平成２１年度実施
東北大学大学院情報科学研究科
博士課程前期・後期入学試験問題
(2009 年 8 月 25 日)

専門試験科目

言語・メディア群

注意

○ 以下には、専門科目９問題が印刷されている。

○ 受験者は、そのなかから３問題を選んで、答案用紙に解答すること。

○ 言語系を志望する学生は，問題７〜問題９のなかから，２問題以上を選択すること。

○ メディア系を志望する学生は，問題２〜問題５のなかから，２問題以上を選択すること。

○ 問題１、３、４を選択した場合には、指定の解答用紙を使用すること。それ以外の問題を選択した場合は、解答用紙に問題番号を記入すること。

○ 問題６―１あるいは問題６−２を選択した場合には、辞書を使用しても構わない。ただし、辞書は出題者が用意したものを使用するので、必要な場合には試験官に申し出ること。

問題　1

「グローバリゼーション」(globalization)、「アイデンティティ」(identity)、「文化」(culture)の３語をキーワードとして、各自考えるところを６００字以上８００字以内の日本語でまとめなさい。その際、キーワードは３語とも用い、題名をつけて、首尾一貫した論理で記述しなさい。
（この問題には指定された解答用紙を用いること。）

問題　2

芸術、科学、技術の相互関係を問う以下の 4 つの設問より一つ選び、選択番号を記載し日本語で答えなさい。

(1) What kinds of relationships are possible among art, scientific inquiry, and technological innovation? How might art and research mutually inform each other?

(2) How are artists investigating techno-scientific research? How have they chosen to relate to the world of research? How does research further their artistic agendas?

(3) How do art historians and cultural theorists understand the interactions between culture and research?

(4) How do researchers conceptualize? What agendas motivate their work? What future developments are likely to call for cultural commentary and artistic attention?

問題　3

以下の文章を600字以内の日本語で要約しなさい。

With the growing importance of media, information and communications in society, many questions arise regarding the skills and knowledge required by the public to engage with these effectively. In academic and policy circles, these skills and knowledge requirements are increasingly framed in terms of 'media literacy', a term which encompasses the new skills required for using the internet, mobile and computing technologies, information literacy more broadly and the more familiar interpretation of broadcast and other media contents.

The growing prominence of the internet poses a set of particular challenges for its users, requiring the rapid development and continual updating of a range of skills and competences, from the most basic to the highly sophisticated. Yet little is yet known of the nature or distribution of these skills and competences.

Following the Communications Act 2003, Ofcom* has defined 'media literacy' as "the ability to access, understand and create communications in a variety of forms". Others follow various, often overlapping or related definitions in order to ask some key questions: what are the literacies required for today's communication and information environment? Are they singular or multiple? Are they an extension of, or a radical break with, past traditions of knowledge and learning? What are the barriers and how should media literacy be enhanced?

Key to this definitional debate is the recognition that many skills and competencies — from the most obvious and basic to the highly subtle and complex — are needed to engage with today's media and information environment. Hence, a broad approach is crucial. This approach to media literacy encompasses 'internet literacy' as follows:

- *Access.* Internet literacy is required to access both hardware and online contents and services, and to regulate the conditions of access.
- *Understanding.* Internet literacy is crucial for effective, discerning and critical evaluation of information and opportunities online.
- *Creation.* Internet literacy permits the user to become an active producer as well as a receiver of content, enabling interactivity and participation online.

Each dimension of literacy supports the others. Across many domains — not only leisure but also education, work, relationships, health and civic participation — internet literacy (and media literacy more generally) is increasingly important. Its absence may contribute to social exclusion and inequality.

