Eksamensoppgave i PSY1012/PSYPRO4112 Kognitiv psykologi I

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Eksamensdato:16.05.2014

Eksamenstid (fra-til):09:00 – 13:00

Hjelpemiddelkode/Tillatte hjelpemidler: Ingen

Annen informasjon:

Målform/språk: Bokmål

Antall sider: 2

Antall sider vedlegg: 0

Kontrollert av:

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Dato   Sign

To av tre oppgaver skal besvares:

1. Hvordan forstår vi talespråk og skriftspråk?

2. Forklar forskjellen mellom "sansing" og "persepsjon".

3. Hvilke hukommelsesprosesser er involvert i forståelse av den følgende historien, og i å vurdere hvor gammel Betsy er?
   Hvor enkelt eller vanskelig er det å gjenhente informasjonen du trenger for å forstå historien, og hva betyr dette for problemløsning?
   "Betsy ville gi Jacob en gave. Hun ristet på sparegrisen. Det var ikke lyd i den. Hun gikk for å finne mor".

Sensorveiledning PSY 1012/PSYPRO4112 vår 2014

Pensumboken for kurset ble fort utsolgt fra forlaget, og den gamle utgaven av boken viste seg også å bli vanskelig å få tak i. Studentene ble derfor oppfordret til å kjøpe en grunnbok som omhandler de samme tema som ble forelest ut ifra timeplanen. Dette kan bety at besvarelsene i utgangspunktet kan ha noe ulikt fokus m.h.t. teori og empiri. Det bes om at dette hensynet tas i vurdering av besvarelsene.

Følgende tre oppgaver ble gitt:
1. Hvordan forstår vi talespråk og skriftspråk? How do we understand oral and written language?
2. Forklar forskjellen mellom "sansing" og "persepsjon". Explain the difference between "sensation" and "perception".
3. Hvilke hukommelsesprosesser er involvert i forståelse av den følgende historien, og i å vurdere hvor gammel Betsy er? Hvor enkelt eller vanskelig er det å gjenhente informasjonen du trenger for å forstå historien, og hva betyr dette for problemløsning? "Betsy ville gi Jacob en gave. Hun ristet på sparegrisen. Det var ikke lyd i den. Hun gikk for å finne mor.
   What memory processes are involved in understanding the following story, and in judging how old Betsy is? How easy or difficult is it to retrieve the information you need to understand the story, and what does that mean for problem solving? "Betsy wanted to give Jacob a present. She shook her piggy bank. It made no sound. She went to see her mother".

Sensorveiledning til disse tre oppgavene:
1. Oppgaven skal handle om språk og begreper om språkets struktur er nødvendige for å kunne besvare den godt. For å forstå noe må vi ha oppfattet det, og oppgaven bør inneholde informasjon om talepersepsjon og teori hvor talepersepsjon ses som ordinær persepsjon samt talepersepsjon som spesielle perseptuelle prosesser for talespråk. I tillegg vil det være naturlig å skrive om hvordan vi oppfatter ord, setninger og meningsinnhold. Det vil være naturlig å ta med lesing og skrive om hvilke prosesser som er involvert i lesing og hva som skjer når lesing er et problem. I tillegg vil det være naturlig å diskutere med hvordan vi forstår større enheter i språket (diskurs).

2. Although intimately related, sensation and perception play two complimentary but different roles in how we interpret our world. Sensation refers to the process of sensing our environment through touch, taste, sight, sound, and smell. This information is sent to our brains in raw form where perception comes into play. Perception is the way we interpret these sensations and therefore make sense of everything around us. The main difference between sensation and perception is that sensations are the passive process of bringing information from the outside world into the body and to the brain. Perception, on the other hand, is the active process of selecting, organizing, and interpreting the information brought to the brain by the senses. Sensations are passive, in the sense that we do not have to be consciously engaging in a "sensing" process. It is what our senses do naturally and at all the time. However, perception is what our brain actively does: it interprets the sensations. Sensation is the process by which our senses gather information and send it to the brain. Humans are capable of sensing a large amount of information as any given time, such as room temperature, brightness of the lights, someone talking, a distant train, or the smell of perfume. However, due to too much information, our brain does not interpret everything. For example, if you are talking to someone, you might not realize that someone just walked in the room, even though you probably did hear the door creak and their footsteps. It's just that your brain didn't interpret the information, and hence you didn't perceive the person walking in. Due to this most of our world goes unperceived by us. Scientists estimate that we observe 11,000,000 bits of info per second. However, we interpret only 40 bits. Also, perception can be shaped by learning, memory and expectation. An example of this and an easy way to distinguish between sensation and perception is that: When we see a building from far, it appears small. When we walk towards the building it appears to get bigger, at least that is what our eyes see. However, we do not exclaim in surprise that the building is growing, or that we are shrinking. It is because we know that the building is the same size as it always was, as we are as well, it's just our relative distance from the building that makes the building appear so. Another example of perception shaped by learning, memory and expectation is when we walk into a room. If anything is amiss, or if something has been moved or removed entirely, we can tell the difference. Our eyes see the room, and we perceive that something is different from before.

3. Understanding the story depends on retrieving some background knowledge, presumably from semantic memory. Here is an outline, with the information that needs to be retrieved in brackets: Betsy wanted to give Jacob a present. [Presents can be obtained by buying.] She shook her piggy bank. [Piggy banks are often used by kids to keep money.] It made no sound. [The sort of money kids usually have in a piggy bank is coins. Coins would jingle when shaken in the piggy bank, so if there is no sound, there is no money.] She went to see her mother. [Kids' usual alternative source of money is their parents or grandparents, not credit cards or the local friendly loan shark.] This retrieval is so fast and efficient that we are usually not even aware of it. It allows us to make reasonable inferences about, for example, Betsy's age, most likely in the range from 4 to 10 years old.

That retrieval of background knowledge depends on recoding. The story is read, and written material is recoded into an acoustic code. The evidence for that is that words that have similar sounds are more easily mixed up in short term memory tests than either words from a control list without similarities or words with similar meaning but different sound. Tests of long term memory instead show that words with similar meaning are mixed up rather than words with similar sound. Other evidence that may be cited is that when short text passages differ either in style or in meaning, then meaning is automatically encoded, while style is encoded only when people are warned that they will be asked about it. Or that while exact recall of a short story (was this exact sentence in the story) takes longer as delay between encoding and retrieval increases, plausible retrieval (does this make sense in the context of the story?) becomes faster with increasing delay. Students may choose to say something about the role of sleep or reconsolidation in recoding. These topics are not central enough that it is a problem if a student fails to mention them, but are relevant enough that it is also not a problem if a student does discuss them. The implication for problem solving is that because we are so very good at retrieving relevant information (and because our working memory doesn't give us much capacity to manipulate information), reasoning and problem solving should be biased towards relying on semantic knowledge. For example, many of the important differences between experts in a field and less experienced people are differences in the amount and organization of knowledge in semantic memory: Of the differences listed in the book, those concerning schemas, organization, representation, strategy, automatisation, prediction of difficulty and confronting unusual problems are based on differences in semantic knowledge. The students will not have enough time to discuss all of those and will have to trade off comprehensive listing against depth of discussion. Anything from a list with a little explanation to one example discussed in depth will be acceptable.