PAUL RASTALL

# BOTTOM-UP LINGUISTICS

Perspectives and Explorations

With a Postscript on Language and Reality

MASARYK
UNIVERSITY
PRESS

# BOTTOM-UP LINGUISTICS

Perspectives and Explorations

With a Postscript on Language and Reality

MUNI
PRESS

# BOTTOM-UP LINGUISTICS

Perspectives and Explorations
With a Postscript on Language and Reality

PAUL RASTALL

MASARYK
UNIVERSITY
PRESS

BRNO 2019

ISBN 978-80-210-9434-5
ISBN 978-80-210-9433-8 (hardback)

# CONTENTS

**Section III / Further theoretical issues**



**Postscript**



**List of Tables**

# PREFACE

This work presents 'bottom-up' linguistics. Bottom-up linguistics rejects any substantive *a priori* framework for the description of languages or for the understanding of language. While analytical methods and concepts for linguistic description are required, and must be justified, there is no assumption that explanatory constructs correspond in any direct way with cognitive or any other external reality, or that there is any necessary or fixed form of language. Constructs are means for understanding verbal phenomena, not hypostatisations. Any analytical methods inevitably presuppose some general views about language, but they are not substantive claims in a bottom-up approach; nor are they exclusive. They are kept to a minimum, and are restricted to broad categories, such as 'sign' or 'phoneme', and relations such as 'grammatical dependency' or 'phonological constructional relation', within which there is plenty of room for variation. That is the approach is European functionalism (such as that of Martinet) and, in particular, the Axiomatic Functionalism of Mulder. Because a bottom-up approach is explicitly 'integrationist', it sees language as a dynamic process simultaneously from multiple perspectives and in its role in everyday life. Language and other forms of semeiosis combine in meaning-making.

In particular, a bottom-up approach raises the issue of the relation between language and our construction of reality. While that question goes beyond the scope of this work, some ideas on that issue are presented. A bottom-up approach follows Saussure in seeing linguistic form and meaning as the same thing from different points of view. Thus, meaning and hence our sense of verbally created reality are formed by the mass of verbal units and their associations. Linguistic resources are verbal models which stand in relations of resemblance and comparison with our models of external (perceived) reality and our memories, and which contribute to our worlds of attitudes and values.

A bottom-up approach to linguistic analysis starts with the hypothesised analytical units (e.g. signs or phonemes) and relations of verbal communication (such as combination and mutual exclusion), and aims to present them in their multi-dimensional complexity. This involves taking simultaneous multiple perspectives on language and on the process of communication. As noted above, the approach involves the explicit rejection of 'top-down' approaches with *a priori* frameworks with allegedly substantive universals. Such approaches commonly focus on structural features of language, and other aspects of language are either not integrated or are difficult to integrate into an overall picture. Generalisations in a bottom-up approach arise from the comparison of multiple individual units and relations. Allowance is made for linguistic differences and 'anomalies'. There are no presuppositions about the structure of languages. Generalised statements have a descriptive-explanatory function only. They are built up from small-scale units and patterns, and each refers to some aspect of verbal behaviour, which must be integrated with other aspects. Bottom-up linguistics is thus opposed to the abstraction of structural 'essences', or 'underlying forms', and their presentation as hypostatised realities. It is concerned with the simultaneous diversity of verbal reality.

A bottom-up approach (there could be more than one) is close in spirit to the integrationist views of, for example, Roy Harris or Edda Weigand. The approach adopted here presents the general principles, and has its origins in the European functionalist tradition of Nikolai S. Trubetzkoy, André Martinet, Jan Mulder, Georges Mounin, Mortéza Mahmoudian, Henriette Walter, Colette Feuillard, and many others, and acknowledges indebtedness to linguists such as W. Freeman Twaddell and Raymond Firth (for his polysystemic view of language). The view of language as a mass of associations in multiple dimensions has clear similarities with some of the ideas in Saussure's *Course in General Linguistics*, but goes well beyond it in investigating further perspectives. Those include the adaptation of linguistic means to communicational needs and the patterns involved, realisational issues, the process of verbal signalling, and the verbal contribution to mental models of reality.