* 英国における電気通信・放送等の規律・監督を行う規制機関
(出典 : Livingston, Sonia, et al. (2005) *Internet Literacy among children and young people: findings from the UK Children Go Online project* p.6)

問題　4

　以下は Wikipedia の項目 "Semiotics" からの抜粋である。その要旨を 400 字以内の日本語で記しなさい。

The term, which was spelled *semiotics* (Greek: σημειωτικός, *semeiotikos*, an interpreter of signs), was first used in English by Henry Stubbes (1670, p. 75) in a very precise sense to denote the branch of medical science relating to the interpretation of signs. John Locke used the terms **semeiotike** and **semeiotics** in Book 4, Chapter 21 of *An Essay Concerning Human Understanding* (1690). Here he explains how science can be divided into three parts:

> All that can fall within the compass of human understanding, being either, first, the nature of things, as they are in themselves, their relations, and their manner of operation: or, secondly, that which man himself ought to do, as a rational and voluntary agent, for the attainment of any end, especially happiness: or, thirdly, the ways and means whereby the knowledge of both the one and the other of these is attained and communicated; I think science may be divided properly into these three sorts.
>
> —*Locke, 1823/1963, p. 174*

Locke then elaborates on the nature of this third category, naming it Σημειωτικη (*Semeiotike*) and explaining it as "the doctrine of signs" in the following terms:

> Nor is there any thing to be relied upon in Physick*, but an exact knowledge of medicinal physiology (founded on observation, not principles), semiotics, method of curing, and tried (not excogitated, not commanding) medicines.
>
> —*Locke, 1823/1963, 4.21.4, p. 175*

In the nineteenth century, Charles Sanders Peirce defined what he termed "semiotic" (which he sometimes spelt as "semeiotic") as the "quasi-necessary, or formal doctrine of signs", which abstracts "what must be the characters of all signs used by...an intelligence capable of learning by experience" and which is philosophical logic pursued in terms of signs and sign processes. Charles Morris followed Peirce in using the term "semiotic" and in extending the discipline beyond human communication to animal learning and use of signals.

Saussure, however, viewed the most important area within semiotics as belonging to the social sciences:

> It is... possible to conceive of a science which studies the role of signs as part of social life. It would form part of social psychology, and hence of general psychology. We shall call it semiology (from the Greek semeîon, 'sign'). It would investigate the nature of signs and the laws governing them. Since it does not yet exist, one cannot say for certain that it will exist. But it has a right to exist, a place ready for it in advance. Linguistics is only one branch of this

general science. The laws which semiology will discover will be laws applicable in linguistics, and linguistics will thus be assigned to a clearly defined place in the field of human knowledge.

—*Cited in Chandler's "Semiotics For Beginners", Introduction.*

*Physick：当時用いられていた用語だが今は使われていない、医学的な治療法・治療学を意味する言葉

(http://en.wikipedia.org/wiki/Semiotics：2009 年 8 月 18 日現在)

問題　5

　フランスの記号学者ピエール・フレノー＝ドリュエルは、18世紀以降のヨーロッパの本における文章と挿絵が原則として序列関係に置かれており、挿絵はしばしば文章に対する補佐的な役割しか与えられなかったとした上で、挿絵が文章内容の(1)「明確化・詳述」や(2)「補足・追加」、(3)「強調点のずらし」、(4)「誇張表現」などを行うことで、文章の拘束力から自由になる例が徐々に増えていくと述べる。

　上記(1)から(4)の機能のうちから２つを選び、文章と図像（写真も含む）からなる挿絵入り本、絵本、漫画、パンフレットなど（言語や時代を問わない）を例に挙げてその機能を説明し、２つの例において文章と図像が全体として表現していることについて述べなさい。選択した２つの機能についての例は、同じ本・冊子から選んでも、別々の本から選んでも良い。また、とりあげる本・冊子については、わかる範囲でタイトルや著者名、刊行年代、内容等に言及すること。

問題　6

以下の問題6－1（ドイツ語）、問題6－2（フランス語）のうちから 一つ を選択して解答しなさい。なお、この問題を選択した場合には、辞書を使用しても構わない。ただし、辞書は出題者が用意したものを使用するので、必要な場合には試験官に申し出ること。

