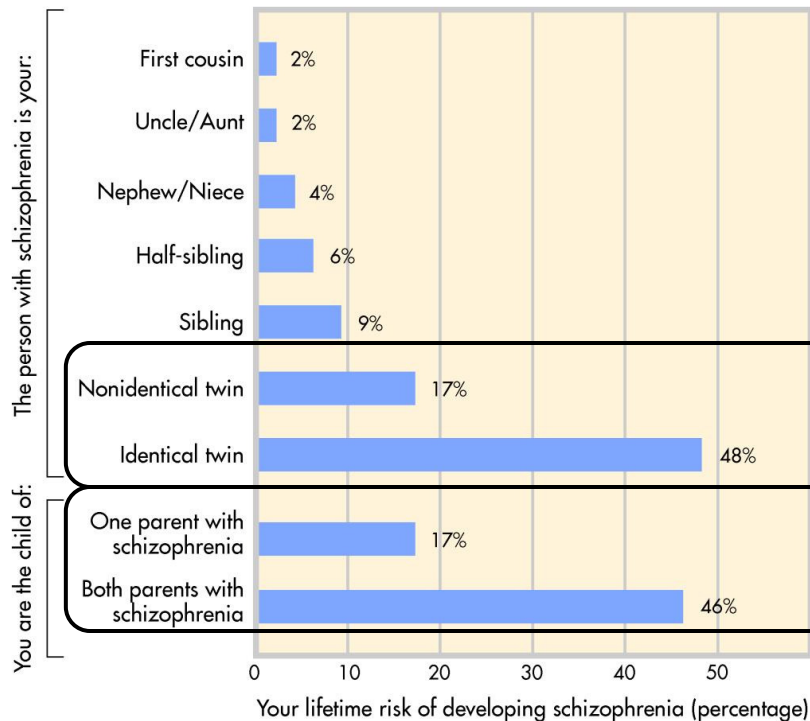
- **Twins:**

Monozygotic twins (1 in 250 births)
 Sperm + Egg → One sperm and one egg → Zygote divides → Two zygotes with identical chromosomes → "Identical" twins

Dizygotic twins (1 in 150 births)
 Two eggs and two sperm → Two zygotes with different chromosomes → "Fraternal" twins

- Identical twins: If one twin has schizophrenia, the other twin is 48% likely to have schizophrenia.
- Fraternal twins: If one twin has schizophrenia, the other twin is 17% likely to have schizophrenia.

- If you are the child of both parents with schizophrenia, you are 46% likely to have schizophrenia compared to 17% if one parent has schizophrenia.



Coincidences: Remarkable or random?
(www.csicop.org/si/9809/coincidence.html)

Some psuedosciences rely on “incredible coincidences” such as those between former Presidents Abraham Lincoln and John F. Kennedy?

- They both have seven letters in their last name.
- They were elected 100 years apart (1860 and 1960).
- They were assassinated on a Friday in the presence of their wives.
- Lincoln was killed in Ford’s theater. Kennedy was killed in a Ford automobile.
- Both assassins went by three names (John Wilkes Booth and Lee Harvey Oswald), which contain 15 letters.
- Oswald shot Kennedy from a warehouse and fled to a theater. Booth shot Lincoln in a theater and fled to a barn (a kind of warehouse).
- Both succeeding vice-presidents were southern Democrats and former senators named Johnson (Andrew and Lyndon) with 13 letters in their names and born 100 years apart (1808 and 1908).

Is this remarkable or random?

If we compare other relevant attributes, we fail to find coincidences.

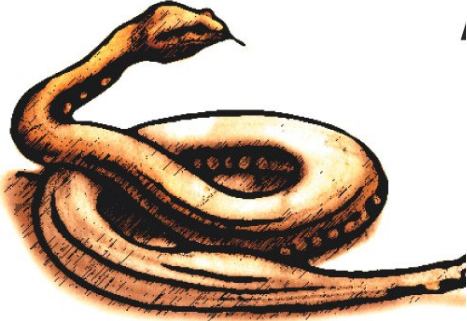
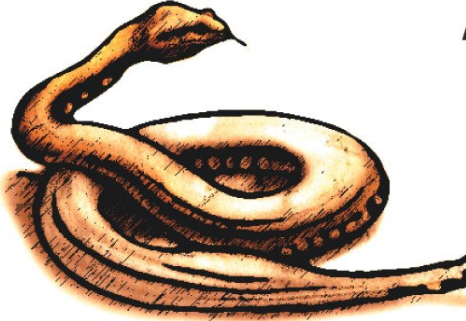




- Lincoln and Kennedy were born and died in different months, dates, and states. None of these are 100 years apart.
- Their ages at death were different, as were the names of their wives.

For any two people, with reasonably eventful lives, it is possible to find a coincidence between them. These coincidences are not predicted in advance.

Evolutionary

Evolutionary perspective helps explain behavior in terms of natural selection.