The work falls into three sections with a postscript on language and reality. The first section presents the reasons for the rejection of 'top-down' approaches and for the adoption of a 'bottom-up' approach with an explanation of its ontological and epistemological positions. Here the emphasis is on theoretical perspectives. Language is seen as a mass of associations in multiple dimensions in which clusters of entities with similar associations can be classified and cross-classified and in which frequent patterns can emerge as 'memes'. Section two is concerned with explorations using a bottom-up approach, and presents a number of analyses showing how a bottom-up approach can work- and its advantages. The third section addresses further theoretical issues- questions of the process of meaning transfer and some ideas on the mechanism of the verbal updating of mental models. Further examples are offered. A postscript addresses some of the issues over the relation of language and reality from a bottom-up perspective.

Some of the ideas of bottom-up linguistics have previously appeared in *La Linguistique, Language under Discussion*, *Linguistica Online*, and some early practical analyses have appeared in *English Today*.

## Acknowledgements

I wish to thank Dr. Aleš Bičan of Masaryk University for reading draft extracts of this work, commenting on them, and making useful suggestions for improvement. I am also grateful to Dr. Jana Chamonikolasová and Dr. Jana Pelclová who acted as very helpful intermediaries with the Masaryk University Press as well as to the staff of the Press for their efforts in producing the book. I have, of course, benefited from the work of many scholars who have gone before me, especially the late Professor Jan Mulder of St. Andrews University and my first teacher of linguistics, Professor Roy Harris of Oxford University. I am solely responsible for the content of the work and for any errors in it.

# Section I

Bottom-up Linguistics: multiple perspectives on individual units, anomalies, and the emergence of linguistic patterns

**In Summary**: This study draws attention to the drawbacks of 'top-down' approaches to linguistic analysis and advocates a 'bottom-up' approach. That is, it criticises preconceived macro-level structures and the establishment of all-embracing substantive general constructs, and proposes building up macro-level descriptive constructs from micro-level analysis. It emphasises the need to recognise extensive anomalies in linguistic structures and to allow for diversity in linguistic systems. Numerous phonological and grammatical examples are provided. It further emphasises the wide range of perspectives on linguistic units and constructions, and the need to integrate different perspectives on the same entities in order to account for diverse parameters of information. This involves the development of ways to analyse the processing of speech signals from multiple, simultaneous points of view- formal, semantic, and 'aesthetic' (concerned with value systems, social and associative). It thus rejects the idea of top-down, linear verbal processing from so-called 'deep' to 'surface' structures. 'Bottom-up' linguistics rejects linear processing in favour of multiple parallel processing as more realistic and more consistent with modern views of cognition. Bottom-up approaches draw a clear distinction between the *presentation* of linguistic analyses for the purposes of description and explanation and the *representation* of language, i.e. how we conceive of it. In particular, bottom-up linguistics opposes the view that abstracted structures can be represented as hypostatised realities or 'essences' of language.
In the second section of the work, there are detailed bottom-up analyses of various morphological constructions, the syntax of quantifying expressions, the semantics of 'verbs of general meaning', and other applications in phonology, as well as multi-dimensional analyses of verbal products. The third section addresses further theoretical perspectives with examples, and a Postscript addresses some issues in the relation of language to reality.

# 1. Theoretical Issues

## 1.1 The key propositions of bottom-up linguistics

A bottom-up view of language and linguistic analysis:

1. works from individual linguistic units and their multiple associations towards generalisations about the patterns of association and combination of similar units.
2. seeks to identify the parameters of verbal communication and their manifestation in the associations of linguistic units.
3. sees each unit (of whatever complexity) as a node in a complex of associations in different dimensions simultaneously.
4. sees each unit as 'functional' in each parameter of communication, i.e. separately contributing to communication.
5. recognises variety and anomaly in linguistic patterning in all dimensions of analysis.
6. sees 'language' (in the sense of sets of individual speech acts) as purposive adaptations of verbal resources to circumstances to achieve communication, but in a wider perspective sees language as a component in the construction of a virtual reality of understanding and social orientation. This includes the combination and contrast of verbal acts (written or spoken) either as consecutive text or as interactive dialogue. 'Communication' is seen as a totality which can be viewed either from the point of view of transfer of information or from the point of view of meaning-making, or both- the viewpoints must ultimately be integrated. (Verbal communication is seen as a (major) component in 'multi-modal' communication; a focus on language involves a somewhat artificial abstraction of verbal communication from other modes of non-verbal communication (visual, tactile, etc.) as a practical necessity.)
7. sees language not as a function of linear top-down processing but as an interaction of multiple, simultaneous, parallel connections linking a situational and verbal context to verbal means of expression. This process involves multiple possible utterances at each point in discourse. Any actual utterance is the product of a filtering process involving criteria of appropriateness at each point in utterance formation.

