平成25年度実施（上期）
東北大学大学院情報科学研究科
博士課程前期2年の課程・後期3年の課程入学試験問題

専門試験科目
第６群（心理・哲学群）

注意

○専門科目試験問題は、全部で１２問あります。
○前期２年の課程の受験者は、４問を選んでそれぞれ答案用紙に解答しなさい。
○前期２年の課程外国人留学生受験者は、３問を選んでそれぞれ答案用紙に解答しなさい。
○後期３年の課程の受験者は、２問を選んでそれぞれ答案用紙に解答し、さらに学習心理情報学または認知心理情報学（人間社会情報科学専攻）及び認知情報学（応用情報科学専攻）に配属を希望する者は小論文を作成しなさい。
○各答案用紙上の

問題番号	

の空欄に、解答する問題番号を、

さらに、

受験番号：

には受験番号を、それぞれ記入しなさい。
○試験時間：　10:00 - 13:00

2013年度上期

専門科目試験問題（第6群：心理・哲学群）

1. 情動価や感情価を有する刺激に対する選択的注意について説明しなさい。
2. 記憶情報の符号化と検索に関する原理の一つである符号化特定性原理について説明しなさい。
3. 統計学におけるブートストラップ法について説明しなさい。
4. 人間の思考や判断の特徴を二重過程理論に基づいて説明しなさい。
5. 自己開示およびその返報性について説明し、それが人間関係において重要である理由を述べなさい。
6. 学習指導要領では子どもたちの生きる力を育むという理念のもと言語活動の充実が求められているが、いかなる言語活動がどのような生きる力を育む可能性があるかについて、認知的な視点で論じなさい。
7. 思想史における「エロス」と「アガペー」との違いについて説明しなさい。
8. 「ニコマコス倫理学」について説明しなさい。
9. 「幾何学の精神」と「繊細の精神」との区別について説明しなさい。
10. 「神即自然」について説明しなさい。
11. カントの「実践理性」について説明しなさい。
12. ニーチェの「永遠回帰（永劫回帰）」について説明しなさい。

平成25年度実施(上期)
東北大学大学院情報科学研究科
博士課程前期2年の課程・後期3年の課程入学試験問題

外国語（英語）

第6群（心理・哲学群）

注意

○解答は答案用紙に書きなさい。
○試験時間：　14:30 - 15:30

1. 下線 1)を訳しなさい。
2. 下線 1)の論法の問題点について本文中で指摘されていることを要約しなさい。
3. 下線 2)を訳しなさい。

Feelings in Animals

Some have argued that an animal's behavior can be used as a kind of nonverbal self-report to assess its feelings. The neuroscientist Jaak Panksepp takes this approach in *Affective Neuroscience*, as does, more controversially, the psychoanalyst Jeffrey Masson in *When Elephants Weep*. Their logic is as follows: Since animals and humans behave similarly when emotionally aroused (for example, similar fear responses are expressed by rats and people in the presence of danger), they must experience the same subjective states as well.[1)] If so, it would be possible to use behavioral responses in animals as indicators of feelings.

The flaw in this approach, which takes us right back to the credibility problem, is revealed by the results of a study of human heroin addicts. The subjects were allowed to press a button to administer either saline or a high or low dose of morphine through an intravenous tube. The subjects did not know what was in the tube at any given point. Periodically, they were asked to rate how they felt. When a high dose of morphine was in the tube, they pressed vigorously and also reported feeling high. When saline was in the tube, the subjects pressed little and reported feeling nothing. But when the dose of morphine was weak, the subjects vigorously pressed the button in spite of the fact that they reported feeling nothing. Clearly, one would be misled by using behavior as a measure of what was felt in this case, since the subjects behaved but didn't feel. Emotional responses are not always external mirrors of internal feelings, but are rather controlled by more fundamental processes.

The problem is only compounded when we examine the relation of behavior to feelings in different species. Just because two creatures act the same does not mean they have the same experiences when they perform those actions. A beetle that finds itself under the approaching footstep of a human does what a human would do – it tries to escape before the foot lands. A robot can be programmed to do what a human would do if an object is sent flying toward his or her head – raise an arm to deflect the object. Do the beetle and robot feel fear, or do they simply express a defensive response? The fact that we have feelings when we act emotional does not mean that every act that looks emotional is accompanied by feelings. The renowned ethologist Niko Tinbergen reached a similar conclusion: "Although ... the ethologist does not want to deny the possible existence of subjective phenomena in animals, he claims that it is futile to

present them as causes, since they cannot be observed by scientific methods. . . . Hunger, like anger, fear, and so forth, is a phenomenon that can be known only by introspection. When applied to another subject, especially one belonging to another species, it is merely a guess about the possible nature of the animal's subjective states."

Given that we are left with nonverbal behavior as our main tool for assessing emotional states in animals, and that animal studies are the best way to study the brain, how can we escape the credibility problem and gain a richer psychological understanding of the brain's emotional circuits? How can we, in other words, study emotions using nonverbal emotional behavior as a measure without using it as a measure of feelings? Ironically, an important clue about how to do this comes from cognitive science. As we saw in the last chapter, cognitive science was successful because it figured out how to study the mind without getting bogged down in questions about subjective experience. The trick was to treat the mind as an information-processing device rather than as a place where experiences occur. Although early cognitive scientists considered emotions to be more a matter of mental content than of information processing, and thus not subject to cognitive analysis, their processing approach is, in fact, directly applicable to the study of emotion. Just as it is possible to study how the brain processes the color or shape of a stimulus without first figuring out how the conscious experience of color or shape comes about, it is also possible to examine how the brain processes the emotional significance of a stimulus without necessarily first figuring out how that stimulus comes to elicit conscious feelings. Since emotions as processes can be studied in animals and humans alike, and since, as we'll see, emotional processing underlies both emotional behavior and emotional feelings, a processing approach is a way out of the credibility problem.[2)]

In *Synaptic Self* by Joseph LeDoux

［注］ saline: 生理食塩水
Intravenous: 静脈注入の
bogged down: 身動きがとれなくなる