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**Article**

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## Chomsky's I-language and E-language

Naoki ARAKI\*

(Received Nov. 1, 2016)

### Abstract

Language has been thought to be the object of linguistics. But Noam Chomsky insists that language is a useless notion for linguistic science. He argues that linguistics should be concerned with grammar. He renames language and grammar, externalized language (E-language) and internalized language (I-language) respectively. According to Chomsky, E-language (language) is something abstract externalized from the actual apparatus of our mind and I-language (grammar) is the physical mechanism of our brain. If we are endowed with Universal Grammar (UG) at birth and get I-language after parameters built in UG are set one way or another and I-language generates E-language, then I-language will be the object of linguistic science. But if there is nothing but language (E-language) spoken or written around us and grammar (I-language) is regularity derived from language (E-language), then we will have a quite different story. In other words, language spoken or written around us will be the object of linguistic science.

**Key Words:** language, grammar, E-language, I-language.

### Introduction

Usually we take language as something written or spoken in our daily life. Language is thought to be something existent and grammar is considered something abstract like regularity derived from language. So, unlike language, grammar does not exist as language does. But Chomsky insists that language does not exist but it is grammar that is existent. He argues that language is something externalized from our brain and grammar is the physical mechanism of our brain. Then he terms language “externalized language (E-language)” and grammar “internalized language (I-language)” respectively.

In this paper, we consider why Chomsky thinks that language is something abstract and grammar does exist and why he names language E-language, and grammar I-language respectively.

### 1. The Inversion of Language and Grammar

Chomsky insists that the notion of language is not clear and not well-defined in linguistic science. He takes dialects of German and Dutch for an example illustrating this:

In colloquial usage we say that German is one language and Dutch another, but some dialects of German are more similar to Dutch dialects than to other, more remote dialects of German.

(Chomsky 1980: 217)

Here, Chomsky claims that the very notion of German or Dutch is not scientific because of the fact that some dialects of German are more similar to some dialects of Dutch than other dialects of German. This example of German and Dutch is repeated in Chomsky's other work (Chomsky 2000: 48-49) when he criticizes Michael Dummett.<sup>1</sup>

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\* Department of Information Systems and Management, Faculty of Applied Information Science, Hiroshima Institute of Technology, Hiroshima 731-5193, Japan. E-mail: n.araki.gm@it-hiroshima.ac.jp

Furthermore, Chomsky refers to various dialects of Chinese and Romance languages such as French, Italian, Spanish, and so on:

We say that Chinese is a language with many dialects and that French, Italian, and Spanish are different languages. But the diversity of the Chinese “dialects” is roughly comparable to that of the Romance languages. (Chomsky 1980: 217)

Again, Chomsky insists that the notions of Chinese, French, Italian, and Spanish mean nothing scientific and objective due to the fact that dialects of Chinese are as diverse as Romance languages. The same idea as this is discussed in Chomsky (1988: 37)<sup>2</sup>. This means that political boundaries and institutions make real the notions of German and Dutch or those of Chinese, French, Italian, and Spanish. If the notion of language is not clear, as Chomsky insists, what will make linguistic science possible?

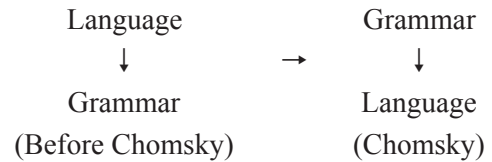
To answer this question, Chomsky assumes an ideal speaker-hearer’s knowledge of the language to be its grammar, in an ideal homogenous speech community without any dialect variations:

Let us refer to this representation of the knowledge of these ideal speaker-hearers as the grammar of the language. (Chomsky 1980: 220)

So Chomsky’s grammar is rules and principles in an ideal speaker-hearer’s mind. In this respect, we can say that his or her grammar is internalized, that is, “internalized grammar.” As we shall discuss later in more detail, this “internalized grammar” is renamed “internalized language (I-language).” If we define grammar, as Chomsky does, “language” will be sentences described by grammar and the latter “generates” the former. This leads to an idea that although grammar is finite, language which grammar produces is infinite.

