２０２０年度

大学院文学研究科博士課程前期２年の課程入学試験

（　秋期・一般選抜　）問題

専門科目Ⅰ　　英　語　学　　専攻分野

試験開始の合図があるまで、この問題冊子を開いてはいけない。

受験記号番号	

成 績	

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専門科目Ｉ（　英　語　学　専攻分野）

［Ｉ］次の英文を読んで設問に答えなさい。

Natural languages involve invariant properties (linguistic universals) and properties that vary from language to language. The program of meeting explanatory adequacy in a systematic way thus requires plausible mechanisms for the acquisition of invariant and variable properties. **(A)**If the knowledge of invariant properties may stem from the internal structure of UG, the acquisition of cross-linguistically variable properties inevitably involves the role of experience: the learner must figure out all sorts of language-specific properties, from the set of phonetic features with distinctive value, to the association of word forms with particular concepts, to morphological paradigms, properties of word order, etc. So, addressing the issue of explanatory adequacy over a large scale requires a full-fledged theory of language invariance and variation.

The theory of principles and parameters introduced such a comprehensive framework. Pre-parametric models, such as the Extended Standard Theory (EST) of the 1970s, were based on the concept of particular grammars, conceived of as systems of language-specific, construction-specific rules. A particular grammar, say the grammar of English or of Japanese, would be a system of rules specific to the particular language and giving a precise characterization of the language particular way in which various linguistic constructions were expressed. So, the grammar of English would have phrase structure rules for the NP, the VP, and so forth, and transformational rules for the interrogative, relative, passive construction, etc. Universal Grammar was conceived of as a grammatical metatheory, expressing the format for phrase structure and transformational rules, hence providing the basic ingredients from which the language particular rules could be built. UG would also provide some general constraints on rule application expressing island properties.

Here is an illustrative example, taken from Baker (1978:102), an influential introductory textbook. English would have a transformational rule for passive with the following shape:

(1) Passive

Structural description:	NP	—	Aux	—	V	—	NP	—	X		
	1		2		3		4		5		→
Structural change:	4		2		be+en+3		0		5+by+1		

The rule would apply to a tree meeting the structural description of the rule (essentially, the tree corresponding to a transitive sentence), and would introduce a structural change consisting of the movement of the object to subject position, the demotion of the subject to a PP headed by *by*, and the insertion of the passive morphology. The grammar would include rules expressed in a similar format for raising, question and relative clause formation, topicalization, and so forth.

Language acquisition was a crucial issue at the time of the EST model, and in fact this framework went with a theory of acquisition, at least programmatically. The assumption was that the language learner, equipped with the format of rules provided by UG, would figure out inductively, on the basis of experience, the particular rule system that constitutes the grammar of the language he is exposed to. The learner would thus implicitly act as a 'little linguist,' formulating hypotheses within the class of formal options permitted by UG, and testing them on the empirical ground provided by the primary data.

Among many other problems, **(B)**this approach had to face a major obstacle concerning acquisition: no operative concept of 'rule induction' was introduced, so it remained unclear how the language learner could arrive at figuring out rules of the level of complexity of (1). Given this difficulty, the program of achieving explanatory adequacy over a large scale remained a distant goal.

Things changed rather dramatically, in this and other respects, with the introduction of Principles and Parameters model around the late 1970s. According to the new model, Universal Grammar has a much more substantive role than just functioning as a grammatical metatheory, and directly provides the basic scaffolding of every particular grammar. UG is a system of universal principles, and specifies a finite number of parameters, binary choice points expressing different options that individual languages may take. The ambitious program was to reduce all morphosyntactic variation to such primitive elements, the values that parameters can take at each choice point. The program turned out to have an exceptional heuristic value for comparative studies, and comparative syntax flourished in the following decade and afterward.

What is more important is that **(C)**the Principles and Parameters approach provided the tools for meeting explanatory adequacy on a systematic basis. Universal properties could be connected to the structure of principles of Universal Grammar, and the fixation of binary choice points on the basis of experience offered a promising device to account for the acquisition of variable properties. The fixation of a substantial number of parameters is by no means a trivial task because of the complex interactions that may arise, possible ambiguities of the primary data in relation to distinct patterns of fixation, and so forth, a complexity which has been highlighted by the computational modeling of parameter fixation. Nevertheless, the very fact that precise computational models could be built on that basis shows that the parametric approach to variation offered an operative device to concretely address the issue of the acquisition of grammatical systems.