The notion of 'association' is a primitive term. It covers any relation connecting two or more verbal entities of whatever sort and in whatever way. Associations can be, for example, oppositional, constructional, set-theoretical (through class membership), semantic (including connotational), aesthetic/value-based, phonological. Numerous examples are provided throughout the text.

It should be noted that a bottom-up view of language and linguistic analysis is concerned with *modelling* communication, and that linguistic units and patterns of association are constructs for understanding observed verbal behaviour. They are not hypostatised. This bottom-up modelling is therefore about:

1. the identification of linguistic units and their associative relations of all types as explanatory constructs;
2. the linkage of communicational context with verbal means;
3. the identification of the parameters of communication and the associations of individual linguistic units of all types;
4. the processes of selection and construction of individual utterances and complex discourse in communicational contexts;
5. the criteria for the selection of individual utterances from sets of possible utterances in given contexts, including a wide variety of value-based considerations (textual, discoursal, aesthetic, social);
6. the role of language in the construction of our sense of macro-level reality.

Those topics are addressed from a theoretical point of view in Sections 1 and 3 with some worked examples, while detailed practical examples are offered in Section 2. The relation of language to reality is considered in the Postscript.

In the 'bottom-up' approach, verbal products are seen as macro-level realities- entities as they appear to us in everyday experience. They are concerned with our wider macro-level experience- experience of perceptions, attitudes, memories, desires, etc. as they appear to us. These realities are taken to be the products of physical processes, cognitive processing, and mental states, which are unconscious and clearly precede any rational awareness of verbal or non-verbal 'reality'. We are dealing with language and reality as they appear to us after that unconscious processing. This is taken to be a *reflection* of the factors in the production of language and its relation to non-linguistic reality. Bottom-up linguistics seeks to give an account of those factors and their interactions.

This approach involves a clear rejection of many common presuppositions about language and linguistics, and is founded on an extensive critique of the fundamental notions of linguistics in numerous previous publications (see bibliography, Rastall, 1998, 2006a, 2006b, 2011, 2015, 2016, 2017, 2018). 'Bottom-up' linguistics presupposes the critical analysis of the concepts of communication, structure, function, and rejecting the dogmas of universalism, linear processing ('operationalism'), the centrality of a grammar 'component', the attribution of linguistic models to speakers, and hypostatisation of linguistic entities. The bottom-up critique shares the dissatisfaction with mainstream linguistics of such scholars as Harris (1982) and Everett (2014). Clearly, the rejection of many common views requires the development of a positive alternative. That is the main purpose of this work. It is broadly sympathetic to the 'European' functionalist linguists working in a range of similar traditions, such as that in France led by André Martinet and his followers around the world, the Danish glossematic approach, the work of Dutch and German linguists, or the rich heritage of thinking in the broadly 'Prague School'/ East European direction with its many modern developments. Those linguists have in common that they have always paid attention to the variety of verbal means in any speech community as well as to the diversity of points of view on linguistic phenomena (and especially sociolinguistic perspectives). Their work is unfortunately not well known in the hegemonic Anglophone academic community, but is found in, for example, the journal, *La linguistique* or in many Czech publications. Bottom-up linguistics offers a distinct, and

integrationist, approach which recognises verbal diversity and rejects the idea that 'structure' orders phenomena- rather structure emerges from overlapping similarities and contrasts in form, function, and associations.

## 1.2 Introductory remarks

Most problems and issues in linguistics are in essence *metaphysical*. That is, they are questions of the definition of concepts, their mutual relations, and their connection to the real world. Our linguistic concepts in turn involve the selection of perspectives on verbal interaction. Thus, linguistic analysis is as much about the theory we adopt for an analysis as it is about our observations of verbal phenomena/interactions or the linguistic descriptions that result from applying theory in the analysis of phenomena. That theory must also include a clear *ontological* framework in which constructs of different orders of abstractness are connected to real-world entities and events. That issue is extensively discussed in Mulder (1989 and 1993a) as well as Mulder and Rastall (2005). Much of that discussion is concerned with the question of 'ontological commitment' or the view one takes of the ontological status of *constructs* and classes. The view taken here is that analytical units and relations (phonemes, syntactic structures, social or aesthetic values simultaneous with utterances, etc.) are explanatory constructs set up from theoretically determined points of view. Constructs are class concepts. There is no direct, demonstrable correspondence with real-world entities, but they are useful for understanding our macro-level experience of language. Our constructs are heavily 'theory-laden', but not purely 'instrumentalist' (see below for further discussion). Their function is to provide a way of understanding verbal communication as we observe it, but different theoretical concepts of the phoneme or sign, for example, can be put forward, and they will lead to different views of the same phenomena.