Traits that facilitate survival are more likely to allow that person (or group of people) to survive, live longer, reproduce and grow in numbers. Traits that don't facilitate survival are less likely to allow that person or group to survive, live longer, reproduce and grow in numbers.

Afraid of Snakes	Not afraid of Snakes
	
More likely to avoid dangerous snakes	Less likely to avoid dangerous snakes
Live longer, have larger families	Live shorter lives, have smaller families
	
	



Phobias

Phobia disorders—An anxiety disorder that is characterized by marked, persistent and excessive fear and avoidance of specific objects, activities or situations.

The fear response is out of proportion to the stimulus and the fear and avoidance significantly interferes with daily life.

About 11% of people in the United States will develop a specific phobia in their lifetime. Generally, phobics realize their fears are irrational, but feel compelled to avoid the feared situation or objects.

Specific phobias fall into five categories:

(1) animals (dogs, cats, rats, snakes, spiders)	
(2) natural environments (heights, darkness, water, storms)	
(3) situations (bridges, elevators, tunnels, enclosed spaces)	
(4) blood injections and injury	
(5) other phobias including illness and death.	

Phobias

TABLE 28.2 SOME COMMON—AND NOT-SO-COMMON—
PHOBIAS

These are common:

Blood	hematophobia
Darkness	nyctophobia
Enclosed space	claustrophobia
Germs	spermophobia
Heights	acrophobia
Mice	musophobia
Snakes	ophidiophobia
Spiders	arachnophobia
Wasps	spheksophobia

Phobias can develop to almost anything, including:

Air	aerophobia
Churches	ecclesiaphobia
Eyes	ommatophobia
Frost	cryophobia
Shadows	sciophobia
Swallowing	phagophobia
Trees	dendrophobia

Source: Adapted from Melville, 1978.