Then, what will Chomsky’s claim be if we compare it with the traditional relationship between language and grammar? Before Chomsky, it was thought that first of all, language existed as a clear and concrete object (for example, real utterances), not as an obscure one as Chomsky insists. Therefore,

grammar was considered to describe the regularity of language as phenomena. In other words, language took precedence over grammar. But Chomsky completely reversed this relationship between language and grammar:



Now the notion of language is not clear, but language has become what grammar generates. It is not language but grammar that is crystal clear. Regarding this reverse, Chomsky looks back on those days (around 1980) at a discussion with Riny Huybregts and Henk van Riemsdijk, saying:

[...] it seems obvious, when you think about it, that the notion language is a much more abstract notion than the notion of grammar. The reason is that grammars have to have a real existence, that is, there is something in your brain that corresponds to the grammar. [...] But there is nothing in the real world corresponding to language. In fact it could very well turn out that there is no intelligible notion of language. (Chomsky 1982: 107)

Here, Chomsky is sure that grammar really exists, that is to say, there is something in the brain, which corresponds to grammar but this is not the case with language. He insists that grammar is clear but language is obscure, inverting the idea that the notion of language is clear and the notion of internally represented grammar is suspect:

This is the point I discussed in *Rules and Representations* [published in 1980] in a somewhat different context. It was mainly a debate with philosophers who feel that the notion of language is somehow clear and the notion of internally represented grammar is somehow suspect. It seems to me that it is actually the other way around. The notion of internally represented grammar is quite clear, [...] there must be such an object [grammar] and what it might be like is quite clear, I think. On the other hand, the concept

of language is very obscure, and it is not obvious that there is any intelligible or significant notion.  
(Chomsky 1982: 108)

The same idea as this is mentioned by Norbert Hornstein in Chomsky (2005: xxxii-xxxvi).<sup>3</sup> But on the other hand, Chomsky excludes a society where a mixture of two languages is spoken just like the Russian society depicted in Leo Tolstoy's *War and Peace* (1863-1869):

We exclude, for example, a speech community of uniform speakers, each of whom speaks a mixture of Russian and French (say, an idealized version of the nineteenth-century Russian aristocracy).  
(Chomsky 1986: 17)

The reason for this is that two languages, for example, Russian and French are not thought to be based on the same parameter settings of Universal Grammar as each other. But in reality there are a lot of multilingual people and societies around the world. In any case, in the final analysis, Chomsky concludes:

[...] the fundamental concepts are *grammar* and *knowing a grammar*, [...] *language* and *knowing a language* are derivative. [...] a grammar does not in itself define a language [...] languages may not be recursively definable,  
(Chomsky 1980: 126)

## 2. Language versus Grammar and E-language versus I-language

As we have seen, Chomsky reversed the relationship between language and grammar. In Chomsky (1986), he further develops his idea. First, Chomsky points out that the traditional notion of language is sociopolitical:

In the first place, the commonsense notion of language has a crucial sociopolitical dimension. We speak of Chinese as "a language," although the various "Chinese dialects" are as diverse as the several Romance languages. We speak of Dutch and German as two separate languages, although some dialects of German are very close to dialects that we call "Dutch"

and are not mutually intelligible with others that we call "German."  
(Chomsky 1986: 15)

These are the same problems as "the diversity of Chinese dialects and Romance languages" and "the similarity of dialects of German to those of Dutch," which are discussed in Chomsky (1980: 217). Again, Chomsky insists that the notions of Chinese, Romance languages such as French, Italian, Spanish and also those of Dutch, German are sociopolitical, not scientific and objective. Furthermore, he goes on to say that the commonsense notion of language also has a normative-teleological element:

The commonsense notion [of language] also has a normative-teleological element that is eliminated from scientific approaches. [...] Consider the way we describe a child or a foreigner learning English. We have no way of referring directly to what that person knows: It is not English, nor is it some other language that resembles English. We do not, for example, say that the person has a perfect knowledge of some language L, similar to English but still different from it. What we say is that the child or foreigner has a "partial knowledge of English," or is "on his or her way" toward acquiring knowledge of English, and if they reach the goal, they will then know English. Whether or not a coherent account can be given of this aspect of the commonsense terminology, it does not seem to be one that has any role in an eventual science of language.  
(Chomsky 1986: 16)

English which children or foreigners are learning, is neither English nor any other language which is similar to English but different from it. In this sense, the notion of English used here, is not scientific at all. Chomsky names this commonsense-notion language "externalized language" (E-language). For example, structural and descriptive linguistics and behavioral psychology tended to consider language as "a collection of actions, or utterances, or linguistic forms (words, sentences) paired with meanings" or "a system of linguistic forms or events." Also Saussurean structuralism interpreted *langue* as "a system of sounds and an associated system of concepts." Moreover, language was, for Bloomfield, "the totality of utter-

ances that can be made in a speech community.” David Lewis defined language as “a pairing of sentences and meanings over an infinite range.” According to Chomsky, these notions of language above are all externalized language (E-language) in the sense that they are understood independently of properties of mind/brain. This leads to an idea that grammar is “a collection of descriptive statements” concerning E-language, or “the actual or potential speech event.” Then, what is the relationship between grammar and E-language?