Specific verbal constructs (units and relations) are ways of accounting for particular sets of associations. For example, phoneme constructs, such as /p/ in English are generalisations from the associations of allophones (themselves constructs) with similar, non-different properties in differentiation and combinatory relations. Similarly, signs are explanatory constructs accounting for classes of allomorphs with similar, non-different properties. Thus, *am, is, are*, etc. are grouped together in a set which we can call 'be'. It should be clear that there is a difference between the convenience of presentation of linguistic analyses and the representation of the mass of verbal associations in many dimensions. A phoneme or sign construct is a convenient way of referring to classes of entities which are broadly similar. While *am, is, are* can be grouped together as semantically similar but in complementary distribution[1] in the ways that some other allomorphs are, it should be clear that each has its own phonological associations, and that each is differentiated in other dimensions from the 'short forms'- *-m, -s, -re* within the set 'be'. All linguistic units are inherently relational. They are the nodes in relations of differentiation and construction (paradigmatic and syntagmatic dimensions).

1 There are complications involving the *coherence* of the allomorphs, *is* and *are*, with the subject, when it can be considered as singular or plural- *the government is/are...*, or number is not distinguished in the noun *the sheep is/are...* As we will see below, those are examples of the many intersecting considerations in an integrationist approach.

Even our observations are to some extent dependent on our theoretical positions. As Popper (1972a:71) says, 'All knowledge is theory impregnated, including our observations'. We can choose to look at verbal phenomena from a communicational, or aesthetic, or social, or logical (etc.) perspective. As linguists, we usually choose to select the communicational aspect of speech acts as the phenomena for analysis. That is partly because the fundamental purpose of verbal behaviour is 'communication'[2] and partly because we need to have identifiable units and relations as points of reference. The establishment of social values of linguistic entities, for example, presupposes the identification of the entities in question. Nevertheless, other points of view are quite conceivable. Speech can be seen in its social or aesthetic aspects, for example. There are numerous ways in which we can look at the expression, *chicken* – it has a phonological form, a central meaning with reference to certain types of bird and their meat, a range of grammatical functions, and it can be used as an expression for cowardice, etc.-, but we must be able to identify it as a unit of analysis. This is so not least because we must be able to say how it functions in relation to other expressions, grammatically (e.g. in *chicken-hearted, be chicken*, etc.) or semantically (as in its semantic field or sets of associations- *poultry, duck, turkey, hen, cockerel*, etc.).

Models of communication involving a sender, a receiver, a channel of communication, some system of communication, and the possibilities of interference ('noise') and feedback, all placed in a social and discoursal context, also imply multiple points of view on the act of communication as well as the need for the integration of perspectives. One should note that the selection of a communicational perspective on verbal phenomena is a way of establishing the identities of linguistic units and relations- providing a reference point for other perspectives. You cannot discuss the semantic field of *chicken* without identifying the unit, *chicken*, and *mutatis mutandis* for all other units and relations. This applies to a 'bottom-up' approach as much as it does to any other. We must note, however, the vagueness of the term 'communication'. As the exchange model of communication just referred to implies, we must identify the different parameters of communication in each dimension of analysis[3].

As Mulder (1975) pointed out, linguistic descriptions are a function of our observations of verbal phenomena and the theory we use for description. We could see *chicken* as a phonological form, an unanalysable grammatical unit or a combination of *chick* + *en*, or as a syntactic unit with a distributional range. The decision on the morphological status of *chicken* will depend on the theory we adopt and, in particular, on whether proposed component morphemes are purely formal units or form-meaning units. Similarly, the *phonological* make-up of *chicken* will depend on how we approach the status of [č]- is it one phoneme, two phonemes (/t + š/), or (as Mulder, 1968) says, a special case called a 'semi-cluster' (a single phoneme before the vowel but a complex after the vowel)? The decision is a matter of theory and the methods one uses to interpret the data. It is not a matter of observable 'fact', but of interpretation of observations to present the relevant factors in communication.

