

## Theory of Knowledge – PERCEPTION

*It is only with the heart that one can see rightly; what is essential is invisible to the eye.*  
Antoine de Saint-Exupery

### WHAT IT IS: Introduction

1. Concerning senses...add to what we generally accept those we call internal physical receptors: hunger; pain; arousal.

2. The study of perception now falls largely within the domain of psychology.

We do not take it all in. Quite literally, there is too much stimulation to take it all in

Think about all the sounds that surround you and those you actually hear

Think about all the sights around you and those you actually see

Focus and concentrate on one particular sense. What do you notice/

Imagine you are alone on a dark street and the only way home is to cut through an even darker alley. You turn into the alley and within a minute of walking realize you are not alone. Adrenaline surges. What sensations might you have experienced to have allowed you to recognize danger/

Link this to the excerpt from *Blink* by Malcolm Gladwell.

**Perception defined:** our entire understanding of things, including our opinions.

We add abstract adjectives to describing experiences but these words are often not experienced by our senses.

Much of what we learn, remember, believe and know depends on our senses.

Some animals have sonar perception (humans do not) and magnetic perception to detect the earth's magnetic field; for further investigation, check out

<http://faculty.washington.edu/chudler/amaze.html>

Thus we have specifically human perceptions of the world. We do not perceive the world as it is. We perceive in the way it is to us. We are people with different experiences and cultural backgrounds, as well as a species.

**I: Sense perception** is the physical response of our senses to stimuli.

1. Sensory information stimulate sense receptors.
2. Electrical impulses convey this sensory information to the brain.

3. Brain either recognizes or ignore these impulses.
4. Recognition comes from past association and expectation.
5. It is instantaneous.

**Perception** can be defined (note: the verb is not IS) as the awareness of things through five senses. However, based on our own observations and discussions, the definition of senses can be expanded to include all of the following

sight  
sound  
taste  
touch

balance  
heat  
pain  
smell

### Stoskopff *Summer of the Five Senses*



Expanding our definition of senses enables us to reflect upon the nature of senses. What does it mean to see? Do we actively think about the act of smelling? Do we ever pose the following question:

You are in a situation in which one of two senses – sight and sound – will be saved only by losing the other. You can choose which of the two to preserve; which one would it be? Explain your response.

### II: Characteristics of our senses:

1. Human
2. Variable
3. Selective
4. Interpretive

## 1. **Human:**

While we share some of the same senses as other animals, they are not as acute in us. Then, there are senses some animals have that we do not.

<http://faculty.washington.edu/chudler/amaze.html>

Question: What have humans adapted to replace these or diminish the influence of other senses?

Questions: Which sense do you think we apply MOST as metaphor? Defend your answer.

## 2. **Variable:**

Although it can be agreed that sense perception is a primary way of knowing, involving sensory receptors, nervous systems, brain, it must also be agreed that how we perceive this information varies from person to person.

We try to establish what is normal among us.

Variants emerge because of our prior experience, cultural backgrounds, bias, connotations, range of ability...I use my sense of sight but it is aided by glasses and sometimes impeded by contact lenses and perhaps vanity.

One sense may compensate for another.

<http://www.lvbeethoven.com/Bio/BiographyDeafnessAndCreativity.html>

The five string quartets, the Missa Solemnis, and the 9th Symphony are some Beethoven's works after he went deaf.

Then, there is synesthesia: the stimulation of one sense's cognitive pathway involuntarily stimulated another.

Is the brain "predesigned" to assigning synesthesia-like qualities, or metaphor, to its sensory surroundings? Apparently, yes. In the picture below, if asked which shape is called "bouba," and which is "kiki," 98% of people answer the same way.



Synesthesia can cross into variants beyond color – number, color – letter; there is an account of music – taste, that tones produce different tastes in the listener.

Variants can be cultural; think of exposure to spices and what people determine as hot versus mild.

Cautionary note: what we deem to know what is best for others may not be best at all; the challenge is to keep observational knowledge claims distinct from value judgments.

### 3. Actively selective:

We do not (cannot) take in all that is around us. There are many factors to this, from simple physiological to deliberate tuning out.

<http://www.bing.com/videos/search?q=chabris+and+simons&view=detail&mid=15DCBA8C35B5942FE6A315DCBA8C35B5942FE6A3&first=0&FORM=NVPFVR&adlt=strict>

Some of these factors can be as simple as that we are too hungry to concentrate; too sleepy to focus; too far away to take in key components, too emotional to be open to the current experience.

**Cognitive bias:** a quick way of handling sensory input in a quick and impressionistic (subjective way).

<http://www.scribd.com/doc/30548590/Cognitive-Biases-A-Visual-Study-Guide>

**Inattentional blindness/ perceptual blindness:** by paying attention to that which we consider important, we can miss the unusual; thus, we expect to see cars on the road but do not...to the same degree...expect to see motorcycles.

<http://dontai.com/wp/2010/05/12/the-dangerous-right-turner-inattention-blindness/>

<http://www.apa.org/monitor/apr01/blindness.aspx>

The Awareness Test:

[http://www.youtube.com/watch?feature=player\\_embedded&v=Ahg6qcgoay4](http://www.youtube.com/watch?feature=player_embedded&v=Ahg6qcgoay4)

Actively selective awareness leads to false testimony on behalf of eyewitnesses and is affecting legal cases:

[http://theinvisiblegorilla.com/blog/2010/06/13/change\\_blind\\_courtroom/](http://theinvisiblegorilla.com/blog/2010/06/13/change_blind_courtroom/)

- 4. Interpretive:** even when we are not consciously aware of interpreting sensory input, our brains are doing so.

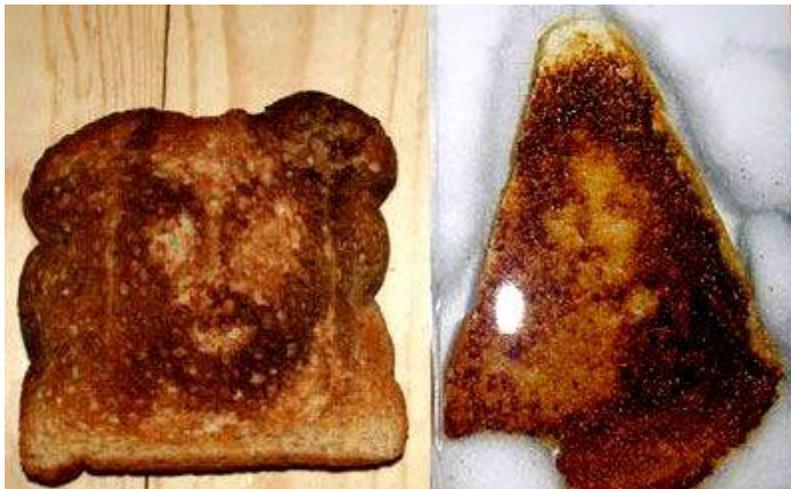
Some things we discard without knowing we are doing; others we find in places they are not; we recognize faces where they do not exist.



**Pareidolia:**

— *n*

the imagined **perception** of a pattern or meaning where it does not actually exist, as in considering the moon to have human features



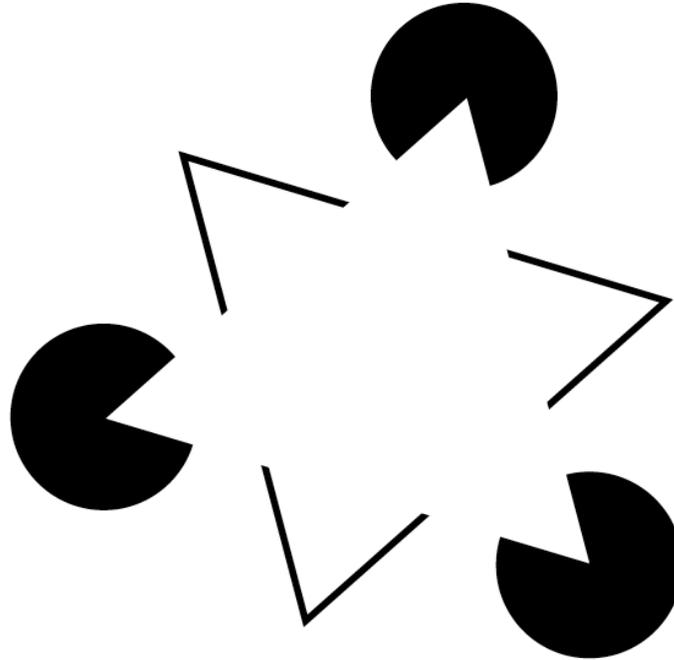


According to [research](#) at an English university, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter is at the right place. The rest can be a total mess and you can still read it without a problem. This is because we do not read every letter by itself but the word as a whole.

[http://www.anvari.org/log/20030916.1803\\_first-and-last-letter-research.html](http://www.anvari.org/log/20030916.1803_first-and-last-letter-research.html)

We rely on past experiences, prior knowledge and our ability to synthesize current experience with them.

**Gestalt theory of psychology:** we perceive objects visually as meaningful patterns of groups rather than collections of separate parts. However, sometimes we notice what is not there!



