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contributions dealing with a range of linguistic domains such
Comrie (1981), Shopen (1985), Payne (1997) & Whaley (1997
tions that focus on some particular domain such as Comrie (
(1982), Dahl (1985), Bybee, Perkins & Pagliuca (1994) on tens
& Thompson (1982) on transitivity, Blake (1994) on case, Pal
and modality, Chafe & Nichols (1986) on evidentiality, Givo
nuity", Lyons (1999) on "definiteness", and many others. Th
on both particular linguistic systems and typological genera
systems derives from the systemic functional approach to typ

Systemic functional linguistics is a tradition within func
language that was developed by M.A.K. Halliday beginning w
nese in the 1950s. He drew originally on the contextualism, p
system-structure theory that had characterized work led by
1930s in Britain, but later he also incorporated other strands,
Prague School functionalism and American anthropologica
work already incorporated the ethnographic experience: he l
Bronislaw Malinowski's pioneering work in anthropology fro
wards.) The systemic functional base means that descriptions
ented towards context, grounded in discourse and focused o
itself is interpreted as a meaning potential – a meaning pot
three different kinds of meaning (ideational meaning, interp
textual meaning).[1]

The systemic functional contribution to language typol
book must be viewed in the context of the rich and expandi
cal linguistics. The interest in similarities and differences acr
back in time, of course; but it was not until the 19th century
was undertaken, first by Schlegel and Humboldt – inspired
tual theme of evolution and the accumulation of experience
range of languages around the world. In the 19th century, la
approached "from below": the focus was on the grammar of
and typology was based on word structure – the familiar types
native, fusional and polysynthetic languages, later reinterpret
involving two distinct parameters – degree of synthesis (from i
and degree of fusion (from agglutinative to fusional). In this
ical approach to typology goes back to the Prague school in
Mathesius, Skalička and Trubetzkoy (see Sgall 1995), with Jak
veloping a kind of universalism that was later taken up in th
within generative linguistics in particular.

These early developments are very significant. However,
field in the last 20 years has been particularly impressive. An
volume publication edited by Greenberg (1978) had just ap

(Section 1.3) and given a brief example of a systemic functional d particular language (Section 1.4): at that point we will be able to s resources of systemic functional linguistics can contribute to typol Here we will just give a few indications of salient features of a syste approach to typology.

i. The sample of descriptions of languages that would form the ba to include rich, comprehensive ones oriented towards meanin investigations of discourse, thus ensuring that the features bei can be motivated independently for each particular language (naturally occurring discourse) and that they can be located w all system of each language (cf. Section 1.6 below). The contri present volume are brief outlines of such descriptions.
ii. The typological generalizations would be based on a concepti as a resource – a "meaning potential" (see Section 1.3.2 below), multidimensional semiotic space (see Section 1.3.1 below). Th operating with a more highly differentiated conception of lan often been used in typological work (cf. Bateman, Matthiesser for this point in relation to multilingual specifications in gener
iii. One consequence of the multidimensional theory of language is that languages are far too complex to be typologized as unifie typology has to be typology of particular systems (such as systems), not typology of whole languages as was done traditio guages were typologized as analytic versus agglutinative versus polysynthetic (see Halliday 1966: 166–168). This is not to say th be "syndromes" of such systemic types – either fairly limited or of the kind proposed by G.A. Klimov (for example, his "active on 30 lexicogrammatical features; see Nichols 1992: 7–12); b must, we believe, be treated as **syndromes** of individually moti cal features rather than as unified types of language, and it mus that they do not exhaust the dimensions of typological likeness across languages (see for example Martin 1988, on a tenor-orie in Tagalog).

1.2 Orientation – systemic functional language typology

1.2.1 Typology as one research application within systemic functional linguistics

Many linguistic frameworks see language typology and issues relat universals as the central concern – or perhaps even the only con

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had abundant experience. For example, the description of the interpersonal clause grammar of English (see Section 1.4.1) makes it look interestingly different from that of French (Section 2.3) and that of Vietnamese (Section 7.2.2); but this is a positive "feature", not a negative "bug".

The fact that typology has always been only one among many research tasks on the agenda for systemic functional theory has important implications for the systemic functional approach to typology. In purely practical terms, it has meant that there have been fewer people available to pursue typological questions: the research agenda within systemic functional linguistics has never been set only, or even primarily, by questions internal to linguistics – as has happened in "theoretical" linguistics in the US in particular – but rather by questions about languages, questions that have often come up in contexts of research application such as educational, stylistic, clinical and computational contexts. So those of us who have worked on systemic functional typology have always been engaged with many other tasks as well.

"Typology" in systemic functional linguistics has thus always interacted with other research concerns, including other multilingual research concerns such as comparative studies and translation studies in linguistics and multilinguality in computational linguistics (cf. Halliday 1957, 1966; Catford 1965; Ellis 1966; Steiner 1992; Steiner & Yallop 2001; Matthiessen 2001; Teich 2001), multimodal research concerns (Steiner 1988; Kress & van Leeuwen 1996; O'Toole 1994), and research concerned with variation within a given language (cf. Matthiessen 1993); and systemic functional work on typology has often been carried out in the context of some particular research application such as multilingual text generation (cf. Bateman, Matthiessen & Zeng 1999; Bateman et al. 1991; Teich 1999).

The special contribution that systemic functional theory can make to typological studies derives in large part from the fact that it is a very general, rich and flexible theory that has been applied in a wide range of research contexts – a theory that has been designed to have more "power" than is needed for any single research area (such as typology) precisely because it has been applied to a range of areas.

1.2.2 Theory and description; the boundary between the two

Let us now return to the distinction between the general theory of language and the descriptions of particular languages. Theory and description are ontologically quite distinct in systemic functional linguistics: theory is the theory of human language (or indeed, by extension, of semiotic systems in general); descriptions are descriptions of particular languages (or, by extension, of particular semiotic systems). Both theory and description are **resources** – resources for construing language (theory) and languages (descriptions). The emphasis in the development of

& Matthiessen (1999) for an attempt to lay part of the foundation. This obviously includes a much more intersubjective orientation (cf. Trevarthen 1987), where the construction of knowledge is seen as part of the process of learning how to mean in interaction with others (Painter 1993, 1999).

Language is one distinctive and unique kind of semiotic system – what is referred to as a **higher-order semiotic** (Halliday 1995). It is differentiated from other kinds of semiotic system by systemic theory in terms of **stratification** (Section 1.3.6) and **metafunction** (Section 1.3.4): language is interpreted as a tristratal semiotic (rather than a bistratal one) and as a metafunctional semiotic (rather than micro- or macro-functional one). The present kind of language can be assumed to be the third phase in a long evolutionary history of language, very likely starting before the last common ancestor we humans share with our closest primate cousins (for the evolutionary perspective, see Matthiessen 1999, forthc.). In terms of stratification, language has evolved beyond the bistratal organization (content/expression) of protolanguage into a tristratal system with a distinct, stratum of lexicogrammar:[3] semantics and lexicogrammar are content strata and phonology (sign or graphology) is the expression stratum. In terms of function, language has evolved beyond the microfunctional organization of protolanguage, where functions are complementary but mutually exclusive (making it possible to mean only one thing at a time) into a metafunctional system where functions are complementary and simultaneous (making it possible to mean more than one thing at the same time). Stratification and metafunction are two central semiotic dimensions in systemic theory and will be discussed in Section 1.3 below.

In systemic functional linguistics, systemic theory thus differentiates language from other kinds of semiotic system, interpreting it as a tristratal and metafunctional semiotic – a higher-order semiotic. However, systemic ***theory*** does not differentiate among different "variants" of language such as English and Chinese; that is the task of systemic ***descriptions*** of different particular languages such as the ones presented in this book. Thus the fact that both English and Chinese construe human experience of time grammatically is a general feature of language as a higher-order semiotic system: time and other phenomena of experience are construed lexicogrammatically within the ideational metafunction. However, the different grammatical models for construing time grammatically that English and Chinese have evolved fall within the domain of description: the English temporal model is described as a tense system, construed logically within the logical mode of the ideational metafunction (Halliday 1994; Matthiessen 1995a, 1996), whereas the Chinese one is described as an aspect system, construed experientially within the experiential mode of the ideational metafunction (see Halliday & McDonald, this volume). The observation that the tense system of English and the aspect system of Chinese represent poles on a tense/aspect continuum from the western to the eastern zones of the Eurasian continent with Russian and other Slavic lan-

guages construing time in mixed ter
a descriptive generalization, not a t
interpreting temporal systems of te
ifies two modes of construal – the
further below), so in describing te
cal terms or in experiential terms.
is construed on a logical model as
tems of certain languages spoken in
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logical and experiential modes of c
the particular temporal categories t
"primary tense", "secondary tense";
and so on – are descriptive, not the

Systemic linguistics thus draws
a way that theoretical assumptions
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varies considerably across differen
temic functional linguistics, categor
have at one time or another been ta
sumed to be "universal". In system
all be taken as descriptive rather th
as categories posited in the descript

The systemic view on where th
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have to be justified in the course of
such descriptive categories can be
(or even all languages) is an empir
question to be decided only after the
in comprehensive descriptions of e
to be justified by reference to the pa
to some abstract universal. This pri
was articulated by Firth (1957: 21–2

> Though it is found convenie
> *cle,* for example, it must not
> *are to be found* as the univers
>
> It has been held that in
> tinction is unnecessary. Th
> sometimes said that there a

> tives are really verbs' in Japanes
> levels of linguistic analysis is tl
> set up and of the terms applie
> phonological analysis. This do
> the paragraph and the sentence
> phonemic procedures or even
>
> Reverting to the discussion
> any language, the 'universalist'
> are determined by their inter-r
> A nominative in a four case sys
> ferent 'meaning' from a nomin
> for example.