Evolutionary

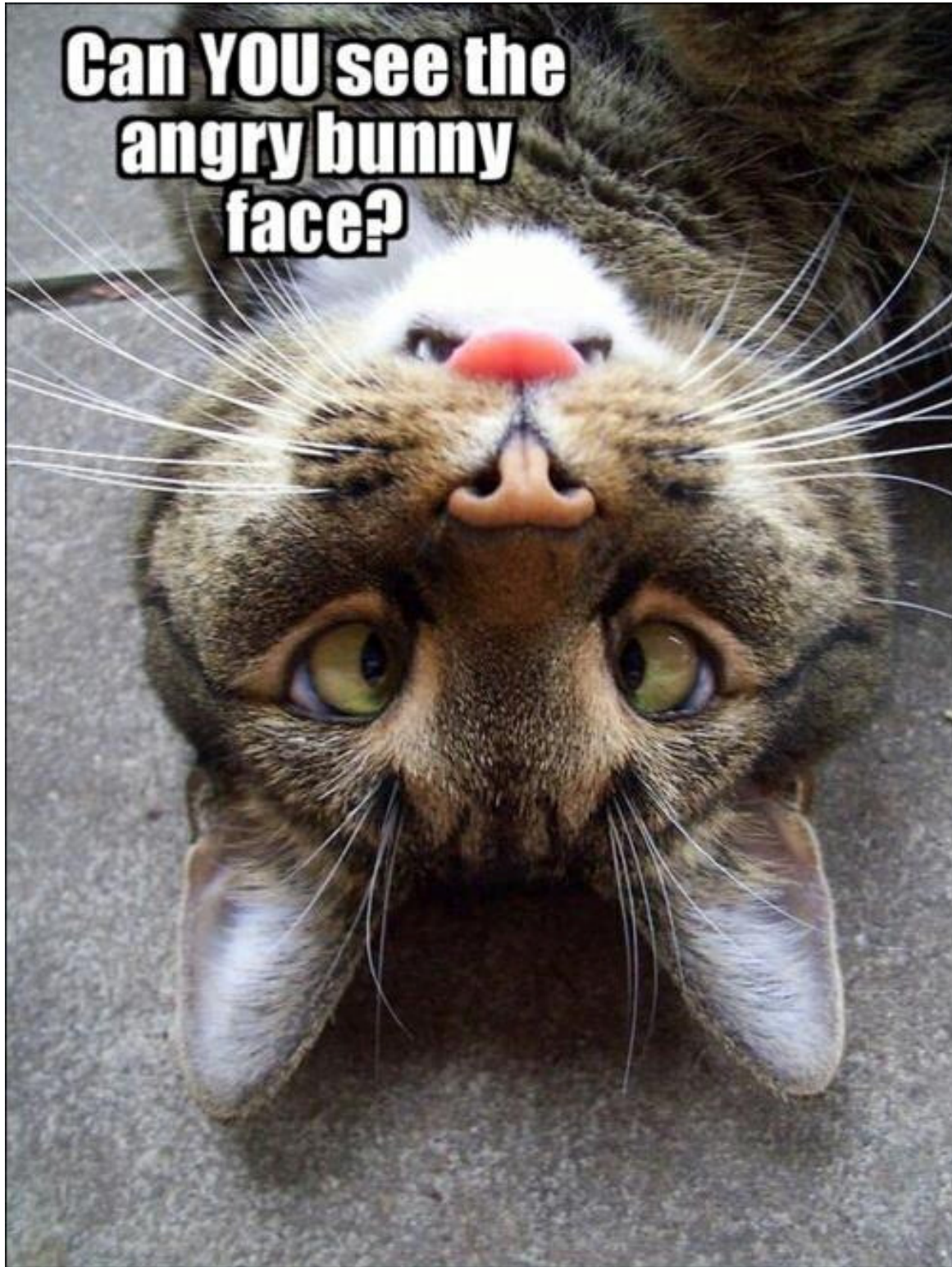


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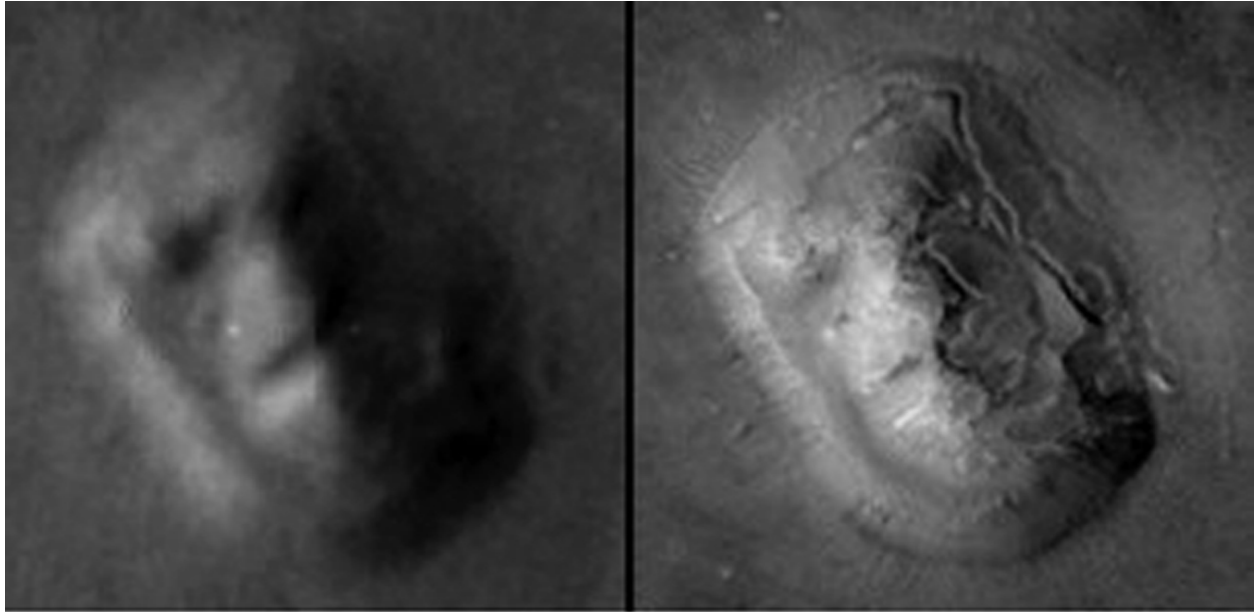
Evolutionary



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Evolutionary Perspective

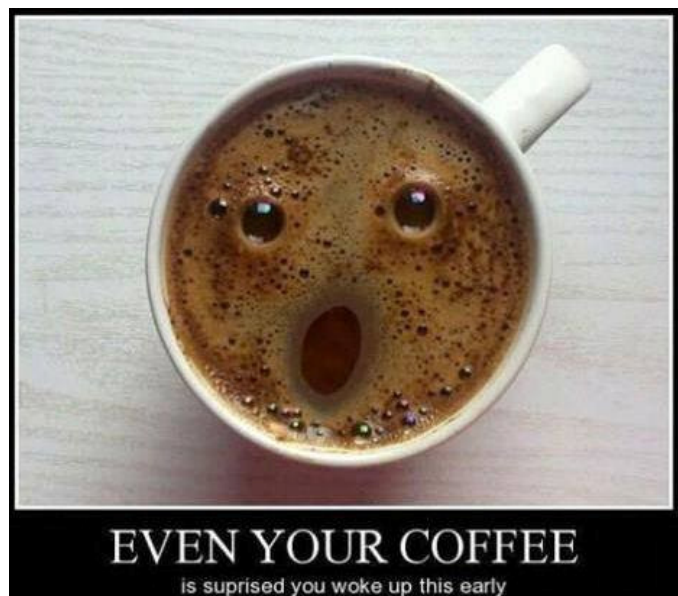
Being able to quickly interpret something as a face is important for survival to recognize a friend or foe.



1976 "Face"

2001 "Face"

Image source: [Psychology \(2009\)](#), Hockenbury and Hockenbury









**Reincarnation gone
horribly wrong.**