＊この問題を選択した場合には、解答用紙左上にある「問題番号」の欄に「6－1」あるいは「6－2」と記入すること。

問題　6 — 1

以下のドイツ語の文章を日本語に訳しなさい。

Zunächst sollten in der heutigen Zeit, in der die Zahl der Druckerzeugnisse überwältigend angestiegen ist, öffentliche Einrichtungen, die sammeln, ordnen und bewahren, als Museum noch stärker die Funktionen einer Bibliothek übernehmen. Kurz gesagt ist damit die eigentlich selbstverständliche Tatsache gemeint, dass man dahin kommen sollte, Manga weniger als Kunst zu schätzen, sondern als Lesestoff zu rezipieren. Zeitschriften und Zeitungen vermitteln eine Flut von Bildinformationen. Im Fall der Comics kommt eine entsprechende Textmenge hinzu, so dass es himmelweite Unterschiede zwischen der reinen Textinformation und derjenigen gibt, die Übertreibungen miteinschließt. Um dies zu analysieren, sind Forschungsmitglieder und Bibliothekare notwendig geworden. Zumindest sollte man es nicht an einem engen Informationsaustausch mit Forschern außerhalb der Museen, Forschungseinrichtungen und den Aufbewahrungsorten untereinander fehlen lassen.

問題　6 — 2

以下のフランス語の文章を日本語に訳しなさい。

Nous ne concevons plus aujourd'hui d'ouvrages pédagogiques sans illustrations. Il n'en fut pas toujours ainsi. Au XIXe siècle encore, une large majorité d'abécédaires en était totalement dépourvue. Pourtant, philosophes et pédagogues s'accordent de longue date à reconnaître que les enfants s'ennuient devant ces alphabets austères. Comenius* le premier dira que les enfants ne les « comprennent point, parce qu'ils ne sont pas bien représentés à leurs sens et à leur imagination ». Aussi préconise-t-il dans son *Orbis sensualium pictus* (1658) le recours à l'image pour illustrer les lettres et les mots. Par ce moyen, il entend « éveiller et aiguiser de plus en plus l'attention des enfants sur les objets représentés, puisque les sens, principaux guides de ce tendre âge, cherchent toujours des objets matériels, languissent et s'ennuient en leur absence ». Cependant, si le rôle pédagogique de l'image se développe en France à partir du XVIIe siècle, dans le cadre de la pédagogie princière, il faut attendre la fin du XIXe siècle avant qu'elle ne devienne une évidence institutionnelle. Sa reconnaissance est alors unanime, et pour les pédagogues de tous bords, « tenir les yeux d'un enfant, c'est tenir son intelligence ». De nos jours, le rôle de l'image, bien compris, diversifié, s'accompagne d'une réflexion en profondeur sur les processus cognitifs de l'enfant.

注）Comenius：コメニウス（1592-1670）はチェコの教育思想家・宗教改革家。1658年に『世界図絵』（*Orbis sensualium pictus*）を刊行。

問題　7

　等位接続構造を持つ(1)の文は、従属節を含む(2)の文と、ほぼ同じ意味解釈を持つとされる。この２つの例に関して後の問いに答えなさい。

(1) [s₁ You drink another can of beer], and [s₂ I'm leaving this room].
(2) If [s₁ you drink another can of beer], [s₂ I'm leaving this room].

問1
例文(1)と(2)のそれぞれの句構造を、樹状図(tree diagram)を用いて表しなさい（S1 と S2 の内部の階層構造や要素の範疇については、省略してよい）。

問2
a. 例文(1)、(2)の S1 と S2 のそれぞれから要素を抜き出した場合、どのような容認性の判断が得られるか。下記の解答例を参考にして、３つの例文を作成し、それぞれについて予測される判断を書き、その判断になる理由を述べなさい。

　　解答例：(1)の S1 における another can of beer を what に変えて抜き出しを行うと *What do you drink, and I'm leaving this room?という文ができる。しかし、これは what の移動が等位構造制約に違反し、容認不可能になる。

b. 下記(3) のような構造があったと仮定する。
(3) 　[α ...]＋接続詞＋ [β ...]
接続詞が等位接続詞の場合と従属接続詞の場合で、問２の a で見たような抜き出しに関する相違の他に、どのような相違があると考えられるか。例文を作成し、具体的に説明しなさい。

問題　8

次の英文を読み、以下の問いに答えなさい。

The distribution and interpretation of adjectives in the noun phrase has puzzled scholars for hundreds of years. The reason for this continued interest lies mainly in properties of adjectival modification that do not match our intuitive expectations about how elements that combine together ought to be interpreted: (a) some combinations of adjectives and nouns appear not to be compositional.

The notion of compositionality was first introduced formally by Frege (1977 [1923]). His principle of compositionality states that the meaning of a complex expression is a function of the meaning of its part and of their mode of combination. (b) The intuition behind the principle has been part of the study of a human being from the outset, since compositionality is perceived as a natural explanation of how a human being can understand sentences never heard before. Compositionality also makes the study of semantics possible: semantics would be almost inaccessible for study if the relationship between form and meaning was not regular. Compositionality also helps solve the induction problem for language acquisition: since the combination of perceptual forms is the most concrete data on hand, acquisition is greatly simplified if there is a homomorphy between semantic composition and composition of perceptual forms, i.e. we can then suppose that access to the composition of forms provides a fairly direct access to semantic composition.

Given this broad appeal of compositionality, it comes as no surprise that adjectival modification has puzzled linguists over the years: three salient properties of adjectival modification do not match our intuitive expectations about compositionality. First, there are many instances in which a noun phrase built from the same ADJ and the same N, with apparently the same syntactic relation, results in a complex expression with more than one meaning. The second problem for compositionality has to do with cross-linguistic variation: a certain meaning expressed by some syntactic combination in a first language is often expressed by a different syntactic combination of equivalent parts in another language. A third problem is that, though an N and an ADJ each express a property that defines a set, the combination of an ADJ and an N is not always interpreted as a simple intersection of sets.

Consider the first case. I use English examples to illustrate the point, but this holds in other languages as well. As all the authors who have worked on adjectival modification have observed, the same ADJ+N pair can often have a range of interpretations, as in the examples in (1).

(1) a. old friend (= aged friend; antonym: young friend)
    b. old friend (= long-term friend; antonym: new friend)

Here, the same parts, apparently syntactically combined in the same way, result in a complex expression with different meanings. (c) The availability of two readings in (1) suggests that the intuitive assumption that a simple combination of words should be associated in a one-to-one relation with a similar semantic representation must be wrong.

The second problem for compositionality comes from cross-linguistic variation. For instance, in French, a difference in the order of the ADJ relative to the N corresponds to a difference in meaning.

(2) a. homme pauvre --- man poor (= not rich man)
    b. pauvre homme -- poor man (= pitiful man)

These kinds of examples are problematic when we compare them with English because

different syntactic combinations of equivalent parts express the same meaning, so that the correspondence is not one-to-one between syntactic and semantic combinations. Thus, the French combination N+ADJ of (2a) corresponds to the English combination ADJ+N of (3a).

(3) a. John lost all his money on the stock market. Now he is a poor man. (= not rich man)
    b. John lost his left arm in an industrial accident. Oh, the poor man. (= pitiful man)

Cross-linguistic variation has revived much interest in adjectival modification in recent years because of the prevalent conception of universality in Generative Grammar. Not only is the meaning of particular complex expressions compositional, but the meaning between syntax and semantics is assumed to be universally uniform, so that variation is a prima facie imperfection.

Consider now the third problematic case. The following ADJ+N pairs in English seem to respect the homomorphy of syntactic and semantic composition:

(4) carnivorous mammal, square table, red ball, married man

For instance, the meaning of *carnivorous mammal* appears to be an intersection of the meanings of *carnivorous* and *mammal*. This fits with an intuitive analysis of the expression: at a surface level of syntactic analysis, the sequence carnivorous mammal appears to be a simple combination of words, and it seems natural to associate the sequence with a semantic representation that has a similar elementary kind of association, such as predicate conjunction or set intersection. This intuitive analysis works fine for a broad class of adjectives. However, the following sets of data show that not all adjectives are interpreted in this way.