However, the selection of a functional-communicational perspective (in which units and relations are identified on the basis of their separate contribution to the communicational whole) as a reasonable analytical core approach does not imply that communication is the sole or main

2 This view will be modified later, when we come to the discussion of language and reality.

3 While the exchange model has its uses in identifying the possible perspectives on communication, it also has a number of faults. See the critique in Rastall (2015).

'function of language'. It is a necessary and fundamental part of analysis, but the wider role of language in human life and society is to provide a kind of virtual reality for our understanding of, and orientation in, the multiple and complex worlds of our existence (Rastall, 2017). It is both culturally transmitted and the means of cultural transmission. A bottom-up approach involves multiple perspectives on verbal behaviour which allow us to build up an integrated understanding of that 'language world', including the ways in which language transmission contributes to the formation of attitudes and ideologies.

But what is true for the linguist is also true for the 'native speaker'. Speakers build up their own constructs of languages and their components- which may or may not coincide with linguistic analyses. Linguists and native speakers (who are influenced by their schooling in reading and writing) have quite different ideas on what 'words' make up English; for example, *is* and *are* are (orthographic) 'words' for the native speaker, but *allomorphs* of (the sign) *be* for the linguist, where allomorphs and signs have different ontological statuses- an allomorph is a member of a class, but a sign is a class of allomorphs. Allomorphs and signs cannot both be 'words' in the same sense. Similarly, many 'compositions', such as *farm-worker* or *car seat*, are popularly seen as 'words', but are clearly grammatical combinations of other (syntactically unanalysable) 'words', *farm, worker, car, seat*. One cannot have a logically consistent analysis in which the class of 'words', as minimum syntactic units, contains both syntactically simple and complex entities; the notion 'word' would become meaningless. Indeed, compositions such as *farm-worker* or *car seat* can be seen as syntactic combinations of the sort, **prenominal-noun**. They are of the same grammatical sort as *school holiday, road surface, dog behaviour,* etc. which would not normally be regarded as single 'words' (but as **noun + noun**), and the first component commutes with other pre-nominals, *in-company worker, production-line worker, front-row seat*, etc. The linguist's definition of 'word' will not correspond to the everyday (often inconsistent) usage (assuming the linguist uses the term 'word' at all). Thus, we could set up descriptions of the native speakers' constructs or beliefs about their languages which would differ from the linguist's analysis (which might include, for example, a narrow definition of 'word' not coinciding with the everyday usage).

Furthermore, every speech signal is assessed by speakers as information from multiple points of view. Thus, responses to any utterance focus on what is prominent for the hearer. For example, in *Have you done the washing up?,* the emphasis may be a request for factual information, a hint, a criticism, or a piece of sarcasm, and the addressee will respond accordingly. The English word, *scone*, can be pronounced to rhyme with *one* or with *tone*. (Not the Scottish place name, *Scone*, pronounced [sku:n].) The former pronunciation is generally regarded as 'posh' or 'upper-class' by many speakers and the latter as 'non-you' or hyper-correct by others. Clearly, those are also aspects of the speaker's perception of verbal interaction that the linguist must model, but there is no reason to suppose that the linguist's analysis will always correspond to popular feeling or school-influenced ideas. The linguist's job is to describe observables, not to prescribe or take sides. A communicational analysis differs from a description of speakers' beliefs or attitudes, but the two overlap in some areas of semantics concerned with the social or aesthetic values of utterances. Thus, one must also model the social/attitudinal/aesthetic values of all verbal units in language behaviour as part of their simultaneous effect- the pronunciation of *scone* being an example of one such effect.

* * *

One must also consider *epistemological* issues: i.e. about what we 'know' and how we know it. In most approaches to linguistics, there is a tendency to focus on (substantive) 'top-down' models, i.e. those which work from the most general constructs and statements to the individual utterance in order to provide a rational explanation of the specific verbal interaction while claiming empirical content for the constructs. Such approaches have their advantages (see below), but they fail to account for diversity and anomaly, or force anomalies into a procrustean bed. They typically see linguistic explanation from a single perspective (usually a grammatical-constructional one), and hence fail to account for the mass of non-grammatical associations that we have referred to. Transformational-generative approaches are obviously 'top-down' in this sense. 'Underlying' and unobservable kernel sentences are set up and linked to (analogues of) real-world utterances by equally unobservable transformational processes. In structuralist approaches too (e.g. Tagmemics or Systemic Grammar) the most general structures in a 'scale-and-category' or 'rank scale' approach (e.g. Butt *et al*, 2000:20 *ff*) are set up to account for specific observable utterances. In the case of Tagmemics (e.g. Cook: 1971:54 *ff*), there is a long list of exceptions or minor sentence types which *do not* fit the framework.

