Oppgavesett PSY1012/PSYPRO4112 – våren 2018

**To av tre oppgaver skal besvares:**

**1. Hvilken innflytelse har egenskapene til arbeidshukommelsen og langtidshukommelsen på hvordan vi løser problemer?

2. Forklar forskjellen mellom "sansning" og "persepsjon." Inkluder en diskusjon om hvor og hvordan disse to begrepene overlapper (hvis de gjør det), så vel som hvor og hvordan de ikke overlapper (hvis de ikke gjør det).

3. Beskriv menneskelig språkpersepsjon og språkforståelse.**

Sensorveiledning:

**To av tre oppgaver skal besvares:**

1. **What influence do the properties of working memory and of long-term memory have on how we solve problems? Hvilken innflytelse har egenskapene til arbeidshukommelsen og langtidshukommelsen på hvordan vi løser problemer?**

Sensorveiledning:

The components of working memory are the central executive, visuo-spatial sketchpad, phonological loop and episodic buffer.  Phonological loop and visuo-spatial sketchpad process auditory (especially language) and visual information respectively.  The episodic buffer binds together information in different modalities.  All of these components have capacity to hold and process only a small number of chunks of information.  What exactly constitutes a chunk depends on experience, and thus information in long-term memory.  For example, experts typically can chunk together several steps of a problem-solving procedure, and so reduce their working memory load when solving a problem in their areas of expertise. Relevant properties of long-term memory are that it stores information in a meaning-based as well as a visual code, that it efficiently retrieves relevant information, and that it is good at pattern matching.  Efficient retrieval of relevant information combined with limited capacity for information processing should bias people towards reasoning based on past experience and pattern matching.  A suitable example would be that expert chess players do not differ from less expert players in short-term memory capacity when remembering random arrangements of chess pieces.  However, when remembering positions from real games, the more expert players remember larger chunks, indicating that they recognize familiar patterns.  The quality of expert players’ looking ahead in a game is not much affected by time constraint, again indicating reliance more on pattern matching than brute force calculation.  This is only an example of a possible approach, not something that is required.  Another example (not in the pensum, but presented in the lecture) would be that when people are to evaluate the logical validity of all four combinations of believable, unbelievable, valid and invalid syllogisms, they accept c. 90% of believable syllogisms, regardless of validity.  Of the unbelievable syllogisms, they reject 90% of the invalid and 50% of the valid.  It seems people simply do not bother to reason logically when conclusions are believable.  This may be interpreted as a sign of poor reasoning, or else a strategy of efficiently focusing mental effort on cases that conflict with prior knowledge.  What makes such a strategy efficient is that long-term memory is good at retrieving relevant information, while working memory has very limited capacity.  Checking even what is believable would waste precious resources.  What I want students to understand is that some apparent weaknesses may be seen as working with the strengths of human cognition and avoiding the weaknesses.​

1. **Explain the difference between "sensation" and "perception." Be sure to include a discussion of where or how these concepts overlap (if they do overlap) as well as where or how they do not overlap (if they do not overlap). Forklar forskjellen mellom "sansning" og "persepsjon." Inkluder en diskusjon om hvor og hvordan disse to begrepene overlapper (hvis de gjør det) såvel som hvor og hvordan de ikke overlapper (hvis de ikke gjør det).**

Sensorveiledning:

We have five different sensory organs: eyes, nose, ears, tongue, and skin. These five sensory organs are responsible for receiving different stimulations around us through seeing, smelling, hearing, tasting, and, finally, feeling through the skin. The signals which are received through our sensory organs from the environment around us are called sensations. Simply put, sensations are what our sense organs receive and transmit to the brain. Once the brain receives the stimulus, it converts the whole signal into feelings, taste, sound, sight, and smell. On the other hand, perception is almost like a sixth sense. It is what we perceive or form an opinion on of anything and everything happening around us.

The perception of a person is an absolutely personal experience. It is what a person thinks about his or her environment, and it is how the person looks at the world around him. It is more of a psychological concept than anything physical like sensations. Two different people can have different perceptions about the same thing. For example, in body image, a healthy person has a different perception about his or her body. Healthy people, even if they are a little overweight, react and see themselves differently and accept who they are or work towards achieving what they want. Once they achieve it, they stop. While an anorexic person, no matter how slim, no matter how underweight, has a perception that they are still overweight and stops eating food altogether to achieve, what they perceive, to be the right body for them.

Perception is what a person wants to believe, their personal opinion. People of different generations or people of different religions or people from different backgrounds have a difference of opinion only because they perceive everything differently. Wise people try to understand the perceptions of other people whereas unwise people believe that what they perceive about a situation or about a person is the only correct perception.

Perception and sensation are different mostly because sensation is more physical. Sensations arise only because the body receives a stimulus, and the body reacts to it converting the stimulus into one of the things that one of the sensory organs of the body can identify. However, perception is absolutely psychological. Perceptions are individual thoughts of individual people.

Summary: Sensation is the process of hearing, smelling, feeling, tasting, and seeing as a result of external stimulations received by the five sensory organs of the body; ears, eyes, nose, tongue, and skin. Perception, however, is the mental image of something or somebody made due to the different actions exhibited by the environment around us.

1. **Describe human language perception and comprehension. Include both oral and written language. Beskriv menneskelig språkpersepsjon og språkforståelse.**

Sensorveiledning:

Language can be defined and described in terms of its properties and basic components like words and sentences. Such description may be the starting point in describing its perception and comprehension. Speech perception is one of the important processes that may be included and it can be viewed as both ordinary and special. This may also include the description of both auditory and audiovisual speech perception. Syntactic and semantic processing can also be part of the description of comprehending oral language. In addition, these last two topics is also relevant in an explanation of how we comprehend written language. This may include topics from the perceptual basis for reading to what happens when reading becomes problematic, as it does in dyslexia, the comprehension of words and larger parts of language like discourse will all be relevant in the context of representation of ideas and text. In addition to this, comprehension of language may also include what the relationship between language and thought is, and how we interpret language as part of a social context.