<http://www.users.totalise.co.uk/~kbroom/Lectures/gestalt.htm>

**Final note on this section:** If every new sensation was a unique experience with no past association, we would be unable to apply any past learning. We would be unable to use perception as a way of knowing as it is in that moment only. We are not neutral to the experiences around us; we are interpreters of them.

Dave Irwin and loss of memory:

<http://www.nationalpost.com/news/toronto/story.html?id=c5233696-6ad3-4bd1-bb4a-85811b4a8ed8&p=4>

### **III: Limits of Sense Perception**

Sense perception is:

1. selective
2. interpretive
3. cumulative

Sense perception (and the limits we judge it to have) as influenced by:

1. our emotions
2. our rationalism
3. our imagination

#### **1. Sense perception extended by way of technology:**

1. eyeglasses and hearing aids

2. microscopes and telescopes
3. Internet



### Things to consider however:

As accessibility becomes easier by way of technology, our observations become even more indirect. As glasses to eyes both assist and cause indirection, so, too does other far more sophisticated and advanced technology to bring to our senses that which we would otherwise not experience, but do not *actually* experience.

It is not so different than the metaphor of the map of the world.

How many contacts in your phone? Recall five numbers.

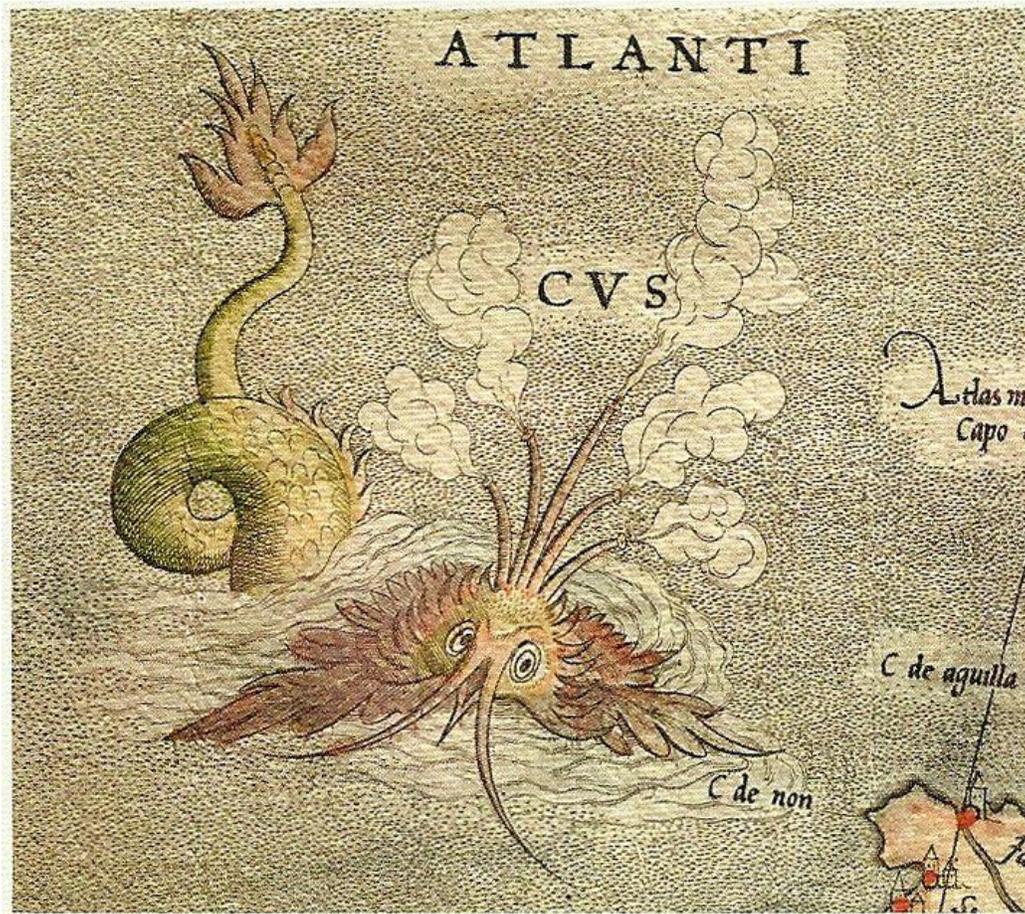
With extended ability to 'see' a much larger world, questions emerge: what is our role and responsibility with the knowledge we acquire? What do we do with this knowledge/

## 2. Thinking Critically:

We must be aware of our own limitations; the limitations we set for ourselves concerning the senses.

**Paying attention:** It is possible and beneficial to 'train' ourselves to be more observant and curious about the world around us. Also necessary is to recognize the fallibility of our observations by way of sensory perception.

**Suspending expectations:** to see what IS there rather than what we *expect* to see. Expectations emerge from prior experiences, but we need to be conscious that basing the present on the outcome of the past can lead to a sense of bias; if we believe in sea monsters, we search for them.



Provided by: <http://www.strangescience.net>  
Originally published in: *Europae Descriptio, Emendata*  
Now appears in: *Sea Monsters on Medieval and Renaissance Maps* by Chet Van Duzer



The Cottingley Fairies and **confirmation bias**: we notice what supports our belief and reject what contradicts them.

### 3. Extracting observation from interpretation:

Senses are interpretive and our interpretation is often instantaneous. It likely aids us in flight or fight situations; it also leads to misinterpretation.

Stephen Covey and the man on bus story.

Thus, it becomes a skill to distinguish between our observations, our inferences and our value judgments,

**Observations:** what we take in via our senses

**Inferences:** what we think this means

**Value judgments:** how we evaluate subjectively\*

**Subjectivity** itself is multi-layered including our cultural paradigms, religious stance; past experiences, educational systems, family, etc. Thus, there is a lot to cause us to slow down and consider.

### 4. Checking observations:

Repeatability is essential for scientific validity. Reflecting on our observations of similar experiences or repeated encounters with people can help clarify our expectations. The caution is to not judge too hastily or with too little information.

## IN SUMMARY

### IV: So what are the *buzz* words concerning perception:

**Empiricism** is the philosophical stance that *all* knowledge comes from perceptual experience. The more significant of these two words is experience (Have you read Tennyson's poem *The Lady of Shalott*)? If we do not experience; if we do not try; if we do not fail; if we do not, we cannot fully know ourselves.

**Common sense realism (direct; naïve)** is the stance that we accept at face value and do not question (Pleasantville and the roads to nowhere) and in so doing, we receive an accurate image of reality.

After all, our sense of pain varies from each other and various situations. If pain is not a 'real' thing, then it can be argued (and has been) that neither is sound nor colour, that what you hear and see varies from what I do.

### Read the following explanation – red is not always red, is it?

If I have an experience as of a large apple tree, then that's because there's a large apple tree in front of me. If the apples on the tree appear to me to be red, then that's because there are objects in front of me, apples, that have the property redness; simple.

Plausible though naive realism may be, it has serious problems, among which is the problem of the variability of perception. The same object may appear differently to different people, or to the same person at different times. The apples may appear to be red in the daytime, but at dusk they are a shade of grey. If naive realism is to be taken seriously, and colours are out there in the world, then apples regularly change colour depending on how much light is around them. It is much more plausible, though, to think that the apples are the same as they ever were, that all that has changed is our experience of them.

From: Holt, T. (2006) <http://www.theoryofknowledge.info/naiverealism.html>

However, nothing in this course is as straightforward as that.

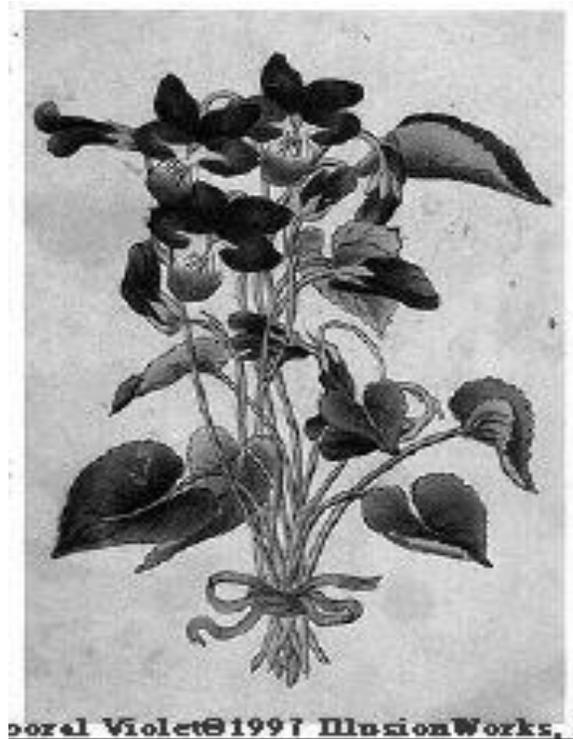
Thus, what other terms must we consider:

**Sensation** – what the 'world' provides...does anybody hear?

**Interpretation** – what our minds provide – think about Nagel's quote (think of so many elements that affect our interpretation – hunger; fatigue; excitement; anticipation; our peer group; our culture; our capital (that which we invest, that which we value).