The E-language is now understood to be the real object of study. Grammar is a derivative notion; the linguist is free to select the grammar one way or another as long as it correctly identifies the E-language. Apart from this consideration, questions of truth and falsity do not arise. (Chomsky 1986: 20)

Here, Chomsky thinks that if language is E-language, grammar will be its description and not a matter of truth and falsity as long as grammar correctly describes E-language. For example, Chomsky refers to Quine, who thinks that it is senseless to take one grammar rather than another to be “correct”:

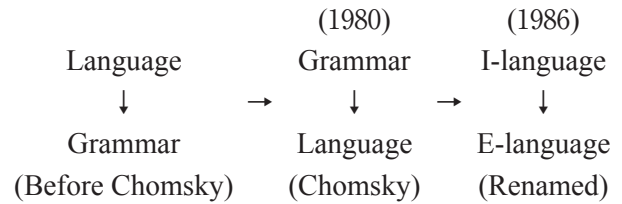
Quine, for example, has argued that it is senseless to take one grammar rather than another to be “correct” if they are extensionally equivalent, characterizing the same E-language, for him a set of expressions (Quine, 1972). (Chomsky 1986: 20)<sup>4</sup>

Furthermore, Chomsky takes up Lewis’s doubt that a grammar *G* is used by a population *P* but another grammar *G*’ is not:

And Lewis doubts that there is any way “to make objective sense of the assertion that a grammar *G* is used by a population *P* whereas another grammar *G*’, which generates the same language as *G*, is not.” (Chomsky 1986: 20)

Here, emerges grammar which was defined by Chomsky before. It consists of rules and principles in the mind of an ideal speaker-hearer in an ideal speech community. In other words, it is an internal-

ized grammar. The rules and principles in a human being’s mind, according to Chomsky, are physical and a matter of truth and falsity without a doubt. Chomsky names this internalized grammar, “internalized language (I-language).” In other words, he renames language and grammar, the relationship between which he reversed in Chomsky (1980), E-language and I-language respectively:



Thus, grammar versus language (1980) becomes I-language versus E-language (1986). Chomsky defines I-language as follows<sup>5</sup>:

The I-language, then, is some element of the mind of the person who knows the language, acquired by the learner, and used by the speaker-hearer.

(Chomsky 1986: 22)

As a matter of fact, I-language exists in the human brain as a physical mechanism in the same way as grammar defined in Chomsky (1980)<sup>6</sup>:

[...] I-language, [...] the system of knowledge of language attained and internally represented in the mind/brain. (Chomsky 1986: 24)

[...] a person’s knowledge of a particular language [the I-language] [...] a state of the mind, realized in some arrangement of physical mechanisms.

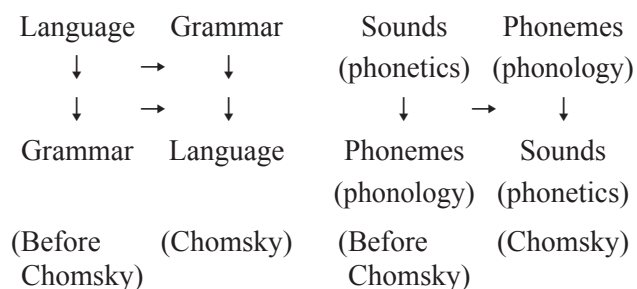
(Chomsky 1986:40)

If I-language generates E-language, then the relationship between phonetics (sounds) and phonology (phonemes) will be reversed, as Chomsky insists, in the same way as that between language and grammar<sup>7</sup>:

The latter [the phonological] representations are not derived from the speech sounds by analytic procedures of segmentation, classification, extraction of physical features, and so forth, [...] The I-language,

incorporating the rules that form the representations (II) [the phonological representation] and the rules that relate them to (III) [the phonetic representations], [...]  
(Chomsky 1986: 43)

So the relationship between sounds and phonemes is reversed just as that between language and grammar is:



According to Chomsky, phonemes are not derived from sounds, but on the contrary, phonemes generate sounds.