A properly structured UG can provide a realistic account of how a particular language is acquired and hence meet 'explanatory adequacy.' **(D)**But then the further question arises of what explains the structure of UG. Why are linguistic computations universally organized the way they are and not in some other imaginable way? Here the question of explanation is raised at a further level: the *explanandum* is not the particular grammar that the adult speaker has acquired, but the structure of UG, the nature and properties of the human language faculty.

The Principles and Parameters framework made it possible to achieve explanatory adequacy over a large range of phenomena; the Minimalist program has tried to ask the further explanatory question, going 'beyond explanatory adequacy.' What could be the 'further explanation' of the properties of UG? If UG is a biological entity, a kind of mental organ, one explanatory dimension of its properties must be evolutionary: **(E)**much as it is reasonable to investigate the evolutionary history of the shape and structure of the liver, or of the eye, so it would make sense to trace back the structure of UG to its evolutionary roots. The study of the human language faculty in a biological setting can't avoid coming to terms with the evolutionary aspects.

The strategy that the Minimalist Program has adopted to pursue explanation 'beyond explanatory adequacy' is to isolate the different factors that enter into the growth of language in the individual. Three factors are identified in Chomsky (2005) and subsequent work, as follows:

(2) 1. Task-specific genetic endowment, which 'interprets part of the environment as linguistic experience ... and which determines the general course of the development of the language faculty' (Chomsky 2005:6).
2. Experience.
3. Principles not specific to the language faculty.

The last category may include very diverse entities: principles of data analysis and organization proper to humans, higher mammals, or also to other forms of animal intelligence; principles of optimal computation, which may hold at different levels of generality for complex computational systems, within or outside the realm of cognitive systems. So, the question about explanation 'beyond explanatory adequacy' can be asked of each factor.

As for the first factor, the further explanation is of an evolutionary kind, so it makes sense to try to identify the evolutionary events that gave rise, presumably quite recently in human phylogeny, to the particular neural circuitry that makes human language possible with its unique characteristics among animal communication systems. As for the second factor, the data that the learner has access to, this has to do with the external world and its historical contingencies, wars, migrations, sociocultural stratifications, and so forth. Hence, it is not directly part of the study of cognitive capacities.

As for the third factor, it potentially breaks down into a vast array of subfactors that may be quite different in nature, so that the 'further explanation' may take very different shapes. Principles of data analysis not specific to language and not specific to humans, but presumably shared with different forms of animal intelligence, evoke an evolutionary explanation, presumably over a very long temporal course. **(F)**As for principles of optimal computation (principles of economy, locality, conservation), they may also demand an evolutionary explanation, to the extent to which they are specific to computational systems implemented in the biological world; or else, they may instantiate 'natural laws' operative in computational systems in general, even outside the sphere of biology.

Needless to say, the very interesting questions raised by the attempt to distinguish first and third factor are extremely hard to state in scientifically satisfactory terms, hence they are at the border of current scientific inquiry on the topic.

The attempt to go beyond explanatory adequacy is a program of great intellectual fascination, and it is a merit of minimalism to have focused attention on such an ambitious goal for linguistic research. **(G)**But the goal of achieving explanatory adequacy does not dissolve into finer goals and research questions in minimalist analysis. Rather, having an analytic apparatus capable of reaching explanatory adequacy over a large scale remains a necessary point of departure for asking minimalist questions. And poverty of stimulus arguments continue to underscore the role of inner constraints of the human mind, now broken down into different factors in determining a richly structured body of linguistic knowledge.

In a certain sense, the intuitive notion of explanation is closely linked to simplicity. A better explanation of a certain domain of empirical data is a simpler explanation, we choose between two hypotheses or two models of comparable empirical adequacy on simplicity grounds, etc. Also the technical notion of explanatory adequacy is traditionally linked to simplicity: in the pre-parametric EST models, it was assumed that the language learner chooses between different fragments of grammars compatible with the primary data through an 'evaluation metric' choosing the simplest fragment (where simplicity can be computed in terms of number of symbols, of rules, etc.). Nevertheless, explanatory adequacy is a level of empirical adequacy, not an *a priori* criterion. **(H)**In certain cases, a tension may arise between the needs of explanatory adequacy and imaginable criteria of optimal simplicity. If we take 'simplicity' as corresponding to 'lack of structure,' i.e., an unstructured system is simpler than a more structured one, the tension is clear.

Consider again, in this connection, the issue of the choice of the correct structural representation of the Subject Verb Object sequence (or, in fact, of any configuration of three elements, specifier, head, and complement):

(3) a. [S [V O]] b. [[S V] O] c. [S V O]

A restrictive theory of Merge, limited to binary applications (hence, ensuring binary branching structures) constrains the choice to (3a) and (3b), ruling out (3c). If the theory is further supplied with a version of Kayne's (1994) Linear Correspondence Axiom (or any principle stating or deriving the compulsory linear order Specifier—Head), then (3a) is the only possible choice for any transitive sentence like *John loves Mary*. So, a language learner equipped with binary Merge and the Linear Correspondence Axiom (or equivalent) has no choice, the 'correct' structure is enforced by the shape of his cognitive system, a desirable result from the viewpoint of the needs of explanatory adequacy. Clearly, a system not specifying the LCA (or equivalent) is simpler than a system with the LCA. And arguably, a system not putting any binary constraint on Merge, hence permitting *n*-ary Merge, may be considered simpler than a system-limiting Merge to binary applications. Such unstructured systems could arguably be considered simpler than more structured systems; still, they clearly put a heavier burden on the language learner, implying that the choice between (3a), (3b), and (3c), all *a priori* possible, must be determined through data analysis, a step in the wrong direction from the perspective of aiming at explanatory adequacy.

In some such cases the tension may be genuine, in others it may stem from the ambiguity of the concept of 'simplicity' For instance, in our case, if we do not take 'simpler' as meaning involving less structure, but as 'involving fewer computational resources,' the binary Merge, yielding systematic binary branching may be taken as simpler than *n*-ary Merge, as the former involves at most two slots in operative memory, while the latter involves n slots. And perhaps partly analogous (if less straightforward) considerations can be made in connection with the LCA. So, it may well be that in some cases the apparent tension between explanatory adequacy and simplicity dissolves if we disentangle different facets of an ambiguous concept. **(I)**In the following passage in 'Derivation by Phase' Chomsky highlights the subtle border between *a priori* concepts like good design and simplicity, and empirical discovery: 'Even the most extreme proponents of deductive reasoning from first principles, Descartes for example, held that experiment was critically necessary to discover which of the reasonable options was instantiated in the actual world.' The example of simplicity as oscillating between 'lack of structure' and 'computational parsimony' illustrates the point. The first interpretation is in conceptual tension with the level of empirical success that goes under the name of 'explanatory adequacy,' while the second is fully congruent with it.

[adapted from Luigi Rizzi "The Concept of Explanatory Adequacy," in *The Oxford Handbook of Universal Grammar*, Oxford University Press]

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問1　下線部 **(A)** を日本語に訳しなさい。

問2　下線部 **(B)** について、this approach が指示するものを明らかにした上で、具体的内容を本文に即して説明しなさい。

問3　下線部 **(C)** について、具体的内容を本文に即して説明しなさい。

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問4　下線部 **(D)** を日本語に訳しなさい。

問5　下線部 **(E)** を日本語に訳しなさい。

問6　下線部 **(F)** を日本語に訳しなさい。

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問７　下線部 **(G)** について、具体的内容を本文に即して説明しなさい。

問８　下線部 **(H)** について、具体的内容を本文に即して説明しなさい。

問９　下線部 **(I)** を日本語に訳しなさい。

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［II］以下の日本語の文を英語に訳しなさい。

記憶とは、何でしょうか？　記憶と言っても、ものごとを覚えたり、忘れたりすることだけではありません。記憶は、非常に重要な働きをしていて、いろいろな心の現象に関与しています。

たとえば、過去の出来事を思い浮かべてください。その経験は楽しかったですか？　それとも、とても怖かったでしょうか？記憶を辿ると、さまざまな感情も一緒に思い出すはずです。つまり、記憶は感情にもリンクしているわけです。あるいは、何か質問に答える場面を想像してください。質問に答えるには、質問そのものを覚えて、関連する情報を思い出し、回答するために言葉を組み立てるはずです。つまり、ものを考えるときにも記憶は必要なのです。

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