**Context** – what I would also deem setting (time, place, circumstances)

**Figure and ground** – look at the image; what is highlighted (more readily discernible to us is the figure; what is in the background is, well, ground). Do you see the faces?



**Visual grouping** – we have a tendency to derive meaning from what we see; visual grouping is the collating of our experiences by which we then draw quick conclusions subsequent times we experience something similar.

**Expectations** – we expect to see (perceive) based on past experiences; thus, we tend to miss the unexpected. Consider the typos you make on a daily basis – in first reading everything is fine; it is only with a certain time and distance we see clearly our errors.

**Unconscious influence** – when we view items upside down, it takes only a few days for the brain to adjust to see things right side up:



We do so unconsciously; we continually adapt to that which we perceive in order to make sense. The inability to do so is known as **visual agnosia**; please review the link I posted on Ning.



**Selectivity/subjectivity** – we can only absorb SO much! The ordinary running of a school day appears to seamlessly pass one into the next unless we are suddenly startled. Do you know the practically surefire cure for hiccups; it involves manipulating the concentrated selectivity of the *hiccupee*.

So many elements affect our perception – everything from context to mood to interest to emotion to hopefulness to fear; if you loathe ToK but enjoy staring at the person seated before you, what you take in within the structure of the class will be very different than that of another observer. Consider that every story can be multi-voiced. Thus,

**Eye-witness testimony** continues to be a very limited way of measuring accuracy as is the reliance on memory (are they yours or are they appropriated re-telling to you from another source; if the latter, then there is at least two levels of subjectivity at play – the speaker and you, and in your recounting, the audience becomes the third). Do we really know anything at all?!

So, why rely on perception as a way of knowing? After all, memory is faulty; we may not be astute observers all the time (in fact, many are poor observers more often than not); we may infer incorrectly. In

order, then, to count on perception, it behooves us (o! so glad to have worked that word in there!) to apply the following:

**Coherence:** basically, let's see if what we perceive follows a pattern of what we expect; think back to the old Sesame Street jingle – *One of these things is not like the others.*

**Other sensory confirmation:** Rather than rely solely on one sense, we apply another or others (apples – we see, smell, taste, and as you bite into it, hear and touch ). Applying another sense enables us to check for our own accuracy.

**Independent testimony** – just an aside – in 2006, 36% of Americans believed the US government to be at least somewhat complicit (either overtly involved or aware and passive) in the 9/11 attacks. Quick math tells me 36% X 300 million than over 100 million Americans BELIEVE this. (Yikes! Have you seen *Loose Change?*)

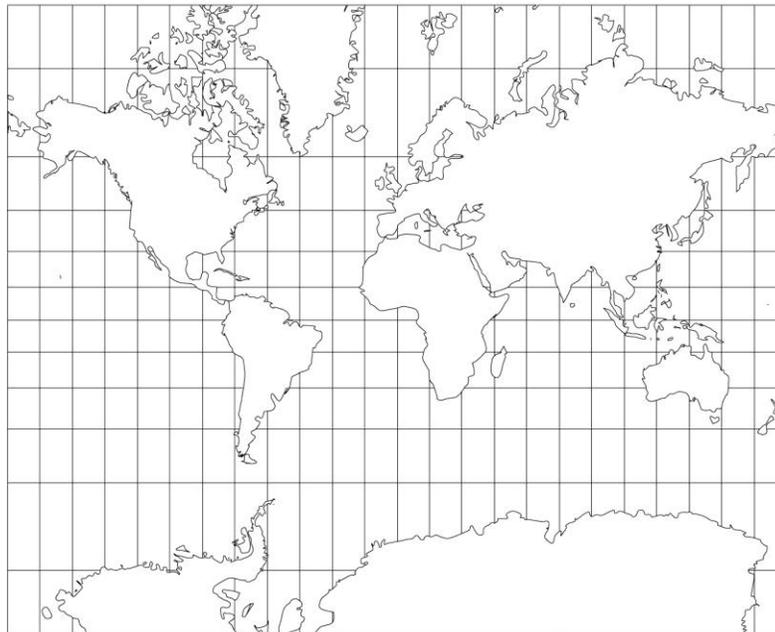
Notwithstanding THIS, what independent testimony refers to is the group confirmation; if you have seen what others purport to have seen, it probably happened.

Finally, consider these last two terms:

**Scientific realism** – the world exists, contra to our perception of it

**Phenomenalism** – all knowledge is based on experience; we cannot know what it is to be of the world without experiencing within it – to paraphrase: we can only really know our own mind; everything else we must experience to perceive

World Mercator Projection Map



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