Formal and Functional Dichotomy:
Contending or Complementing

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Abstract

Language is concisely spelled out in our Glossary as a "human system of communication that uses arbitrary signals, such as voice sounds, gestures, or written symbols." But frankly, language is too complex, fascinating, and mysterious to be adequately illuminated by a brief definition. Language is an inseparable part of our lives, and the study of language underpins the study of scores of disciplines. It is language which makes us “HUMAN”. Since time immemorial numerous scholars have tried to unravel the mystery called ‘Language’. There are mainly two significant approaches to the study of language: Functional and Formal approaches.

This paper concerns itself with two of the imperative approaches applied to study human languages/s, namely: Formal and Functional approaches. Both of these approaches have their own methodological and epistemological spectrums. Here, in this paper an effort has been made to peer into the integrationist approach.

1. Introduction

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2. Understanding Functional and Formal Approaches

In the broader sense: theoretical approach to description and explanation of linguistic phenomenon based on their various functions is considered as functional approach. It is concerned with linguistic texts. Any form of linguistic output is linguistic text (news paper,
creative writing etc.). Linguistic behaviour is highly important for functionalists. To them, language is nothing but behaviour or use. The following functions are generally investigated: topic vs comment, theme vs rheme, definiteness or animacy (animate vs inanimate) of noun phrase, the semantic roles (=> thematic relations) or syntactic functions of the expressions.

The basic assumption of functional grammar is that linguistic phenomenon cannot be explained sans examining their functions. Hence Functional grammar renders an alternative to (post) Structuralist attempts at describing linguistic phenomenon formally (i.e assuming the autonomy of Syntax).

Formalists focus centrally on linguistic form. Formalist is to characterize the structural possibilities of language, both universal and language-particular. Followers of this approach feel that the goal of linguistic theory is not description but explanation of linguistic output underlying. The most fully developed and a powerful version of the approach through form is that proposed by Chomsky and his battery of followers. This approach is mainly known as Generative Grammar approach. According to this approach, Linguistics should go beyond merely describing syntactic structures and aim to explain why language is structured in the way it is. Chomsky argued that, to do this adequately, it was imperative to make language description absolutely explicit. The prime aim should be the explanation of linguistic knowledge. This approach sets out to provide rules of this kind for the formation of grammatically correct sentences. One of the mottoes is to discover the rules which govern how constituents can be put together to form grammatically correct sentences, and to formulate these rules in a general way as possible (Ideally, so that they apply to all human languages rather than just individual language). This reminds me of a quote by J. Lyons (1966), “Bloomfield: did more than anyone else to make Linguistics autonomous and scientific. The method that Bloomfield prompted was that of restricting the scope of linguistics to those aspects of language that could be described within scientific accuracy.”

3. Integration of Formal and Functional Approaches

As mentioned above two basic approaches to linguistics are the formalist and the functionalist approaches. Both approaches are binding. However, because formal and functional linguists have avoided direct confrontation, the compatibility of their results is not very clear. There has been a deep cleavage between formalists and functionalists. According to Ray Jackendoff, there is a phonological dimension to the issues that divide Formalists and Functionalists. The wealth of interesting generalizations that are found in functionalists are fully compatible with generative grammar, which appears to be among major challenges to it. The major line of differences between the two camps with respect to the analysis of syntactic structure has a homologue in the phonological structure.

Chomsky’s review of B.F. Skinner’s ‘Verbal Behaviour’ triggered a path-breaking debate in Linguistics. Chomsky openly challenged Skinner’s notion that language is something that is to be learned. This review by Chomsky invited both bouquets and brickbats. For Skinner, verbal behaviour is simply behaviour subject to the same controlling variables as any other operant behaviour. Chomsky completely threw this idea out of window. Skinner's approach focused on the circumstances in which language was used; for example, asking for cake was functionally a
different response than labelling something as cake, responding to someone asking for cake, etc. These functionally different kinds of responses, which required in turn separate explanations, sharply contrasted both with traditional notions of language and Chomsky's psycholinguistic approach. Chomsky thought that a functionalist explanation restricting itself to questions of communicative performance ignored important questions. (Chomsky-Language and Mind, 1968). This whole debate proved to be a harbinger of Innateness Hypotheses and Universal grammar. This hypothesis postulates the existence in the human brain of a “Language Acquisition Device”, equipped from birth with the set of linguistic rules that form the “Universal Grammar”, grammatical rules which are common to all human languages.