Firth's point was that the grammatic
by their inter-relations in the system
fundamental in systemic functional
networks that are presented through
languages discussed here. Some specifi
ter of the book, such as the compari
English, Japanese and Tagalog. One co
such as "causation" or "possession" ar
guages, they have to be shown to em
be located systemically within the tota
other words, the *valeur* of a category h
tem of language; it is not sufficient just
assumed to be universal: cf. Hasan 1
signification in language.)

We have established that theory a
linguistics; but what is the relationshi
modelled in terms of abstraction: th
ticular descriptions. More specifically
a **realizational relationship** to descri
tion of a particular language is a reali
1995a: 58–60; Matthiessen & Nesbitt
relationship between theory and des
Figure 1.1 on page 17. For example, "S
of a number of languages (but not all –
and Rose's account of Pitjantjatjara in
gory of "interpersonal structural funct
this interpretation of Subject, the theo
semantic correlate will be significant
not indicate that Subject will combin

around the world and in the way that modern generative linguists have imposed the categories of formal descriptions of English on languages around the world. Tozzer's warning from the early 20th century in the context of his work on "Maya grammar" is still valid:

> The Spanish priests did not stop with translations of documents into the native languages but they wrote grammars and collected vocabularies as well. These grammars and dictionaries exist in great numbers. There is hardly a dialect spoken in Mexico or Central America that has not some sort of grammar dealing with the structure of the language. The difficulty met with in using these grammars written by the Spanish is the same as that found wherever a primitive language has been studied and recorded along the lines and with the corresponding forms found in Spanish, Latin, or some other Indo-European grammar. The Spanish priest thought he had successfully written a grammar of a native language if he had found forms in that language to correspond to every term in his Spanish grammar. The desire to find words which fitted the different categories of thought expressed in his own grammar often outweighed his keenness in realizing that many grammatical forms used in Spanish could not be properly expressed in the native language. Parallels were sought for every form in the Spanish or Latin. The investigators usually found some native term which seemed to them to conform to the same expression in their own language. If a native did not seem able at first to give words for the pluperfect tense in his language, the more one insisted that there must be such forms the sooner the native would give something which superficially seemed to be a pluperfect.
>
> The whole difficulty lies in the fact that it is impossible to build up a grammar of a primitive language by following a Latin or Spanish model. This rigid adherence to such a model leads to two defects. Forms are given the investigator, often after repeated questioning, which only vaguely express corresponding forms in Spanish or Latin. These are often unnatural and are compounded so as to express in a most artificial way the idea desired. The second defect is the greater as scores of native expressions are entirely overlooked and are never recorded in the early grammars as there are no forms corresponding to them in Latin. (Tozzer 1921/1977:7–8)

This is a warning that is supported by the Boasian, anthropological linguistic tradition and it is one which is hopefully heeded by systemic functional linguists (with the recognition that there are no "primitive languages"!). Thus when Minh Duc Thai began to explore the grammar of Vietnamese in systemic functional terms, he made no descriptive assumptions based on English or indeed on any other language about the textual organization of the clause. Instead he selected Vietnamese texts from a range of registers, each with a clear, easily identifiable method of development, and he then analysed the clauses realizing these texts to find out whether

there was any correlation with "meth
1983 model of moving up to the d
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tions). It turned out that there was
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1.3.2 below.)

However, the type of approach w
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Halliday 1960/6; Teich 1999):

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extensive discourse analysis – a task that has been central on the systemic functional research agenda since the beginning.[1] Thus major systemic functional studies of various languages include lengthy examples of discourse analysis. While there is not enough space in the present volume to demonstrate the use of discourse analysis, many of the contributors have produced longer works that include examples of grammar-based discourse analysis.

1.3 Mapping language – the dimensions of systemic functional theory

In the previous section, we discussed the distinction between theory and description. In this section, we will be concerned with systemic functional theory, and in the following section, we will turn to systemic functional description.

1.3.1 Language as multidimensional semiotic space

As already noted, systemic theory is a resource for construing language as a higher-order semiotic system. "Construing language as a higher-order semiotic system" means mapping the semiotic resources of language – mapping its potential for making meaning. The cartographic metaphor informs the descriptions of languages in this book (cf. Matthiessen 1995a, on "lexicogrammatical cartography"). The metaphor works well together with the common way of conceptualizing language and other systems of meaning in terms of an abstract semiotic space: maps are comprehensive models of a semiotic space, showing how everything is located in relation to everything else. The theory should enable us to see and represent all features of the semiotic landscape of language, including those that are covert and might not be covered by a traditional map. This is of course particularly important in the context of typological work, where we have to be able to interpret a range of potentially very different languages. The theory provides us with the potential for mapping them out in very general terms, scaffolding the particular description developed for each language being investigated.

The systemic functional approach to semiotic cartography is **holistic** rather than **componential** (see Matthiessen & Halliday, in prep.: Chapter 1, and cf. Capra 1996, on these two approaches as alternative strands in scientific thinking): comprehensive maps are constructed first and then local areas are mapped at a greater scale of delicacy. Even if the scale of the global map has to be such that the detailed features of many domains cannot be discerned at first, the global map makes it absolutely clear where those domains are located in relation to one another and in relation to the overall semiotic space. This holistic approach is based on