Such exceptions are (inexplicably) not seen as refutations of the model. Indeed, features such as 'level-skipping' (e.g. where a sentence consists of a phrase or word rather than a clause) and 'back-looping' (where, for example, a noun phrase contains a clause), which contravene the model, are not seen as refutations, or reasons to review the overall framework. (For a discussion of 'minor sentence types' in English and a relativist view of them, see Rastall, 1995a.) In this context, one must distinguish substantive 'top-down' models with claims about the structure of utterances (such as transformational-generative or scale-and-category approaches) from theories for the analysis of utterances containing classifications of semiotic types (as in Hjelmslev, 1953, or Mulder, 1989). The latter do not make substantive claims. They allow for a diversity of structures and entities in theoretically possible categories and types, but they set broad limits to the possible types of entity in particular descriptions. The weakness in both approaches is the inability to deal with anomalies and diverse associations. An approach which makes a radical distinction between morphological and syntactic entities (such as Mulder's, e.g. 1989)- thus determining that any language will have separate sets of morphologically and syntactically complex signs- has difficulties with signs which straddle the distinction. In English, for example, *plural*, *-th*, and *–ness*, which are normally morphological signs, sometimes combine with syntactic complexes, as in *the world number ones in tennis*, *three one hundred and sevenths, the up-and-down-ness of life* (Rastall, 1998). Substantive 'top-down' approaches, as noted, have difficulties with minor sentence types not fitting the preconceived structure (e.g. *nothing ventured, nothing gained; next please; down with the government!*, etc.) and fixed expressions which only appear to fit the structure (*catch a cold, hit the sack*, etc.)- see below. While most adjectives precede the noun in English, some do not (*attorney general*, *court martial, crown imperial, time immemorial*, etc.) and complex adjectivals (*a scene wonderful to behold, a story too incredible to be true*) frequently contain a following adjective- there is no 'rule' that the adjective precedes the noun, only a generalisation for simple adjectives. Similarly, fixed expressions from earlier stages of the language (or deliberately anachronistic constructions (*waste not, want not; ask not what your country can do for you; the ice-man cometh*, etc.) are not accounted for by standard 'top-down' models dealing with contemporary speech precisely because they are not 'standard'. The general rule does not allow for the anomalies, diversity, or different historical layers in contemporary speech.

Also in most approaches, there is a tendency to account for the communicational properties of utterances from a single, central perspective in a linear process - usually that of grammatical combination for the formation of complex utterances. That is obvious in the approaches already referred to, where other aspects of communication are (as it were) tacked on. Thus, semantic, sociolinguistic, or pragmatic aspects of utterances are added to the grammatical core perspective. While one needs some linguistic identities by reference to which different aspects of communication can be integrated- notably through a sign theory (whether of a Saussurean, Peircean, or other sort) to identify units of analysis and their types-, the issue of grammatical combinability should not outweigh all other considerations or prevent an integrated view of utterances. The grammatical aspect of utterances is just one way of looking at them. For example, when Jane Austen describes Mr Bingley in *Pride and Prejudice* as 'a young man in possession of a good fortune', we can consider the expression *in possession of a good fortune* as a grammatical unit and describe it in constructional/dependency terms as *(in ← (possession ← (of ← a good fortune)))*- with arrows pointing to grammatical nuclei. However, we can also see the expression as a term in a set of proportional correlations relating a prepositional phrase to relative phrases to account for grammatical patterns in synonymy:

*in possession of x : possessing x :: in need of x : needing x :: in consideration of x : considering x*

etc.

Alternatively, *in possession of a good fortune* could be seen as a member of a set of stylistically differentiated expressions of similar central meaning: *{in possession of a good fortune, rich, well-off, not short of a bob or two, having plenty of cash, well-heeled,...}*. It is also, of course, a member of a set of well-known Austen references which can be quoted, parodied, used ironically, etc. To account for the expression *in possession of a good fortune*, then, we should avoid giving precedence to any one perspective and integrate multiple perspectives to get an understanding of the utterance.