4. Discussion

Nature of linguistic knowledge is different in functional and formal linguistics. Functionalists green signal the role of experience and say that language is a learnt behaviour. They feel that one cannot acquire a language. Formalists eschew this idea. But language not only has computational or biological endowment but also emergent or adapted structure. Knowledge of language is not dependent on biological endowment only but also on adaptive faculty. As we know that CVCV is the most predominant syllable structure in the languages of the world. It is not sans any reason. This may be because our articulatory mechanism is used to it. Its usability is higher than any other syllable structure. It has to do with adaptability. And more than that sounds have to be used as easily as possible. This point can be further substantiated if we take the examples of classifier system in languages. Suppose a child who is acquiring a language which is replete with rich classifier system, s(he) has to really adapt that system to be really able to use the classifier system naturally.

One debate that has always occupied driver’s seat in the domain of Linguistics is that whether we should study Linguistics using natural science methods or social science methods. The functionalists treat it as a social science whereas the formalists treat it as natural science. A book by Trevor Pateman entitled “Language in Mind and Language in Society” convincingly essays to show that integration of both of these method; Natural and Social Science methods is significant to drive home the phenomenon called ‘Language’.

As a matter of fact, Language finds in human being a receptive culture for its replication and mutation. Language and human beings are inseparable from each other. Language is rarely left free to go its own way. Humans are liable to language rather than something of which they are capable and thus it is natural to them just like seeing.

Pateman rightly says:- “the boundary maintainers who want a clean demarcation line between science and philosophy are like the paranoid neighbour who object because my tree blossoms on his side of fence.”

We must obey the law of change. Change is natural state for language. No cultural armour can save language change. It is just irresistible. At the same time, the powerful innate mechanism of language growth, triggered in the individual by social interaction, do not scatter achieved languages evenly across the space of logically possible languages. They channel it, preferentially towards certain structures. By way of simple example, consider that if sentences concatenate subjects(S) verbs (V) and objects(O), there are six logically possible sentence (word order) structures: SVO, SOV, VO, VSO, OVS, OSV. A language could select for one of these
uniquely, or allow for alternatives up to complete free variation among the six. Insofar as the world's languages do not show a random distribution of these logical possibilities, we have prima facie evidence for channelling. Nativists explain such channelling in terms of how the human mind works; functionalists are broadly speaking those who feel challenged to explain the channelling as the result of communicative pressures. Language cannot be social just on the ground that it goes on between people. We catch virus from other people, but viruses are not social objects – Virology is not a social science at all. A child interacts with people around it and grows a language of its own. The similarity between the child’s language and the language of people around it may make us feel that language has been learnt or at least caught. But it’s just a fallacy.

Formalisation is one of the conspicuous traits of formalists. Formalisation is an account of formulation that is developed as a mathematical system, especially in linguistics, of a model of grammar. Formal grammar jettisons the notational criteria and relies on the formal tests alone. Formalists are of the view concerned that notations (of a rule, a theory and so on and in some way less explicit than a formal statement. A formal statement will not leave anything to the reader’s imagination and background knowledge. But we should not put it into oblivion that formalisation is not explicitness as such. It is just a level of explicitness to be achieved precisely by abstracting form and formal structure. Formalism and notation should not be contradictory rather they should complement each other.

There is a line of distinction drawn between formal and functional approaches based on explanations. Indubitably, explanation is to Linguistics what bread and butter is to our daily life. There are generally two sorts of explanations in Linguistics: Internal and External. Former is identified with the generative program whereas later is glued to functionalists. An internal explanation in Linguistics is one in which a set of facts fell out as a consequence of the deductive structure of a particular theory grammar whereas an external explanation is one which a set of facts is derived as a consequence of principles outside the domain of grammar. But the fact is that both generativists and functionalists adopt both these types of explanations.

The main explanans (explanations) of generative grammar is internal. The ungrammaticality of sentence 1 can be explained by the fact that the rule of grammar fails to generate it.

(1)* I like she.

But the notion of ungrammaticality is itself internal to theory. Just pointing out this sentence as ungrammatical does not mean that we have explained anything about English. An internally consistent deductive system could be designed to rule sentence (1) as grammatical. But the judgement of native speakers is matched with the fact that they find it ungrammatical. In many explanations provided within generative grammar thus fit a weak form of the DN model. Take example of case filter. The case filter require overt noun phrase to be case marked. But for any complex phenomenon the initial conditions and the data to be explained are themselves typically fluid enough that giving them slight reinterpretation allows one to explain any failed deduction sans abandoning the proposed principle.