### 3. Why I-language (grammar) generates E-language (language)

First of all, Chomsky declares that linguistic theory is concerned with an ideal speaker-listener in a homogeneous speech-community:

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. (Chomsky 1965: 3)

In our daily life, we are always making mistakes when talking with other people and writing something. So Chomsky idealizes a language user as an ideal speaker-listener to make linguistic theory possible. Moreover, he assumes a homogeneous speech-community, to which the ideal speaker-listener belongs, although speech-communities are always heterogeneous. Furthermore, he distinguishes competence from performance. This distinction resembles Saussure's *langue* and *parole*. Competence is the speaker-hearer's

knowledge of his or her language and performance is the actual use of competence in real situations. Under the idealization mentioned above, performance is a direct reflection of competence. In other words, competence is the underlying system of rules or a mental reality underlying actual behavior. Here is the origin of Chomsky's idea that I-language generates E-language because competence is equivalent to I-language and performance is to E-language and so competence generates performance.<sup>8</sup>

What is more, Chomsky insists that competence is innate and common to all individuals of the human species:

Suppose that a child with the human language faculty [Universal Grammar] as a part of its innate endowment is placed in a social environment [...]. The language faculty selects relevant data from the events taking place in the environment; making use of these data in a manner determined by its internal structure, the child constructs a language [I-language], [...]. This language is now incorporated in the mind. When the process is completed, the language [I-language] constitutes the mature state attained by the language faculty. The person now speaks and understands this language. (Chomsky 1988: 35-36)

I-language is completed by setting built-in parameters of Universal Grammar and starts to generate E-language. It is safe to say that Chomsky's development of logic is the same as Saussure's in that rules or norm produces phenomena. In the case of Chomsky, the rule system called I-language generates phenomena called E-language, in the case of Saussure, language norm called *langue* produces phenomena called *parole*.

### Conclusion

As we have seen, Chomsky's ideas are quite different from ours. He insists that it is not E-language (language) but I-language (grammar) that linguistic science is concerned with. If we are endowed with Universal Grammar at birth and get I-language with parameter-settings completed and I-language generates E-language, as Chomsky argues, then linguistic science will be concerned with I-language. But if we

are not born with Universal Grammar, we will have a different story. There is nothing but language written or spoken around us and we derive from it regularity which is called grammar. Unlike Saussure's and Chomsky's ideas, a symphony is not a musical score but actual performance itself just as chess is not a rule of chess but moves of chess pieces.<sup>9</sup> In this respect, Chomsky's idea is quite similar to Saussure's. It is safe to say that the two linguists' views of language are very much the same although they have a few differences.

## Notes

1 According to Chomsky, Dummett argues that Dutch and German exist and are different languages: [...] consider Dummett's argument [...] that the "fundamental sense" in which we must understand the concept of language is the sense in which Dutch and German are different languages (he gives a different example, but the point is the same), each of them a particular social practice "in which people engage," a practice that "is learned from others and is constituted by rules which it is part of social custom to follow" (p. 473). Thus Dutch and German exist in this "fundamental sense," "independently of any particular speakers"; every individual speaker "has" such a language, but typically has only a "partial, and partially erroneous, grasp of the language." (Chomsky 2000: 48) Dummett's idea that language is social, learnable and exists independently of speakers who have a partial knowledge of the language reminds us of Saussure's view of language (Saussure 1983). Moreover, Chomsky says, criticizing Dummett's argument: The concept of language that Dummett takes to be essential involves complex and obscure sociopolitical, historical, cultural, and normative-teleological elements. Such elements may be of some interest for the sociology of identification within various social and political communities and the study of authority structure, but they [such elements] plainly lie far beyond any useful inquiry into the nature of language or the psychology of users of language. (Chomsky 2000: 49) Thus, Chomsky does not accept Dummett's idea of language at all.

2 Chomsky says: We speak of Chinese as a language, whereas Spanish, Catalan, Portuguese, Italian, and the

other Romance languages are different languages. But the so-called dialects of Chinese are as varied as the Romance languages. We call Dutch a language and German a different language, but the variety of German spoken near the Dutch border can be understood by speakers of Dutch who live nearby, though not by speakers of German in more remote areas. The term "language" as used in ordinary discourse involves obscure sociopolitical and normative factors. It is doubtful that we can give a coherent account of how the term is actually used. (Chomsky 1988: 37) Here, Chomsky is referring to the example of Dutch and German again.

3 Norbert Hornstein says: Interestingly, "language" is not a particularly important notion. [...] it is understood that the notion of "language" has a merely expository function and has no theoretical standing. [...] the notion of "language" corresponds to nothing real. In this regard, languages contrast with grammars. The latter exist in the minds of speakers. Thus, they are part of the mind/brain and, hence, real. Languages do not exist anywhere. (Chomsky 2005: xxxii-xxxiii) Hornstein agrees on Chomsky's idea of language and grammar.

4 Hornstein says, defending Chomsky's insistence: [...] Quine suggests that "it is senseless to say that if two grammars generate the same language ... then one might be right and the other wrong." Chomsky notes that Quine presupposes that "for a given language there may be many (in fact, infinitely many) grammars." The problem is that to make sense of this point we need to know what it means to be "given" a language. If a language consists of an infinite set of sentences, then it cannot be "given" except by specifying a set of rules that generate that set, i.e. a grammar. Thus, one's epistemological access to a language, if it exists at all, must be via a grammar of some sort that specifies it in intension. Thus, Chomsky notes, despite the common conception to the contrary, "when we move from grammar to language we are moving a step further away from the mechanisms" of the mind/brain that ontologically ground the notions. (Chomsky 2005: xxxiv)

5 Chomsky borrows his notion of I-language from Otto Jespersen: [...] Otto Jespersen, who held that there is some "notion of structure" in the mind of the

speaker “which is definite enough to guide him in framing sentences of his own,” in particular, “free expressions” that may be new to the speaker and to others. Let us refer to this “notion of structure” as an “internalized language” (I-language). (Chomsky 1986: 21-22) A code or a game is also taken up when I-language is explained: It should be noted that familiar characterization of “language” as a code or a game points correctly toward I-language, not the artificial construct E-language. A code is not a set of representations but rather a specific system of rules that assigns coded representations to message-representations. Two codes may be different, although extensionally identical in the message-code pairings that they provide. Similarly, a game is not a set of moves but rather the rule system that underlies them. The Saussurean concept of *langue*, although far too narrow in conception, might be interpreted as appropriate in this respect. The same is true of Quine’s definition of a language as a “complex of present dispositions to verbal behavior” insofar as it focuses on some internal state rather than E-language, although it is unacceptable for other reasons: Thus, two individuals who speak the same language may differ radically in their dispositions to verbal behavior, and if dispositions are characterized in terms of probability of response under given conditions, then it is impossible to identify languages in these terms; and again, the fundamental question of the use and understanding of new sentences is left without any explanation. Perhaps the clearest account is Jespersen’s in terms of the “notion of structure” that guides the speaker “in framing sentences of his own ...,” these being “free expressions.” (Chomsky 1986: 31-32)

6 So Chomsky insists that questions of truth and falsity arise for grammar: Taking language to be I-language, the grammar would then be a theory of the I-language, which is the object under investigation. And if, indeed, such a “notion of structure” exists, as Jespersen held, then questions of truth and falsity arise for grammar as they do for any scientific theory. (Chomsky 1986: 22)

7 For example, Chomsky claims that a rule of word order is a rule of I-language: When we say that it is a rule of English that objects follow verbs, as distinct from the rule of Japanese that verbs follow objects, we

are not saying that this is a rule of some set of sentences or behaviors, but rather that it is a rule of a system of rules, English, an I-language. (Chomsky 1986: 27) Also Chomsky explains the relationship between I-language and E-language, using the Constitution and chess: The rules of the language are not rules of some infinite set of formal objects or potential actions but are rules that form or constitute the language, like Articles of the Constitution or rules of chess (not a set of moves, but a game, a particular rule system). (Chomsky 1986: 27-28)

8 Here is also the origin of Chomsky’s idea that E-language is not the object of linguistic science: Observed use of language [E-language] [...], may provide evidence as to the nature of this mental reality [I-language], but surely cannot constitute the actual subject matter of linguistics, if this is to be a serious discipline. (Chomsky 1965: 4)

9 Saussure says, assuming a symphony to be not its performance but its musical score: The vocal organs are as external to the language system as the electrical apparatus which is used to tap out the Morse code is external to that code. Phonation, that is to say the execution of sound patterns, in no way affects the system itself. In this respect one may compare a language [*langue*] to a symphony. The symphony has a reality of its own, which is independent of the way in which it is performed. The mistakes which musicians may make in performance in no way compromise that reality. (Saussure 1983: 18) Chomsky also says the same as this, assuming chess to be not a set of moves but a rule system: The rules of the language are not rules of some infinite set of formal objects or potential actions but are rules that form or constitute the language, like Articles of the Constitution or rules of chess (not a set of moves, but a game, a particular rule system). (Chomsky 1986: 27-28)

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