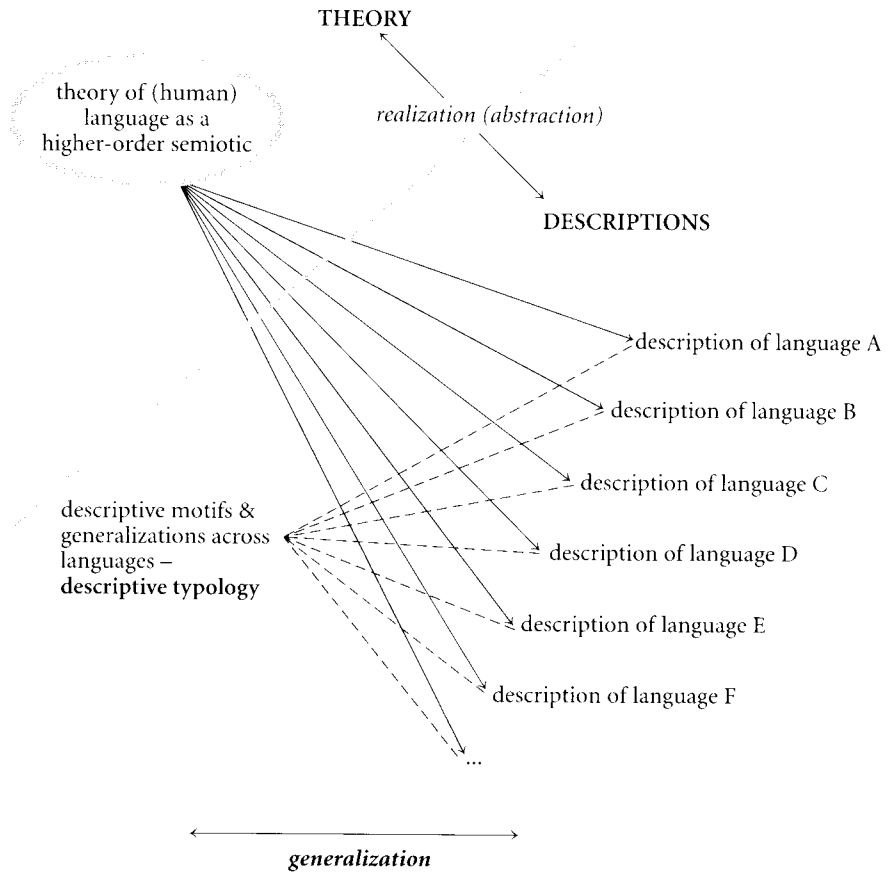
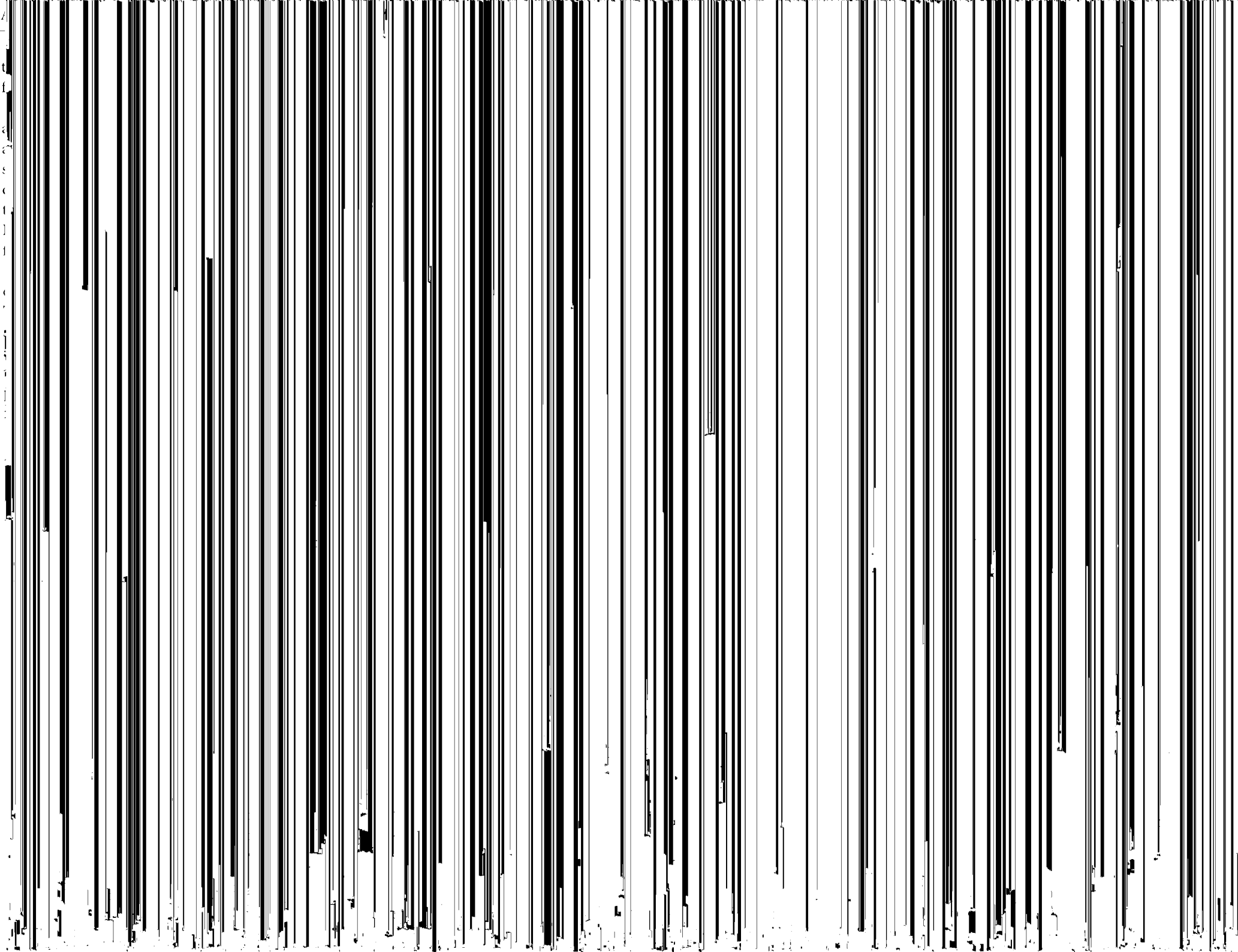
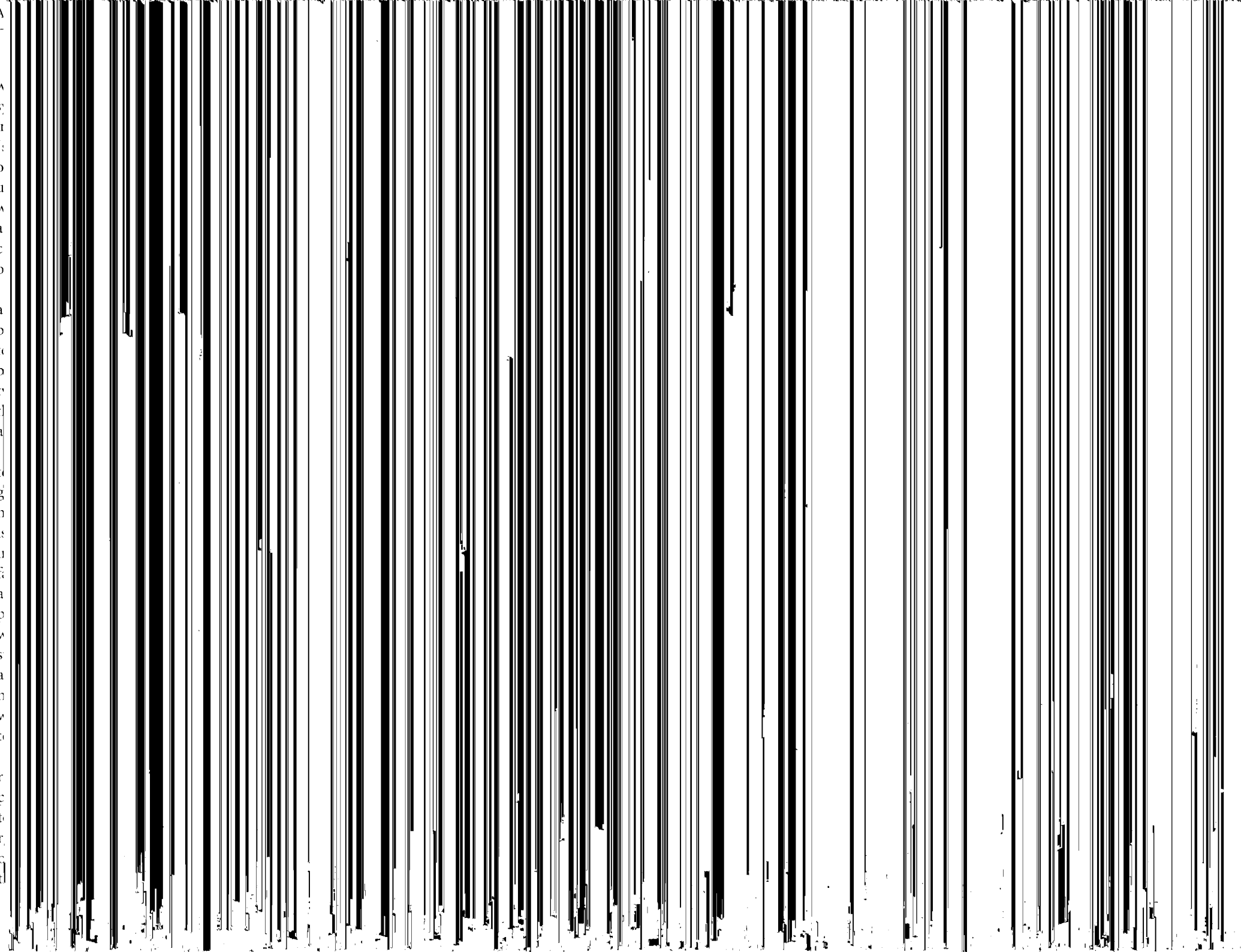


Figure 1.1 The relationship between theory and description

systems thinking rather than on the **Cartesian analysis** that informs the componential approach.

The componential approach has been the dominant one in western scholarship, going back at least to Descartes and the early phase of modern science (where it served as a way of coping with the complexity of the phenomena being observed). It has been characteristic of a great deal of work in linguistics – including formal linguistics in the 20th century; one central manifestation of this approach has been the focus on constituency analysis. In contrast, the holistic approach has developed on the periphery of the componential mainstream. It has informed the development of ecological thinking in biology and of contextual thinking in anthropology and linguistics; and in the second half of the 20th century it has been embodied in systems thinking. Holistic thinking is characteristic of systemic functional linguis-





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interest in phylogene
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1991). The cline of
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Figure 1.2. R
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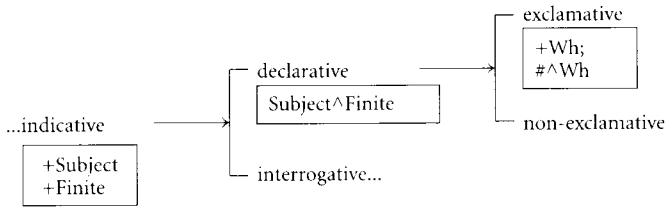

Figure 1.3 Expanding MOOD – exclamatives

The second and third of these are fine; they can be derived from the network. But the first cannot – because its Subject comes before its Finite, and the realization statement for interrogative predicts the reverse. This is a crisis for the description. One way round the problem is to specify the sequence of Subject and Finite at a later stage in delicacy, not for interrogatives in general, but for different types of interrogative. This solution would treat Wh/Subject interrogatives as exceptions – as the one kind of interrogative with a Subject before Finite sequence like declaratives. This would be descriptively adequate; but would it explain the exception?

1.3.4 Metafunction (mode of meaning)

Probably not ... for explanation we'd need to look further afield, to related sets of choices affecting word order. This takes us to another semiotic dimension of complementarities – the notion of **metafunction**.

The "modularity" at issue here has to do with perspective – with different ways of looking at the same thing. SFL suggests that three orientations are essential to understanding linguistic phenomena, referred to as the **ideational**, **interpersonal** and **textual** metafunctions. Systemically, these "modules" have to do with clusters of relatively interdependent choices; structurally they have to do with different kinds of realization pattern (particulate, prosodic and periodic). To generalize, they have to do with complementary modes of meaning – ideational resources for construing our experience of the world, interpersonal resources for enacting our social relations, and textual resources for managing the flow of information as we interact.

In part, what we are introducing here is the notion of cross-classification. For example, the MOOD choices we introduced above can be taken up more or less independently of what we are talking about. Traditionally, cross-classification is illustrated in tables, such as Table 1.2, which presents a paradigm of mood selections in relation to process types.

Table 1.2 Cross-classification of MOOD and PROCESS TYPE

	material	mental
declarative	You can touch me.	You can see me.
interrogative	Can you touch me?	Can you see me?
imperative	Touch me.	See me.

This kind of display is effective for two simultaneous
once we factor in a third perspective, Theme marking, the pa
difficult to read, as shown in Table 1.3.

Table 1.3 Cross-classifying MOOD, PROCESS TYPE and THEME

	material	mental
declarative	I'll go today.	I'll see Tom today.
+ marked Theme	Today, I'll go.	Today, I'll see Tom.
interrogative	Will I go today?	Will I see Tom today?
+ marked Theme	Today, will I go?	Today, will I see Tom.
imperative	Go there today.	See Tom today.
+ marked Theme	Today, go there.	Today, see Tom.

For multidimensional analysis, a system network pro
display of relevant parameters. The systemic representatio
brace to signify that choices for THEME, MOOD and TRANSI
ously available – as exemplified in Table 1.3 above. These th
metafunctional organization of English clause grammar, fr
textual (THEME), interpersonal (MOOD) and ideational (TRA

Seen as system, metafunctions are predictions about the
and interdependency of systems. For example, if we introdu
and TAGGING into the discussion, the association of these
clear. Exclamatives, for instance, can be positive but not neg

What an inviting cake that is!
**What an inviting cake that isn't!*[9]

This interaction is shown with the I/T superscript notation c
in Figure 1.5 (i.e. 'if exclamative, then positive').

For most speakers of English, imperatives and declarati
not exclamatives or interrogatives:

It's right there in front of you, isn't it?	declarative
**What an enticing cake that is, isn't it?*	exclamative
**Why do you wonder, don't you?*	interrogative: wh
Take one, won't you.	imperative

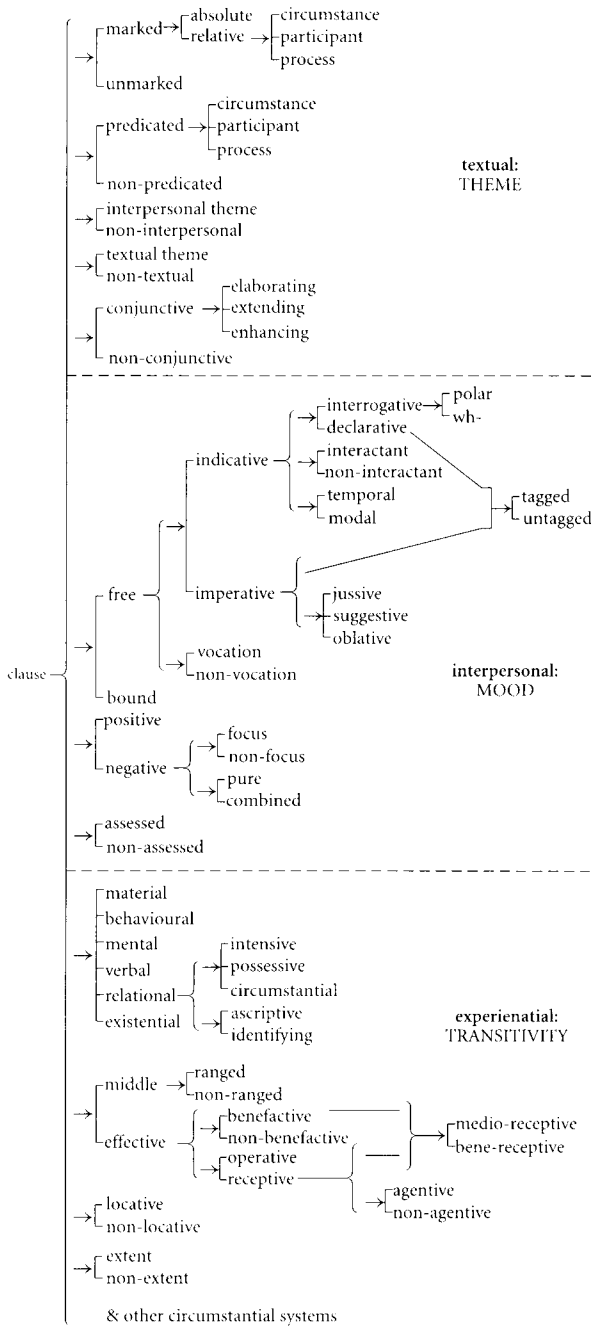

Figure 1.4 Simultaneous clausal systems – THEME, MOOD and TRANSITIVITY

Although, for Australians, and some British speaker
is possible, if the polarity is positive:

Can you reach them, can you?
**Can't you reach them, can you?*

These interdependencies have been wired into Figu
(meaning 'and') and a left-facing bracket (meaning
MOOD, TAGGING and POLARITY as interpersonal sys
to deal with the choice of reversed or constant pol
only available for positive declaratives and imperati
the clustering denser still.

'*declarative*'	
It's right there in front of you, is it?	positive
It's right there in front of you, isn't it?	positive
**It isn't there, isn't it?*	negative
It isn't there, is it?	negative
'*imperative*'	
Take one, will you?	positive
Take one, won't you?	positive
**Don't take one, won't you?*	negative
Don't take one, will you?	negative

Seen as structure, metafunctions are predictions a
tural realization. Ideational resources are associated
ization – they construe experience of the world as bi
be organized **orbitally**, into **configurations** consis
periphery (experiential meaning); or they may be
of interdependent steps (logical meaning). This or
exemplified below for TRANSITIVITY and PROJECTIC
iday 1994; Matthiessen 1995a).

orbital structure

You	*would have thrown*	*it*	*across*
Margin	Nucleus		Perip
Agent	Process	Medium	Locat

serial structure

Willie Russell wrote	*that Rita said*	*that Trish thoug*
Verbal Process	"Locution	"Locution

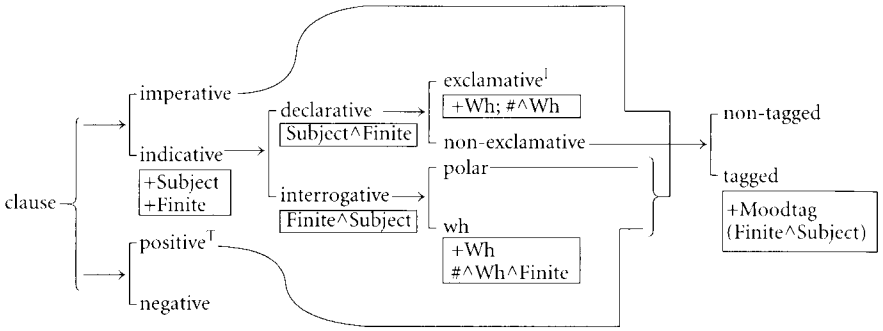

Figure 1.5 Interdependency across POLARITY, MOOD and TAGGING

Interpersonal resources on the other hand are associated with **prosodic** forms of realization – they enact social reality as splashes of engagement, which saturate their domain. This is exemplified below for English polarity, which establishes the arguability of its interact and at the same time conditions the realization of any indefinite deixis within its scope (perhaps more strikingly so in the stigmatized non-standard realization *You can't buy no cakes from no bakeshops no more*).

prosodic structure

You ***can't*** *buy* ***any*** *cakes from* ***any*** *bakeshops* ***any*** *more.*

	NEG		NEG	NEG	NEG

Finally, textual resources are associated with **periodic** forms of realization – they organize semiotic reality as waves of information (the rhythm of discourse). This culminative patterning is exemplified below for Theme and New; Theme choices construct the speaker's angle on his field (in this case someone's poetry), while choices for New elaborate the point of the discourse (in this case the value of the Themes).

periodic structure

It is brilliant. It's witty; it's profound, full of style.

Theme		New
It	is	brilliant
It	's	witty
It	's	profound
(it)		full of style

A summary of these types of structure and their association with modes of meaning (Halliday's metafunctions) is presented as Figure 1.6. Each type of structure is **iconic** in relation to its different mode of meaning. The subdivision of the ideational metafunction into experiential and logical modes has an important

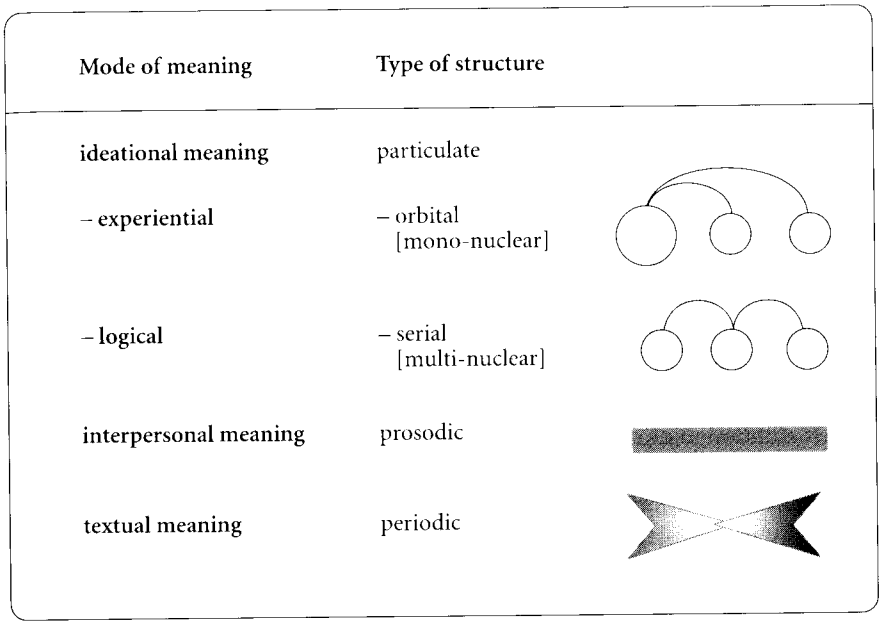

Figure 1.6 Types of structure in relation to modes of meaning

reflex for system – namely, that logical systems are recursive ones, which allow choices to be taken up an indefinite number of times. Well-known examples include clause complexing, subclassification in nominal groups and English tense. For further discussion of this reading of Halliday (1979) in relation to grammar and discourse see Martin (1995, 2000) and Matthiessen (1988).

Now that textual meaning has been brought into the picture, we can return to the problem of Subject and Finite sequencing in Wh/Subject interrogatives. From an interpersonal perspective, the sequencing seems exceptional; all other English interrogatives sequence the Finite before the Subject. From the perspective of textual meaning, on the other hand, the sequencing seems natural; the Wh function is made Theme, as it is elsewhere in the grammar (in exclamatives, relative clauses, noun clauses). In a sense English has two principles, one oriented to interaction – sequence the Finite before Subject in interrogatives; and the other oriented to information flow – put Wh functions first. In Wh/Subject interrogatives, these can't both be true; and pressures of information management appear to win out over considerations of mood. The exceptional sequencing thus comes down to a matter of metafunctional tension, with the interpersonal and textual pulling in different directions. In this regard the trinocular vision metafunctions afford offers a distinctive perspective on apparent structural anomalies, and provides some basis

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Realization in grammar thus involves a series of system to structure cycles, explicitly connecting one rank to another – clause choices related to group and phrase choices, group and phrase choices to word choices, and word choices to morpheme choices if required. This axial cycle gives rise to an important labelling distinction between **function** and **class** in the model. Function labels are written with an initial upper case letter, and configure as the structural output of choices at the given rank; for example, the Subject, Finite, Predicator, Complement and Adjunct functions used for English MOOD above. These functions are realized by classes of group and phrase, with labels written in lower case (e.g. nominal group, verbal group, prepositional phrase). These class labels direct the realization cycle to appropriate choices in relevant clusters of systems. The function labels are thus oriented to structure – to the syntagmatic role some unit is playing; whereas class labels are oriented to system – to the paradigmatic potential of a unit. In this regard, note that all features in system networks are in effect class labels, for more or less delicate subclasses of clause, group or phrase, word or morpheme.

Finally, rank is also important for distinguishing unit complexing (illustrated above) from embedding. With embedding, a unit from the same or higher rank functions as the realization of some unit. Thus the clause *I want* functions as Qualifier of *one* in the following example:

That cake's the one [[*I want*]].

As our nursery rhymes have taught us, such embeddings may include embeddings of their own, which take us deeper and deeper into the structure of the unit we are realizing:

The apprentice [[*that killed the Sith* [[*that killed the Jedi knight* [[*that discovered the boy* [[*who worked in a shop*]]]]]]]]...

Incursion of this kind contrasts with recursion proper, which involves iterating choices from the same system leading to flat serialized chains such as the following:

The boy worked in a shop and a Jedi knight discovered him; and then the knight was killed by a Sith and was in turn killed by the knight's apprentice...

From a typological perspective rank can be used to specify the realizational domains of various regions of meaning. Martin (1983) contrasts participant identification in English, Tagalog and Kâte along these lines, showing the different contributions of clause complexing (subject-switching), clause Theme (and definiteness), and nominal group deixis across these three languages.

Figure

3.6 Stratification (depth of meaning)

In our presentation of the semiotic dimensions of systemic functional theory, we have now introduced both "local" dimensions – axis and rank – and two out of the three "global" dimensions – instantiation and metafunction – listed in Table 1.1 above. Let us now turn to the third global dimension – the dimension of **stratification**. This is the dimension that defines the "domains" in relation to which axis and rank are "local" – the three strata of language: (discourse) semantics, lexicogrammar and phonology (graphology or sign). This dimension is based on degrees of semiotic abstraction – from phonology with its "phonetic" interface to the material (the human body, in the first instance) to semantics, the realm of meaning.

Back to the bakeshop. We hear the following:

Customer: *Give me a walnut bun please.*
Server: *Certainly.*

Strictly speaking, of course, what we heard was vocal noise, which we interpreted as a sequence of phonemes organized into syllables, spoken in a certain rhythm, in a specific intonation pattern. As speakers of English we take this phonological organization for granted, and concentrate on the wording. In this case, for the customer, we have an imperative clause involving a material process, beginning with the process as unmarked Theme – realized by a verbal group (*give*) followed by two nominal groups (*me, a walnut bun*) and a comment Adjunct (*please*) – realized in turn by the sequence of words we used to write the clause above. From the perspective of stratification, what we processed was a level of phonological organization recontextualized by a level of grammatical organization. Suppose, however, we hear the following:

Customer: *I wonder if I could have ...*
Server: *Why do you wonder? It's right there in front of you.*

In some sense here, the server has deliberately misheard – not the phonology, or the wording it realizes, but the customer's meaning. Obviously, the customer wants the bun; but instead of using an imperative to baldly realize his command, he uses a declarative clause (*I wonder*) to project his wishes (*if I could have...*), which he modalizes (*could*). But before he can even say what it is he wants, the server leaps in playfully to take the customer at his word and state the obvious – that there's no need to wonder because the bun is right there and he can have it. What seems to be going on here is that a tension has arisen between the customer's polite wording and his meaning, which the server exploits to make fun. From the perspective of stratification, what was processed was a level of phonological organization, recontextualized by a level of grammatical organization, recontextualized by a level of semantic organization.

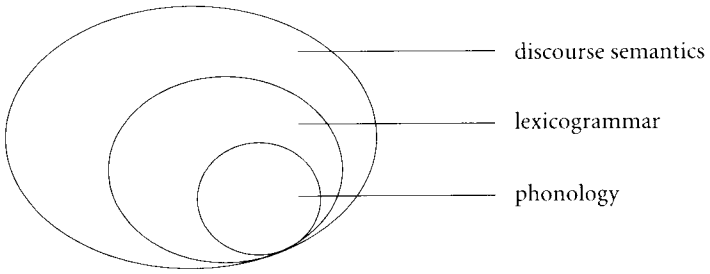

Figure 1.7 Stratification – sounding, wording, meaning

These levels of organization are outlined as co-tangential circles of increasing abstraction in Figure 1.7, beginning with phonology, and moving on through lexicogrammar and discourse semantics. The term "lexicogrammar" is used because wording involves both lexis and structure; the term "discourse semantics" is used to emphasize that in SFL the size of unit under focus gets bigger as we move from one level to another – from the syllable in phonology, through the clause in lexicogrammar, to the text in discourse semantics.

From the perspective of system, the strata comprise distinctive clusters of systems organized by rank and metafunction, with deeper levels of abstraction realized through lower ones. As a functional theory of language, SFL is concerned with the organization of language in relation to social life, and so linguistic levels are generally recontextualized by one or more contextual ones – as outlined in Figure 1.8 above. The realization relation across levels can be usefully interpreted as **metaredundancy**, since social context is concerned with generalizations about discourse semantic patterns, which are themselves patterns of lexicogrammatical patterns, which are themselves patterns of phonological patterns.

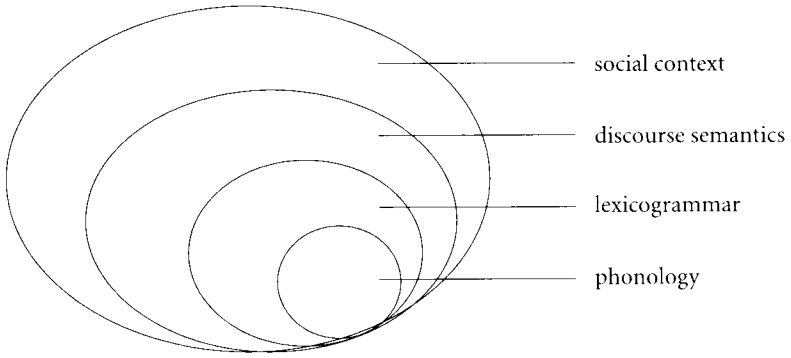

Figure 1.8 Linguistic strata recontextualized by social context

1.3.7 Summary of theoretical dimensions

As we have seen, language is organized along a number of semiotic dimensions. We can interpret all these dimensions as defining particular manifestations of the very general contrast between 'wider environment' and 'narrower environment'; that is, we can interpret them as different dimensions of contextualization. These different dimensions all define environments of typological variation and are related to one another in a successive series of contextualizations, as shown in Figure 1.9.

The diagram says that the most global manifestations of the cline between 'wider environment' and 'narrower environment' are the hierarchy of **stratification** and the cline of **instantiation** (the diagram should also include metafunction, but to avoid too much clutter we have left it out; it would be represented as a "spec-

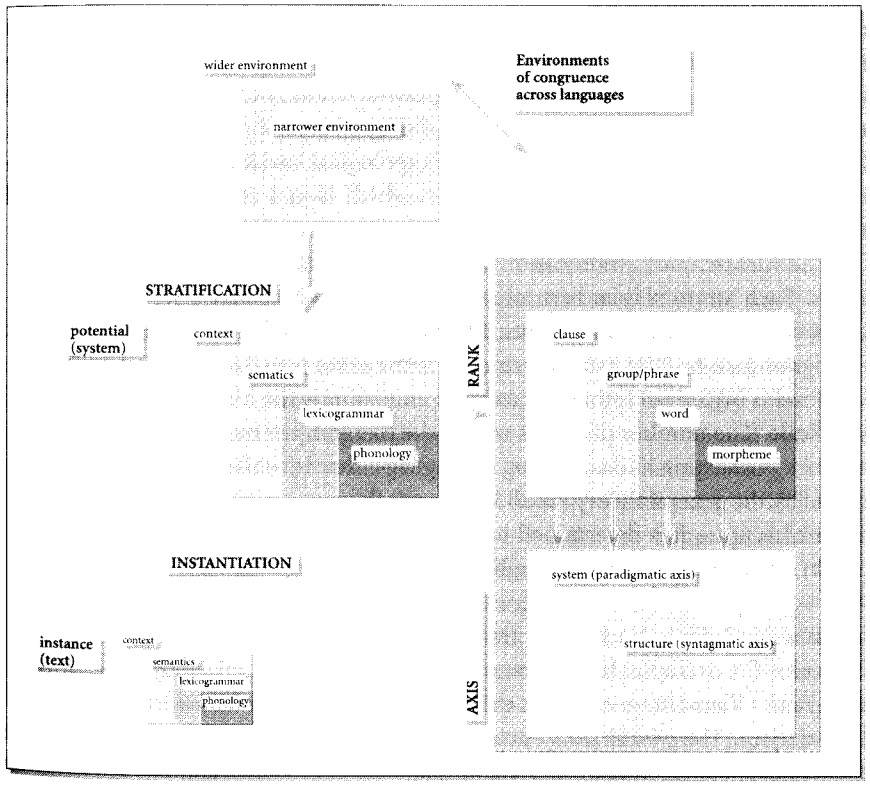

Figure 1.9 Summary of the theoretical dimensions discussed in this chapter except for metafunctional diversification (based on Matthiessen 2001)

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1994). There has thus been systemic functional concern with highly formalized representations (cf. also Patten & Ritchie 1987); but the work has been carried out specifically within those contexts of research where there is a clear demand for such precision of formalization. In other contexts, the demands of theoretical coverage have been foregrounded. In this book we have chosen not to foreground issues of formalization at the lower level of (computational) representation since such an orientation would not relate directly to the concerns of linguistic typology. Having said that, we must however immediately emphasize that the work on representing multilinguality has been important in systemic computational linguistics (see for example Bateman et al. 1991; Bateman, Matthiessen & Zeng 1999). It has led to computational systems that allow us to represent multilingual resources (Bateman 1996; Zeng 1996) and we expect that this work will have a significant effect on both descriptions of particular languages and typological generalizations across languages, just as it has already been helpful to work on translation.

The theoretical map of language thus shows that typological variation is multiply contextualized. Following Matthiessen (in press), we can identify two complementary principles of typological variation. (i) According to one principle, typological variation is like dialectal variation within a language in that the main locus of variation is "low-level" – phonology and morphology in particular, the narrowest environments. This principle is illustrated by Martin's (1983) study of participant identification as a common semantic concern in three languages (English, Tagalog and Kâte) achieved by varied lexicogrammatical strategies. (ii) According to the other principle, typological variation is more like codal and registerial variation in that the main locus of variation is "high-level" – the context of culture and semantics in the first instance. This principle has been illustrated in a series of systemic functional studies – Hasan (1984), Martin (1988) and Halliday (1993). The principles will be explained and illustrated in more detail in Matthiessen & Halliday (in prep.: Chapter 5). Of the two principles, it is the first that has received the bulk of attention in typological research.

The theoretical map Figure 1.9 also shows us the primary pathways of the semogenic process of **grammaticalization** (cf. Matthiessen 1995a: 49–50; Matthiessen & Halliday, in prep.; see for example Heine, Claudi & Hünnemeyer 1991; Hopper & Traugott 1993, for the concept of grammaticalization). Grammaticalization is of course a move up the cline of instantiation from textual instances towards the overall systemic potential – very often with the registers of casual conversation as the cutting edge. It is typically a move along the cline of delicacy within the paradigmatic axis from the lexical zone of the cline to the grammatical zone (for example, from the lexical field of [verbs of] motion to the grammatical system of tense). It is a move down the rank scale from independent element in clause or group towards bound element in word (with clitics as an intermediate stage) – a move that is accompanied by phonological reduction. What is common to all three moves (from text towards system, from lexis towards gran
lower ones) is generalization. In addition, it
ideational domain to either the interpersonal
a move from the concrete realm to the abstrac

Let us add a final note on the multidime
The diagram may be seen as representing a
"modules" or components. This view is help
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putational metaphor of modularity in cognit
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The bands within each spectrum are best inte
(at least in the case of stratification) by metare
1992: 23–26, for this important concept). Fro
the theoretical map shown in Figure 1.9 open
the resources of language and it indicates how
categories by locating them multidimensiona
Any category will be multiply related to oth
sions. For example, a clause is a metafunctio
unifying interpersonal, textual and experienti
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of interaction (interpersonal), a figure in th
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rank, it is realized by groups and phrases, and
(in the default case) by a tone group (a unit
within", it is the point of origin of a number
TRANSITIVITY (experiential) and THEME (text
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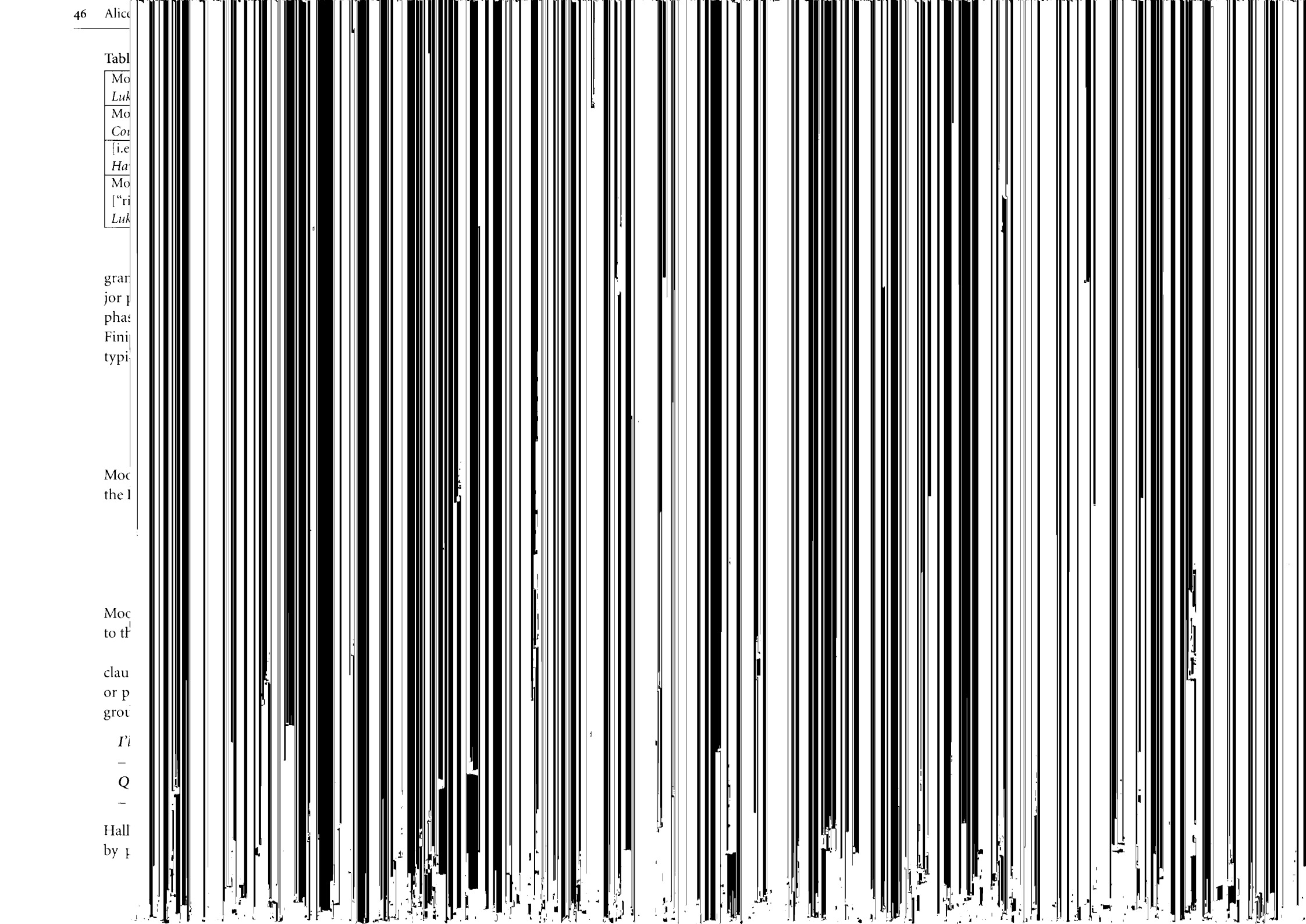

- how are related interpersonal meanings expressed (e.g. affect, honorificatio quotative particles/affixes)?
- what is the role of tone in realizing more and less general mood options?

1.4.2 Experiential clause grammar – the system of TRANSITIVITY

Experientially, the clause construes our experience of a quantum of change in th flow of events as a figure – a configuration of a process, participants involved i the process and circumstances attendant on it (Halliday 1967/8, 1995: Chapter 5 Matthiessen 1995a: Chapter 4; Halliday & Matthiessen 1999; Davidse 1999). Th experiential resource of the grammar of the English clause is the system of TRAN SITIVITY, a small fragment of which is shown in Figure 1.4 above. This system pro vides a small number of general models for construing our experience of a quan tum of change; most centrally, it is concerned with general domain of experience a it relates to the process. Based on grammatical criteria, Halliday (1994: Chapter 5 recognizes three main types of process – 'material' (doing-&-happening), 'menta (sensing) and 'relational' (being-&-having).

Material clauses construe our experience of the world around us – a world o doing-&-happening, involving Actor, Goal and Recipient or Client as participan functions:

Qui-Gon	*handed*	*Obi-Wan*	*the light-sabre.*
Actor	Process	Recipient	Goal
nominal group	verbal group	nominal group	verbal group

Qui-Gon	*poured*	*Obi-Wan*	*a drink.*
Actor	Process	Client	Goal
nominal group	verbal group	nominal group	nominal group

Mental clauses construe our experience of the world inside us, of our own pro cesses of consciousness – a world of sensing (perception, affection and cognition involving Senser and Phenomenon as participant functions:

Qui-Gon	*heard/disliked/knew*	*the Sith.*
Senser	Process	Phenomenon

Relational clauses construe relationships – a world of being-&-having, involvin identity and attribution. Identity is concerned with relationships across orders o abstraction; attribution is concerned with description and classification. For iden tifying processes, Halliday recognizes Token and Value functions; for attributiv ones, he proposes Carrier and Attribute:

Liam Neeson	*was*	*Qui-Gon.*
Token	Process	Value

Qui-Gon	*was*	*tall/a Jedi knight.*
Carrier	Process	Attribute

Alongside these process types of doing-&-happening, sensing and b Halliday takes note of 'behavioural', 'verbal' and 'existential' clause own distinctive configuration of participant roles. The six differen cess types make distinct contributions to the construction of text. construing a narrative plot, the grammar deploys 'material' claus the main event line, 'verbal' clauses to construct dialogic passages, to construe the participants' emotive reactions to events, and 'relati construct descriptive background and both preconditions and ou terial' clauses. Different text types are characterized by different favoured process types (see for example, Matthiessen 1999: 14–15).

The account of 'material' clauses reflects the **transitive model** as it had been worked out in traditional accounts: the clause is orga figuration of Actor + Process with or without the addition of a G variable being whether the Actor + Process combination extends other participant, the Goal, (in this case, the clause is "transitive") case, it is "intransitive"). This model explains a number of the feat glish system of transitivity, but not all; it needs to be complemen kind of transitivity model – the **ergative model** (Halliday 1967/8; 19 Davidse 1992; Matthiessen 1995a: 229–235). This model is based o than on extension and impact. Using the ergative model, Halliday re sitivity from the perspective of agency. In this perspective, a claus consisting of the Process and the participant actualizing that proce (i.e. the medium through which the process is actualized):

The ship	*flew*	*to Naboo*
Medium	Process	Location

In addition there may be an **Agent** function which brings about th of the Process + Medium nucleus:

Qui-Gon	*flew*	*the ship*	*to Naboo*
Agent	Process	Medium	Circumst.

Reasoning along these lines Halliday distinguishes participants in t are created or affected by the process (i.e. the Medium) from part simply specify the meaning or domain of the process – the **Range**. N in agency and affectedness between *Liam had a drink* and *Liam p*

Theme	Rheme
Michael Bevan (65) and captain Steve Waugh (56)	had to mount a rescue operation in their World Cup semi-final clash against South Africa on Thursday
as Australia	were dismissed for 213 in 49.2 overs.
South Africa's vaunted fast bowlers	had Australia on the back foot at Edgbaston.
Waugh's men	had slumped to 4–68 in the 17th over
with the Proteas	threatening to skittle them. [Blake 1999]

Complementing the thematic structure of the clause, the informational structure consists of Given + New.[18] In spoken English New is centred on tonic prominence, for the constituent carrying the major pitch movement in the clause. In the unmarked case this pitch movement falls on the last stressed syllable of a tone group (grammatically: information unit) and so New complements Theme by being associated with final position in the English clause.

The fact that the domain of New is unbounded to the left of tonic prominence, and the fact that pitch movement is implied rather than explicitly realized in writing, means that the analysis of informational structure inevitably involves some degree of indeterminacy for listener/readers. For purposes of exemplification, we offer the following re-reading of the cricket text just analysed. Based on this analysis of New, its point is to establish the rather difficult position from which Australia ultimately managed to extricate itself.

(Given)	(minimal[19]) New
Michael Bevan (65) and captain Steve Waugh (56) had to mount a rescue operation	in their World Cup semi-final clash against South Africa on Thursday
as Australia were dismissed	for 213 in 49.2 overs.
South Africa's vaunted fast bowlers had Australia	on the back foot at Edgbaston.
Waugh's men had slumped	to 4–68 in the 17th over
with the Proteas	threatening to skittle them.

This complementarity of Theme and New provides a framework for exploring the ways in which voice, "mobile" constituents and related resources are deployed to establish a text's method of development and main point. The "mobility" of circumstantial Adjuncts in English for example means that an alternative orientation to the cricket match is possible – one which makes use of marked Themes to foreground time and place:

marked Theme	Rheme
In their World Cup semi-final clash against South Africa on Thursday	Michael Bevan (65) and c Waugh (56) had to moun operation
as in (just) 49.2 overs	Australia were dismissed f
At Edgbaston	South Africa's vaunted fas Australia on the back foot
In the 17th over	Waugh's men had slumpe

In addition, a more delicate analysis of Theme is possible, takin modes of meaning. We've added a couple of modal Adjuncts to to illustrate the way in which Theme can function to relate a cl text (textual Theme) and to foreground attitude (interpersonal The mounting a text's method of development.

Theme: textual	Theme: interpersonal	Theme: topical	Rheme
		Michael Bevan (65) and captain Steve Waugh (56)	had to mount a res operation in their semi-final clash ag Africa on Thursday
as		Australia	were dismissed fo overs.
	(Not surprisingly)	South Africa's vaunted fast bowlers	had Australia on th at Edgbaston.
	(Unfortunately)	Waugh's men	had slumped to 4– 17th over
with		the Proteas	threatening to skitt

Halliday's treatment of English THEME has inspired linguists workin guages to ask the following questions (among others) about the clauses manage information flow in discourse:

- how do clauses contribute to the development of an angle on talked about; is there a Theme function manifesting this perspe
- how is Theme realized – e.g. sequence (especially initial or final clause), inflection, adposition, intonation?
- are there marked and unmarked Theme selections, dependi MOOD; what is the role of voice in constructing unmarked The
- are there special marked Themes (i.e. absolute Themes) which side the TRANSITIVITY structure of their clause possible?

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Table 1.7 Systemic functional index of typological work

		intra-dimensional	inter-dimensional
global	stratification	**context**: virtually no work within typological linguistics itself, but work within cross-cultural pragmatics	Little attempt at inter-stratal typology, but some observations about grammar and phonology in work on grammaticalization (e.g. Croft 1990: 231–233) and some work on genre and grammar in the Grimes (e.g. 1978) and Longacre (e.g. 1990) traditions. Discussions of language and culture types mostly outside field of typology.
		semantics: little typological work but some semantic domains such as those of (transfer of) possession, existence and location, causation used as typological frame of reference (cf. Seiler's, e.g. 1995, UNITYP framework); work on discourse semantics mostly in support of grammatical typology (as in Hopper 1982)	
		lexicogrammar: focus of typology (e.g. Greenberg 1978; Comrie 1981; Mallinson & Blake 1981; Shopen 1985; Croft 1990; Payne 1997) – with special attention given to grammar rather than to lexis (with exceptions such as the work by Leonard Talmy (e.g. 1985); cf. also Viberg 1984)	
		phonology: focus of typology (e.g.Greenberg 1978; Croft 1990: Section 5.4; Lindblom, Macneilage & Studdert-Kennedy 1984; Hirst & Di Cristo 1998; cf. also Ladefoged & Maddieson 1996)	
	instantiation	**system** (potential): still the main focus of typology	No general account or investigation, but some discussion in the context of work on grammaticalization (e.g. Hopper & Traugott 1993; Hagège 1988; Bybee, Perkins & Pagliuca 1994: 19–21, 107–110)
		subsystem/ text type: some work in the Grimes and Longacre traditions; but central concern in work on "sublanguages" in machine translation	
		text (instance): mainly as evidence for the system, not as a focus in its own right; but central concern in translation studies	
	meta-function	**ideational, experiential**: significant volume of work, e.g. on transitivity (e.g. Hopper & Thompson 1980, 1982; including work on "case marking" or "alignment systems", e.g. Blake 1994; Dixon 1979, 1994; Plank 1979), tense/aspect (e.g. Comrie 1976, 1985; Dahl 1985; Bybee, Perkins & Pagliuca 1994), possession, location and existence (e.g. Allen 1964; E. Clark 1978), noun classes and gender (e.g. Corbett 1991)	Little general work on inter-metafunctional patterning but some work on "accessibility hierarchies" (e.g. Croft 1990: 101ff; Keenan & Comrie 1977)
global	*meta-function*	**ideational, logical**: Some work on clause complexing (e.g. Longacre & Thompson 1985; Longacre 1985; Haiman & Thompson 1988) and "serial verb constructions"	
		ideational, experiential/ logical: Work on "causative constructions" (e.g. Shibatani 1976)	
		interpersonal: less work than on the ideational systems and constructions, but some work on mood (e.g. Sadock & Zwicky 1985; Palmer 1986; Ultan 1978), modality (Palmer 1986; Bybee, Perkins & Pagliuca 1994); evidentiality (e.g. Chafe & Nichols 1986; Wierzbicka 1996: Chapter 15), polarity (Givón 1979: Chapter 3; J. Payne 1985)	
		textual: less work than on ideational systems and constructions, but studies of theme and information (Li 1976; Lambrecht 1994), reference and "continuity" (Givón 1983), voice (e.g. Keenan 1985), definiteness (e.g. Lyons 1999)	
local	rank	**clause**: clausal systems of transitivity, mood, theme, etc. (see above under "metafunction"); clausal structure – "word order" in particular (see under "inter-dimensional")	"word order" patterns across ranks stated as implicational universals and harmony patterns (e.g. Greenberg 1966; Croft 1990: 48–63; Comrie 1981: Chapter 4; Hawkins 1983, 1994)
		group/phrase: tense/aspect (as systems at this rank; see above under "metafunction"), noun classes and gender (see above under "metafunction); animacy (e.g. Comrie 1981: Chapter 8); modification hierarchy (e.g. Croft 1990: 117–120)	
		word: word classes (Schachter 1985), noun-verb continuum (Hopper & Thompson 1985), adjectives (Dixon 1977; Thompson 1988); traditional word-based typology (e.g. Comrie 1981: Section 2.3)	
	axis	**system**: some work on whole systems such as transitivity (see under "metafunction" above) and on systemic interdependencies, but focus along the dimension of axis in typology tends to be on structure; systemic (implicational) hierarchies (e.g. Croft 1990: 67–91); systemic markedness (e.g. Croft 1990: 67–91)	No attempt at inter-axial typological correlations
		structure: a great deal of work on "word order", "case marking" and various constructions; head versus dependent marking (Nichols 1986)	

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While
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1.6 Sampli

Let us now
logical gene
should be b
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examples).
son Jr., Rob
example Lo
evidence is

reference grammar by Schachter & Otanes (1972). Sim
valuable typological field worker's guide by T. Payne (19
sonal concerns are bundled together in one of the last c
the heading of "pragmatically marked structures". Howe
description of the grammar of a language through natu
the interpersonal and the textual need to be part of the
fact, either of these metafunctions may prove to be a bet
than the ideational one.

There are thus excellent reasons for basing typologica
prehensive, systemic functional, text-based descriptions
practical problem with using only this approach: it wo
a sample of languages. According to current estimates
languages spoken around the world (6,072 according t
Ethnologue) and they can be grouped into something
1998:127). (For a recent survey of the languages of th
1997.) Only a small handful of these have been describe
of the order of 20 languages from around 10 different la
1.8. Even if we add comprehensive, text-based descriptic
frameworks – of which there are many more description
functional ones, we still do not get anywhere near a repre

What would constitute a representative sample? Gi
with a sample of the order of 30 languages; but this was
since this seminal work it has been shown very clearly
are needed. (For example, Dryer 1988, has shown that
"object-verb order" and "adjective-noun order" positec
hold up in a significantly larger sample of languages; c
Whaley 1997:40–41.) Later studies have increased the
Ultan's (1978:213) systematic study of "interrogative sy
"79 languages selected as randomly as possible in terms
and typological distribution" and Dryer (1992) uses a
Nichols (1991:Section 1.4) discusses different approach
guages for the purposes of typology (for discussion, see
differentiating between "bottom-up" sampling procedur
is to control the time depth of the sample and the size is
down" sampling procedure, where the sample size is d
distribution of sampled languages among groups is desi
imize genetic distance or equalize genetic membership"
1998:134) suggests a bottom-up method for developing
languages: take "one well-described language from each
of each stock". Since stocks vary in branching (Nichols 1
a sample of the order of 400 to 500 languages. In the s

Table 1.7 Languages described in systemic functional t
tion in this volume)

	Family			L
1	Indo-European	Italic		F
				S M
		Germanic		G v
				D
				D A S
				E
		Celtic		Ir
2	Niger-Congo	Kwa		A
				C
		Benue-Congo		M
3	Afro-Asiatic	Semitic		A ir
		Cushitic		B
4	Uralic	Finno-Ugric	Finnic	F
5	Dravidian			T v
6	Austro-Asiatic	Mon-Khmer		V
7	Sino-Tibetan	Sinitic		C th
8	Tai-Kadai	Tai		T
9	?			Ja
10	Austronesian	Western Austronesian	Philippine	Ta
				In
11	Australian Aboriginal	Pama-Nyungan		Pi
		?		G
12	Papuan			W
13	Oto-Manguean			Z
14	[Sign Languages]			A

and comparisons about the metafunctional profiles
the previous chapters.

For comparative purposes, each chapter has a si
tion of each chapter provides a brief history of the la
preview of the metafunctional organization of the l
ping stone for understanding the more detailed desc
Section 3 presents a description of the paradigmatic
of the clause grammar of the language concerned,

and the comparison
day was not success
in the 1960s were n

5. Since "meaning"
sense to characteriz
a meaning potentia
a sounding potenti
potential in the nar

6. For longer accou
is available on the w
http://minerva.ling
SFG%20intro%20N
to the model; Matth

7. Just like the syst
"declarative" forms
Bateman 1991).

8. We are only cons
it lacks a Predicator

9. Thus perhaps th
that is – NOT!

10. This can be con
Liam played Qui-Go

11. In this respect,
tive approaches and
former, systemic fu
resentation as a gen
pursues the develop
clear need for it. U
formal representatio
tation that do as mu
example of which is
Matthiessen 1995b)

12. Heine, Claudi &
of grammaticalizati
content; pragmatic
logical – free form
inflection; phonolog
They can all be inte
1.9. The morpholog
above. The pragmati
interpretation: the n
tiation, which is ass
to the grammatical

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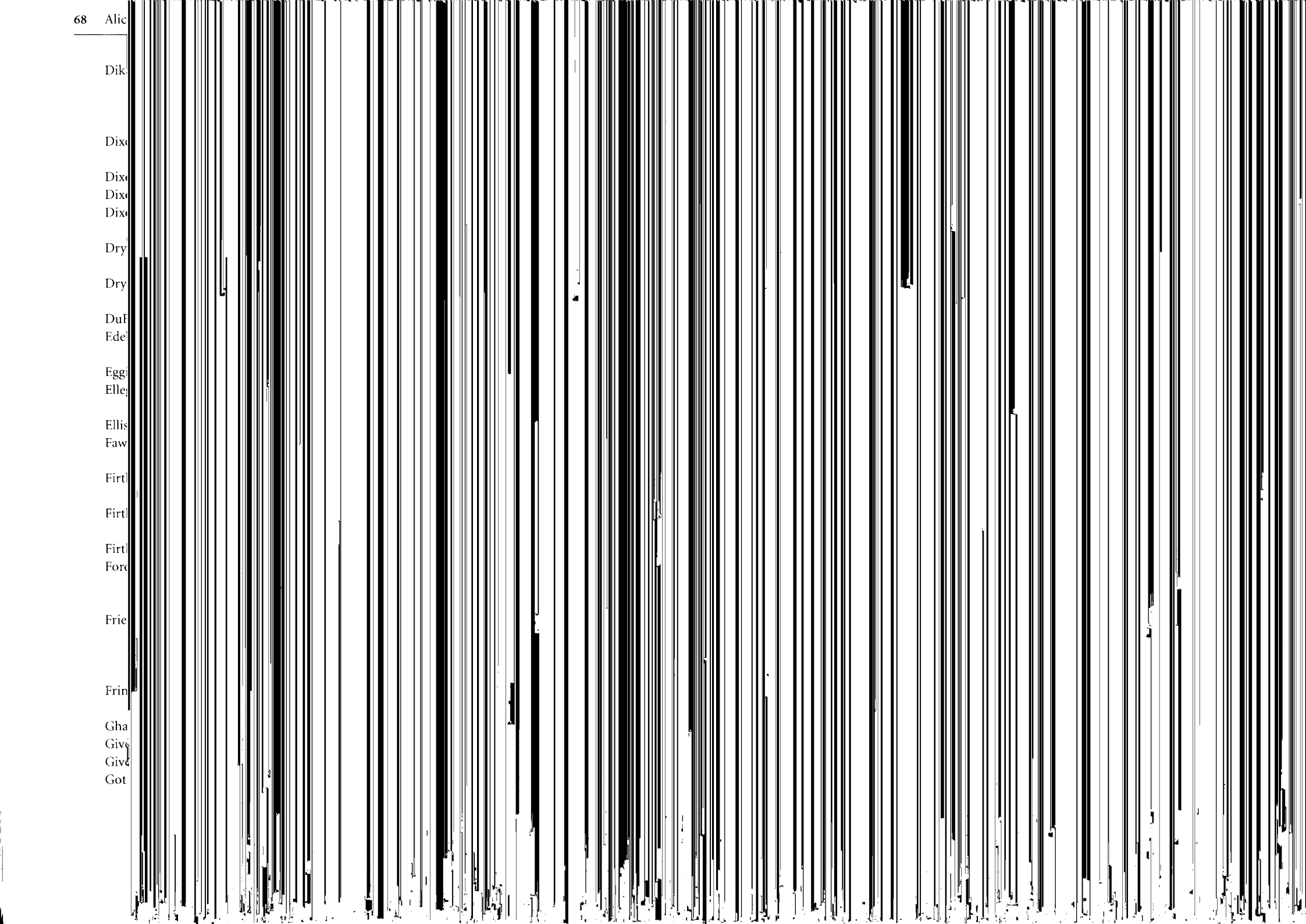

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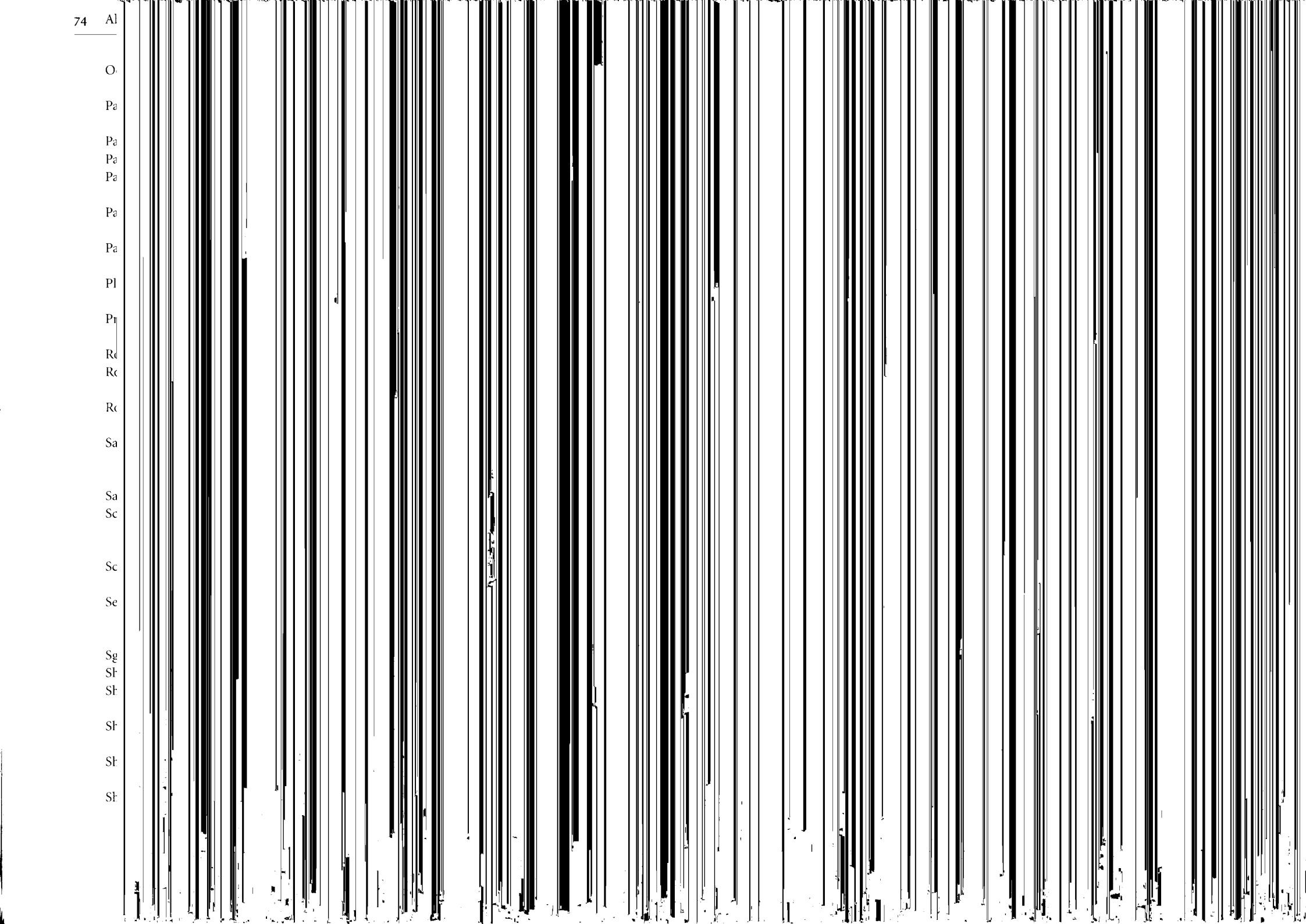

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