Indeed, from a 'bottom-up' perspective, the structure, (*in ← x ← (of ← y)*), is set up to account for an observed set of combinations with a determining function, rather than as an instance of a preposition phrase in an 'underlying' structure. I.e. if we find that other expressions, *in need of, in consideration of, in want of*, etc., have similar properties, then they can be grouped together to account for our sense of higher-level regularities (which may then be projected onto other combinations). However, we will find similar-looking groups, *in the event of, in the act of, in the process of*, etc., which have different sets of properties (e.g. with a definite article but no correlation with a relative phrase). Other similar groupings, *for fear of, for love of, on account of, by way of, out of consideration for*, form similar groupings, but with different specific properties (e.g. in their components). The so-called 'complex preposition' (actually a prepositional syntagm commuting with simple prepositions) arises as a generalisation from this set of groups, but the members of this general class are diverse and their forms are unpredictable. One of the dangers of a 'top-down' approach, for example in the classification of 'words' into parts of speech is that all members of a given class may be assumed to have the same properties. Such a view would fail to do justice to the kind of diversity we have just seen. We can do justice to this diverse reality by working 'bottom-up'. Our view of an individual group will depend on our perspective on it. Thus, in the

case of *in support of*, we can see a member of the class containing *in possession of* etc. (from the perspective of the prepositional group). However, while *support* enters the group *in... of*, it also enters the class ... *for* (*support for, vote for, preference for*, etc.), which *possession* does not (from the perspective of the component noun). In the case of *consideration*, we can have *in consideration of*, but both *consideration for* and *consideration of* in different contexts (*consideration for others, consideration of an issue*). A single top-down point of view will not do justice to this diversity or the apparent anomalies (*the support for :: to support* + direct object vs. *the account of :: to account for* vs. *the possession of* :: *to possess* + direct object). Our structures are useful tools for broad generalisation, but our systems are not very systematic. We should think rather of clusters of similar structures with multiple (rather idiosyncratic) cross-classifications in our representation of language. Top-down approaches typically downplay the sheer anomalousness of languages. Anomaly is an inherent property of language.

This respect for diversity and multiple associations means, furthermore, that top-down, linear processing must be replaced by ways of accounting for multiple, simultaneous associations and parallel processing in verbal productions (see below, section 3).

As indicated above, a very important consideration in what follows is the distinction between *explanation*, using (*presenting*) general or 'macro-level' models as starting points or as summations of overall regularities or patterns, and the *representation* of linguistic means, as we think language actually exists. A common dogma of many approaches to linguistics is the assumption that the linguist's model of a language (i.e. how it is *presented*) corresponds to (*represents*) some supposed mental or social reality. That claim is often confused with the use of a model to *explain*, or account for, observable verbal behaviour. While general models may be explanatory in relation to selected *aspects* of verbal behaviour, that does not imply a correspondence – point-for-point or approximative- with anything existing outside the analysis. For that one would need additional evidence from the supposed object using other methods for triangulation. In other words, a 'black-box' approach involves a confusion between the *necessary* condition of correspondence between model outcomes and observables (at least in given, selected respects) and the *sufficient* condition that the initial and intermediary processes in a model correspond to observables. Getting the 'right' result as an outcome of a model is logically insufficient.

One must bear in mind also that any linguistic analysis involves theoretical presuppositions about the nature of linguistic entities and relations, and the methods to recognise specific instances of them. It also contains presuppositions about the selection of phenomena to be accounted for and how one 'divides up' the observed utterance. One cannot simply assume that those presuppositions conveniently correspond to some unobservable reality or that our linguist's constructs are somehow naturally occurring. This hypostatisation of constructs involves the view that there is a unique, discoverable linguistic reality free from our theoretical perspectives and methods of analysis. As we have seen, our constructs depend on our method of analysis and presuppositions. The belief that there is an ultimate (cognitive) verbal reality does not imply that we can know it directly; we can only account for its appearances. One can add that linear 'top-down' models simply seem quite unrealistic in view of the mass of verbal associations and the complexity and speed of parallel cognitive processing.

The evidence presented below suggests that the great diversity of verbal behaviour, with all its anomalies and the many different aspects of linguistic communication, cannot be addressed from