(5) skillful liar ~ skillful surgeon
    big butterfly ~ big elephant
    small butterfly ~ small elephant
(6) the future president, a perfect scoundrel, a false eyelash, an alleged communist

(d) The adjectives in (5) are not intersective, but rather subsective: the ADJ is not interpreted in an absolute way, but relative to the N it modifies, depending on a scale determined by that N. So a skillful liar could be quite incompetent as a surgeon, and conversely, a skillful surgeon may be an inept liar.

The third set of adjectives in (6), often called "intentional" adjectives, are neither intersective nor subsective. For instance, a future president is not someone who is future and who is president, nor is it someone who is future as a president: a future president is neither future nor president.

（出典：Bouchard, D. (2002) *Adjectives, Number, and Interfaces: Why Languages Vary* より）

問１　下線部(a)について、筆者が「合成的 (compositional)」でないとする形容詞と名詞の組み合わせとはどのようなものか。代表的な事例を３つ指摘している箇所を選び出し、それぞれの内容を簡潔にまとめなさい。

問２　下線部(b), (c)を、日本語に訳しなさい。

問３　(5)に例示されている以外の形容詞と名詞を用いて、下線部(d)の性質を示す形容詞を伴う英語の名詞句の事例を、少なくとも２つ作成しなさい。

問題　9

次の英文を読み、下の問いに答えなさい。

　　　　This book provides a fresh look at parts of the grammar of English.　It pays particular attention to meaning, considering the different sorts of meanings words have, and showing how the varying grammatical behaviors of words are a consequence of their meaning differences.

　　　　My 'meaning orientation' stance is a little novel.　In addition, some of the topics discussed here (especially in Chapters 10 and 11) are scarcely mentioned in regular grammars of English.　(1)It could be said that the present book takes off from the point where most other grammars end.

　　　　The reader will not find here any detailed discussion of (2)the irregular inflections of verbs or plural forms of nouns, topics which are covered in standard grammars.　A basic knowledge of certain aspects of English grammar is needed for understanding the later part of the book, and these are presented in Chapter 2 (which does include some original analysis).

　　　　I work in terms of the broad theoretical apparatus of linguistics that has been built up over the past two thousand years (word classes, main and subordinate clauses, underlying and derived forms, structures and systems, etc.), utilizing the insights of Dionysius Thrax*, Edward Sapir, Leonard Bloomfield, Kenneth Pike, Michael Halliday, Noam Chomsky and Bernard Comrie, among others.　Theoretical ideas are brought in as they assist the central task, of describing the syntactic and semantic organization of English.　I have not chosen to restrict myself by casting the description in terms of any of the systems of nomenclature* that are currently referred to as (3)'linguistic theories' and which have, in the past few decades, grown, flourished and perished with such rapidity.

　　　　(4)The use of jargon and symbolization has been kept to a minimum on the principle that, in a subject such as linguistics, if something can be explained it should be explainable in simple, everyday language, which any intelligent person can understand.　That is not to say that this book can be read through quickly, like a novel.

　　　　Dixon, R. M. W. (1991) *A New Approach to English Grammar, on Semantic Principles*, pp.3-4.

*Dionysius Thrax　ディオニュシオス・トラクス (170 BC-90 BC) 古代ギリシアの文法学者。形態論中心の文法書を残す。現存するギリシアの文法書では最古のもの。
*nomenclature　専門分野での術語の体系のこと。例えば、一般に舌（シタ）と呼ぶ部位を解剖学の分野では舌（ゼツ）と音読みで呼ぶ。このような場合に、解剖学には独自の system of nomenclature があるという。

問１　下線部(1)を日本語に訳しなさい。
問２　下線部(2)について具体例を挙げよ。
問３　下線部(3)の文脈で著者が 'linguistic theories' として引用符で囲んだ意図を述べよ。
問４　下線部(4)を日本語に訳しなさい。

平成２１年度実施
東北大学大学院情報科学研究科
博士課程前期・後期入学試験問題
（2009 年 8 月 25 日）

共通外国語科目
（英語）

言語・メディア群

次の文章を読んで、後の問いに答えなさい。

Do we read differently on the computer screen from how we read on the printed page? It's an interesting question.

Before hearing from the experts, let's review what we think we know. Even the best computer screens are harder on the eyes than the paper page is. Jakob Nielsen, a Web usability researcher, reports that we generally read 25 percent more slowly on the screen.

I read more quickly on the screen and edit out about 40 percent of what appears before my eyes. If you haven't told me what you want by line four of your e-mail, trust me, I won't get the message.

A Norwegian researcher, Anne Mangen, recently weighed in with an interesting paper in *The Journal of Research in Reading*, asserting that screen reading and page reading are radically different. "(A)The feeling of literally being in touch with the text is lost when your actions – clicking with the mouse, pointing on touch screens, or scrolling with keys or on touch pads – take place at a distance from the digital text," Mangen writes.

Her conclusion: "Materiality matters, and one main effect of the intangibility of the digital text is that of making us read in a shallower, less focused way."

When writing about digital reading – blogger Danny Bloom is pushing the neologism "screening" for reading on the screen – Mangen, Nielsen and others focus on the issue of distractibility. How can schoolchildren really read at computer terminals, scholars argue, knowing that more interesting Web pages are just a few clicks away? But don't dedicated reading devices like the Sony Reader or the Amazon Kindle(注) change this equation?

Nielsen agrees that Kindle is trying to out-book the book. He argues that Kindle reading can be even more immersive than book reading: "All you are aware of is the next page, you don't get the feeling that you are coming to the end of the book. It's like being plunged directly into the author's content."

I asked Mangen via e-mail (B)if she thought there might be a future convergence of Kindle reading and Gutenberg reading. "Reading digital text will always differ from reading text that is not digital, no matter how reader-friendly and 'paper-like' the digital reading device," she answered. "The fact that we do not have a direct physical, tangible access to the totality of the text when reading on Kindle affects the reading experience. When reading a book we can always see, and feel with our fingers and hands, our progress through the book as the pile of pages on the left side

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grows and the pile of pages on the right side gets smaller. At the same time, we can be absolutely certain that the book will always work – there are no problems with downloading, missing text due to technical or infrastructure problems, etc."

Two years ago, the media critic (C)<u>William Powers</u> wrote a romantic defense of the ancient medium I publish in. His essay, "Hamlet's Black Berry: Why Paper Is Eternal," was widely quoted by journalists, of course. "Mr. Paper – he is not dead," Power wrote, "There are cognitive, cultural, and social dimensions to the human-paper dynamic that come into play every time any kind of paper, from a tiny Post-It note to an overweight Sunday newspaper, is used to convey, retrieve, or store information."

Paper will never die, Power concluded: "It becomes a still point, an anchor for the consciousness. It's a trick the digital medium hasn't mastered – not yet."

Two years ago, I might have agreed. If I had a daughter, yes, I would send out her wedding invitations on paper, not on Evite. (The world had many daughters, hence a future for mail carriers.) But for books, magazines, and newspapers, "eternity" is a long time. [(D)　将来、キンドルのようなリーダーが５０ドル以下になり、デジタルテキストに関する技術が非常に素晴らしいと言えるものになった時には、いま以上にscreening と呼ばれるものが増えるかもしれない].

注：Amazon Kindle　アマゾン・キンドル。Amazon.com が販売する電子ブックリーダー。

問１　下線部(A)を日本語にしなさい。

問２　下線部(B)で表されている質問に対して、（ア）～（ウ）の問いに答えなさい。

（ア）　Kindle reading　と Gutenberg reading は、それぞれ、どのようなことを指しているか説明しなさい。

（イ）　Mangen は、この質問に対して肯定的、否定的のどちらの回答を行ったか答えなさい。

（ウ）　彼女がそのような回答を行った根拠を２つに分けて簡単に説明しなさい。

問３　下線部(C)の William Powers の主張を要約しなさい。

問４　(D)には、この部分に入る英文の大意を日本語で書いている。これを英語に直しなさい。