Some external explanations are well motivated, which is completely jettisoned by many generativists. The pressure for the parsing efficiency and pressure for syntactic and semantic structure to be in alignment have an effect on the grammatical structure. Internal explanations
are generally brushed aside in functional explanations. But they can be encountered in the literature on ungrammaticality. As we know that the central hypothesis of most functionalists is that grammaticalization is unidirectional. That is, it is claimed that we never find an affix upgrading to an auxiliary or an auxiliary upgrading to a true verb. It should be clear that unidirectionality is a grammar–internal hypothesis governing the evolution of grammatical forms, appeal to it are as much internal explanation as the Case Filter to explain the ungrammaticality of previously uninvestigated set of sentences. External explanation and the autonomy of Syntax (AUTOSYN: Human cognition embodies a system whose primitive terms are nonsemantic and nondiscourse-derived syntactic elements and whose principles of combination make no reference to system–external factors) are completely compatible. Syntax can be both autonomous and externally motivated. This can be understood with the analogy of the game chess which a la the rules of generative syntax form an autonomous system. Using a mechanical mechanism we can make a modal to generate the move in the game of chess but this cannot exclude the possibility that aspects the system were motivated functionally. A la the autonomy of syntax is not challenged by the fact that the speaker of a language can choose what to say at a particular time. The grammatical principles of syntax have an internal algebra but this fact however does not mean that the pressure or motivations from outside the system cannot lead to a change to changed internal algebra.

There has been two distinct approaches to the study of language universals: Formal and Functional. One is pioneered by Noam Chomsky and the other by Joseph H. Greenberg. It is Greenberg who initiated the interest in working on language universal on the basis of a wide range of languages. Chomsky triggered the study of language universals within the mainstream transformational generative grammar. The approaches adopted by these two linguistic leviathans are two major methodological approaches to language universals that have been adopted in linguistic works. There are scores of parameters through which these two approaches can be compared. The most weight of these being the following: the data base for research on language universals (a wide range of languages, or just a single language); the degree of abstractness of analysis that is required in order to language universals (for instance, in terms of surface syntactic structures or in terms of deep syntactic structures); and the kind of explanations advanced for the existence of language universals. Linguistics of Greenberg camp feels that it is important to concentrate on universals stateable in terms of relatively concrete rather than very abstract analysis. They also have argued that, it is necessary that to have data from a wide range of languages.

Chomsky and his battery of followers earlier argued that the best way to learn about language universals is by the detailed study of an individual language. They have also advocated stating language universals in terms of abstract structures and have favoured innateness as the explanation for language universals. But one point is conspicuous that with the adam of time this camp turned to the study of study of many languages. According to them, language universals would be those innate linguistic principles which facilitate the child’s language learning task. There are certain language universals that simply cannot be predicted of an individual language. In particular Implicational universals (involves two linguistic properties related to one another as an implication, such as that if p then q). Statistical universals cannot be presented in a formal approach as well.
As presented above presentation of language universals with some sort of abstractness is related to Chomskian approach. But many of specific universals that have been proposed by Greenberg and those influenced by him require some degree of abstractness. Greenberg’s original contribution to word order typology, by referring to such parameters as the relative order of subjects, verb and object in the clause, assumes that it is possible to identify the subject of an arbitrary clause in an arbitrary language. However, identification of a subject requires a certain amount of abstract analysis.

Commrie flagged off both the functional and formal approaches in the study of language. He presents that not all language universals can be given a functional explanation. He argues that some language universals do have viable and correct functional explanations. He substantiates his notion with an example that according to transformationalists, transformations are structure-dependent, i.e. are limited to performing operations in terms of constituent structure, rather than arbitrary string. This allows for instance a language to form yes-no question by inverting the subject and predicate, or the subject and finite verb, all of which possibilities are found in different languages. It prevents a language, however, from forming yes-no question by simply providing a left-right inversion of the word order for a string of arbitrary length so that the question corresponding to (1) would be (2).

(1) the man that killed the cat had an old gun.

(2) gun old an had cat the killed that man the?

According to Commrie, there is no functional explanation for why transformations in natural languages should be structure dependent. Stating the exception from the Universal number 15 in Greenberg (1966:111) which goes like this: “in expressions of volition and purpose, a subordinate verbal form always follows the main verb as the normal order except in those languages in which the nominal object always precede the verb.” Greenberg with this language universal focuses giant light on an interesting interplay between functional and formal factors in language structures. Functionally one would expect iconicity to override form, so that normal clause order would always reflect chronological order. However, formally, in a language which is otherwise rigidly verb final, it is simpler to have a rule that the verb of the main clause follows all constituents brushing aside their semantics.

5. Observations and Conclusions

Thus, any independent account of explanation for language universals must pay heed to both formal and functional factors. Pragmatic explanations can provide insight into the motivation behind the formal idiosyncrasies. It is imperative to establish the domain of functional versus formal explanations. Many aspects of language can only be appreciated in terms of the interaction of formal and functional factors.

As such we can see that no single approach can explain language completely. The line of distinction between these two approaches seems blurred when we try to explain certain linguistic phenomenon. The dichotomy needs to be reconsidered and a fusion of these two approaches should be welcomed.
References:


