

Frans Plank

## **Noun phrase structure: *An und für sich*, in time, and in space**

### **1. Us**

From roughly 1990 to 1995, the contributors to this volume were the principal partners in a broad-mindedly collaborative enterprise devoted to noun phrases, itself part of a larger joint venture, the EUROTYP programme of the European Science Foundation.<sup>1</sup> In addition to pursuing their individual interests in noun phrase matters, they would confer twice a year, and correspond about twice a day, in the furtherance of concerns they were sharing. Of the ideas that were broached some came to a state of fruition where they could be put down in writing, for good or to be rewritten. Thus accrued a batch of working papers, two thematic collections, and at long last this volume. The contents of *EUROTYP Working Papers VII/1–25 (1990–95)*,<sup>2</sup> of *Double Case (1995)*, and of *The Maltese Noun Phrase Meets Typology (1996)*, complementing the present volume as the literary legacy of five years of cooperation, are detailed in the Appendix to this introduction.<sup>3</sup>

My emphasis in this introduction will be less on chronicling our progress and digressions than on giving a general characterization of the sort of approach that we took and the sort of outlook that it would afford or withhold. Although inevitably also retrospective, the basic mood will be mixed introspective and prospective. The views expressed on typology by itself (Section 2) are likely to be shared by everybody in this volume, while my reflections on typology's relation to diachrony and areal studies (Sections 3 and 4), occasioned by the EUROTYP experience, are of a more personal nature.

### **2. Typology by itself**

Naturally, the approach of the EUROTYP Noun Phrase Group was typological. By common assent, approaching a structural domain typologically means, first, to identify what is individually variable about this domain across the linguistic universe; second, to determine whether individual, logically independent variables co-vary with any others, in the same domain or in others, thereby setting limits on cross-linguistic diversity; and third, to explain such findings. There can be no co-variation

unless there is variation; still, universals which proscribe variation unconditionally define limits on diversity just like universals of co-variation do. These latter are typically stated as material implications, often relativized statistically, but there are also other significant conditional relationships between variables, such as those of licensing or favouring. Co-variation is typically inferred from samples: language samples are typologically the more meaningful the more representative they are of the full range of structural diversity, at least within that part of the linguistic universe which happens not to have vanished without a trace.<sup>4</sup> Explanations of co-variation are typically cast in terms of higher-level structural generalizations, but they are ultimately also sought in perception or cognition, in storage, production, or processing, in acquisition or evolution, in communicative functions or genetic predispositions.

Our assigned structural domain was a particular kind of phrase, best known as NOUN PHRASE (NP).

Even for a domain so circumscribed and familiar (under whichever name), a typological profile is not drawn at one sitting. Getting in control of all conceivable variables of NP structure, and of a sufficiently diverse range of languages to be sufficiently confident when claiming co-variation, is too tall an order to fill at the present state of knowledge, even when prolonged concerted action is taken. To get anywhere, you have to make a choice and give some variables priority over others – guided by the emphases of your theoretical framework, by your expectations about which variables hold the greatest promise of co-variation, and also by practical considerations about the feasibility of obtaining enough reliable information.

In our case, for various reasons including that of labour being better divided (among the several EUROTYP groups) than repeated, we did not give priority to the EXTERNAL grammar of NPs. Referring to persons, things, and further kinds of referents liable to receive similar grammatical treatment (e.g., abstract notions, events, actions, or also properties), independent NPs form part of larger syntactic expressions: in particular, NPs occur as core arguments of verbal and other predicating expressions (as subjects and direct and indirect objects or their equivalents in other types of relational systems), yielding verb phrases or clauses; as complements of adpositions, yielding adpositional phrases; as coordinate conjuncts of other NPs; or also as integral parts of complex NPs (as attributes, to use a neutral designation). Although bona fide NPs may also be used in yet further kinds of constructions (e.g., as adverbials, predicate nominals, or absolutely), and although expressions other than NPs may also be used as parts of constructions just mentioned (e.g., clauses, verb phrases, or adpositional phrases as subjects), these co-occurrences with particular kinds of other expressions in particular kinds of grammatical relations constitute the prototypical external grammar of expressions of the class traditionally subsumed under the label NP.

Although we by no means expect the external grammar of NPs to be invariable across languages nor only to vary randomly, systematic variation in these respects

is given rather short shrift in the published work of the EUROTYP Noun Phrase Group. Nonetheless, there are many ways in which the external grammar of NPs is reflected internally and vice versa, and this is reflected in this volume in contributions on the outside agreement with NPs at clause level (in Corbett's chapter,<sup>5</sup> and also in Stassen's), on NP coordination as opposed to other constructions for the joint involvement of NP referents (in Stassen's chapter), on the morphological coding of the external relations of NPs by case and similar inflectional categories (in Kibrik's and Moravcsik's chapters in Part II, and in all chapters in Part IV), on the marking for such a prime discourse category as definiteness (Part III), and on the shading of clauses into NPs when contracting the prototypical external relations of the latter (in Koptjevskaja-Tamm's chapter on nominalization, Part IV). Elsewhere the external NP relations of apposition (in *Double Case*) and predication (in Stassen's chapter in *The Maltese Noun Phrase Meets Typology*<sup>6</sup>) have been attended to. As to the external linear ordering of NPs, their external grammatical relations,<sup>7</sup> their behaviour in topicalizing and focusing constructions, their sensitivity to tense, aspect, and actionality, their not-so-independent realization as clitics, and the distinction between NPs and clauses in relationships of subordination and complementation, the interested reader is referred to the relevant companion volumes in the EUROTYP series.

Our own priority was the INTERNAL grammar of NPs. To cover this subdomain comprehensively, and postponing questions of outside implicational connections, one would have to look at cross-linguistic diversity in the following general respects: (i) how phrasehood is manifested (if it is); (ii) what syntagmatic relations obtain between NP constituents and how they are encoded; (iii) which kinds of words, phrases, and clauses are found as NP constituents; (iv) which subclasses of such forms are distinguished; (v) how word formation enriches the fund of nominal words; (vi) how form classes match up with syntagmatic relations; and (vii) which nominal words inflect for which categories. All items of this agenda were covered as EUROTYP proceeded, though some less comprehensively than others.<sup>8</sup> Our focal points were systems of inflection (Part II), the morphology, syntax, and semantics of determination (Part III), and the relational structure of NPs variously amplified (Part IV).

As to (i), the phrasehood of NPs as such was a central issue especially in *Double Case*, with echoes in Plank's and Moravcsik's chapters in Part III of the present volume. The point was made, and illustrated in great (often extra-European) detail, that NP-internal cohesion can be tighter or looser, with some languages, sometimes characterized as having "flat" or appositive word-based syntax, arguably not evincing such a phrase type at all. Habitual discontinuity may be indicative of a low degree of phrasal integration; but it does not suffice to disprove phrasehood.<sup>9</sup> Phrasal cohesion can show in linear ordering, with co-constituents subject to adjacency and co-occurrence constraints (requiring or excluding one another), but also, simultaneously or alternatively, in the marking of phrasal parts for agreement or cross-reference with one another or for governing or commanding one another, in the possibility of being

combined in morphological rather than only in syntactic construction (compounding, incorporation), or also, if perhaps less directly, in phonological phrasing. While overall questions of NP-internal order were delegated to another EUROTYP group<sup>10</sup> and phonological phrasing was largely disregarded, agreement/cross-reference and government/command within NPs and their overt manifestations, and more peripherally also the combining of NP parts at word level, are recurrent themes in this volume and in our other publications.<sup>11</sup>

As to (ii), provided parts cohere tightly enough one way or another to form phrases, they can hold different syntagmatic relations within their phrases. Basic elements of relational architecture are arguably selected from a fund that is universal, and is to some extent shared by constructions of all kinds: phrases (NPs and other) have heads, whose most characteristic prerogative is self-sufficiency, grammatically and semantically; if heads don't come alone, they are accompanied by dependents, or also by not-so-dependents (sometimes called "adjuncts", like adjoined relative clauses) or other independents (conjuncts). For NPs, dependency subsumes a range of more particular relations, including primarily those of determination (or specification), modification (or attribution, perhaps at several levels of closeness to heads), complementation, and apposition, and yet more particularly others such as quantification or classification, or also specific semantic relations of modifiers and determiners such as possessor, agent, part-whole, material, or origin. Having NPs does not perforce mean that all of these relations will play a role in the grammar of all such languages (for example, adjuncts do not seem to be very frequent at NP level); nor will the distinctions between those relations selected always be equally clear-cut (that between determination and modification, for example, can be rather elusive<sup>12</sup>). Least invariable are the syntactic manifestations and the overt encoding of NP-internal relations.

The bulk of the present volume is given over to the exploration of such variation for the relations of determination (Part III) and "amplification", to coin a maximally neutral term meant to subsume all expansions of NPs beyond their lexical core without prejudging their precise nature (Part IV). A general chapter on the dependency structure in NPs was also planned for this volume, to examine the claims which elements other than nouns have on the status of head (especially determiners, but probably also quantifiers and adjectives, as suggested in the generative DP literature and before) and to find distributional, inflectional, and semantic motivation for hierarchical layering inside NPs; unfortunately it did not materialize. However, aspects of this question have variously been addressed elsewhere by members of the EUROTYP Noun Phrase Group, including in a separate collective volume, Corbett et al. (1993), where Payne (1993) makes a strong empirical case against an analysis of NPs as DPs. Also, clarifying the dependency structure within NPs was a main theme in *Double Case*. Quantification, in this volume essentially limited to numerals, was the subject of several working papers (by Gil, Corbett, Kibrik et al.) and of chapters in *The Maltese Noun Phrase*.

As to (iii), the constituents to be typically reckoned with in NPs include these: words of such major classes as nouns, adjectives, numerals, and perhaps certain adverbs; function words such as independent pronouns (sometimes with null realization), quantifiers (or also special number words), articles, classifiers, and all kinds of particles (including intensifiers and other qualifiers, positional and directional indicators, focus particles, ligatives linking the parts of NPs, mere markers of NP-hood); phrases of various kinds (headed by typically nominal words, namely adjective phrases, possessive phrases, NPs themselves, but also adpositional phrases); and clauses of various kinds (relative and other attributive clauses, complement clauses). Few of these classes of NP-internal words, phrases, and clauses are universal, although many are widespread, even if not always differentiated from one another equally strictly. Nouns and personal pronouns (at least those of 1st and 2nd person, with demonstratives often doing duty for 3rd person deictic and phoric pro forms) have the best claims to universality. But even these parts are not undisputed. Conceivably, there might be only one single, syntactically undifferentiated class of lexemes, with a Standard Average European transitive sentence like 'The boy sees the goat' rendered by a sequence of three uniform predications where such lexemes are combined with (perhaps bound) pronouns, 'he is young, he sees it, it stinks'.<sup>13</sup> However, upon closer inspection of relevant languages, the grammatical and semantic potentials of such lexemes and their overt morphosyntactic properties in particular constructions have always turned out to be different, massively or at least subtly (as in another rendering of the above sentence, 'he sees it, the youth, the stinker', which clearly contains two nouns, neither however unqualifiedly nouny), thus reconfirming that not to distinguish nouns from non-nouns is not an option. In other languages where nouns have been questioned (e.g., Salish, Wakashan, or Philippine), the questions are about the predispositions of lexemes, being allegedly so versatile as not to require any special marking to adapt them for referring, predicating, or modifying uses, rather than about their actual grammatical uses, indubitably manifesting distinctions of form and distribution.<sup>14</sup> Doubts whether 1st and 2nd person pronouns are universal seem better grounded: deictic reference to speaker and hearer is sometimes made by means of barely grammaticalized nouns for social roles such as 'servant' and 'master' or also by local deictics.

Turning to point (iv), although subclasses of NP constituents are rarely entirely language-particular either, there is cross-linguistic variation as to whether and how nouns are distinguished as proper and common, count and mass, individual and collective, animate and inanimate, concrete and abstract, or relational and absolute; adjectives as denoting essential or accidental properties, as denoting value, size/dimension, age, colour, material, human propensity, or other kinds of property concepts, as gradable or ungradable, descriptive or limiting; numerals as cardinal, ordinal, distributive, multiplicative, and fractional, as counting and adnominal forms; pronouns as personal, possessive, reflexive, reciprocal, logophoric, demonstrative,

indefinite, interrogative, and relative; articles as definite, indefinite, specific, generic, proprial, and partitive; complement and attributive clauses as finite and non-finite, etc.

Variation in the distinction of form classes of NP constituents, especially of nominal words and their subclasses, has been a pervading concern in our work. In this volume, this is reflected in chapters devoted to personal and demonstrative pronouns (Plank, Part II), articles (all of Part III), numerals (Hurford), possessive phrases (Koptjevskaja-Tamm), and adpositional phrases (especially comitatives, Stassen) (Part IV); and noun subclassification for inflectional purposes figures prominently in Part II. Adding to this what we have published in this rubric in our working papers and other collective volumes (e.g., on noun subclasses in relation to number marking, or on the delimitation of cases from adpositions and concomitantly of NPs from adpositional phrases),<sup>15</sup> there still remain serious lacunae, such as pronominal systems in overview or proper names looked at from a typological angle.

As to (v), although basic nominal or pronominal words can in all languages be supplemented by complex ones, the ways and means of word formation differ a great deal from language to language, and few efforts have been made in typology to reduce such diversity to order. The delimitation of word formation from inflection is not equally strict everywhere to begin with, and within word formation at its most typical, compounding is not always equally clearly distinguished from derivation. The uses of compounding and the categories, basic units (stems, words), systemic properties, and formal devices of derivation show great and largely unmapped variation, which is evidently not altogether random, although the evidence for constraints is rarely ample – to illustrate: if words other than nouns form compounds, then nouns will do so too; if there are diminutives and augmentatives of adjectives, then nouns will also have such derivatives; verb-derived nouns will primarily include categories of clausal roles such as agent, patient, beneficiary, instrument, place; if there is polysemy, *nomina agentis* are likeliest to share their affixal encoding with *nomina instrumenti* and *loci*. One area where chance variation has been thought to reign supreme is increasingly emerging as being rather well-structured: languages do not differ without limit in which meanings are taken care of by core vocabularies of basic words and which need complex words for their expression, the best-studied lexical fields to date being those of colours and numbers.

The formation of numerals (Hurford), actional nominals (one of Koptjevskaja-Tamm's chapters in Part IV), and stem formation accompanying inflection proper (Kibrik) are three issues of word formation directly addressed in this volume. Complex attributive forms of nouns (genitives, possessive adjectives, and other) and their derivational or inflectional nature are another relevant topic touched on in chapters by Kibrik and Koptjevskaja-Tamm (Part III, on non-determiner genitives<sup>16</sup>), but *Double Case* has much more on this.<sup>17</sup>

As to point (vi) of our agenda of variation, there is much that is universal about which classes of constituents are eligible for which syntagmatic relations within NPs; after all, to some extent the rationale of form classes lies in such relations. For example, adjectives are words specializing in modifying words which themselves specialize in establishing reference to persons and things (by naming, describing, or pointing to such referents). Still, there is variation in how relationally versatile certain form classes are, and in what formal adaptations are required if words or complex expressions are used in relations others than those they are predestined for – for example, in whether nouns can be used as modifiers, unchanged or only upon overt adjectivalization.

In this volume, such issues of the matching of form classes and NP-internal relations are raised repeatedly, most specifically with respect to attributive relations and the special marking of forms when used attributively in Daghestanian languages (Kibrik), to the word-class provenance of quantifying words (the higher the number the nounier the numeral; Hurford), to the use of genitives as modifiers rather than determiners (Koptjevskaja-Tamm's chapter in Part III), and to the poly- or perhaps rather macro-functionality of certain kinds of formal markers of NPs and their constituents (Gil).

Finally, as to (vii), one of the most productive sources of variation is the expression of certain nominal grammatical (or "functional") categories – such as definiteness, grammatical relations, gender/class, possession, number – by either function words (articles, adpositions, classifiers, possessive pronouns, quantifiers or other number words) or inflections. To begin with, bound morphology may or may not be easy to distinguish from free forms which are clitic. If there is nominal inflection, there may be more or less of it, as measured in inflectional categories, in terms realizing categories (for example, with number only realized by singular and plural, or also by dual, trial, quatral, paucal, multal, singulative, collective, associative), and in the extensions of domains (for example, with only some pronouns and nouns or all pronouns and count nouns inflecting for number; or with only determiners or also with modifiers agreeing in number). Further, overt exponents, coming in a variety of forms (affixes, reduplication, segmental or suprasegmental modification, suppletion, subtraction, metathesis, zero – as also used in derivation), may express separate categories (such as number and case) separately or they may cumulate them, and one category may be expressed in one place or it may extend over several co-occurring segments of a word. Inflectional exponents may be distinct or syncretic, invariant for all relevant words or variant, giving rise to inflection classes. Inflectional categories may be paradigmatically independent of each other or interdependent, exerting all kinds of influences on each other's expression. All in all, the potential for diversity of whole inflectional systems is vast.

Accordingly, Part II of this volume and parts of Part III are probing actual differences and similarities between inflectional systems, looking at a wide range of

nominal inflectional categories<sup>18</sup> and paying special attention to such parameters as have traditionally figured in morphological typology, where languages were characterized along two dimensions: as (predominantly) analytic (or isolating), synthetic, or polysynthetic (incorporating), and as (predominantly) agglutinative, flective, or introflective (non-concatenative).<sup>19</sup> One objective of *Double Case* had been to examine the typological significance of what has been called group inflection or phrase marking (as opposed to word marking) but turned out to show an unmistakable family resemblance with agglutination.

So much for the thematic agenda of five years of NP research within EUROTYPE. Now, doing typology, with whatever structural focus, you ineluctably find yourself doing chores which are sometimes believed to be the responsibility of others – description, classification, and theory. (And to history and geography I will turn in a moment.)

Typologists are out to discover and explain co-variation, but getting under way in that direction can be laborious, requiring much preparatory spadework. Typological research is dependent on reliable descriptions of languages, ideally representing the full gamut of structural diversity. Sometimes good descriptions are available for languages which one would like to have in one's sample, some even informed by typological expectations about variation. These are conveniently transferred to typological questionnaires and checklists. Often, however, and not only for out-of-the-way languages and arcane structures, typologists themselves have to first obtain data and to describe for particular languages what they then want to compare. Much of our own work in the EUROTYPE years, eventually finding its way into chapters of this volume or into our other publications, was of that nature. The Daghestanian family (Kibrik et al.),<sup>20</sup> Maltese (The Noun Phrase Group in association with local linguists), English in a Southeast Asian environment (especially Singlish; Gil), and Swedish (Koptjevskaja-Tamm), all investigated in situ with the assistance of native consultants, were the main beneficiaries of our descriptive preparations.

Co-variation presupposes variation. However, tracing variation for individual parameters and classifying languages accordingly, in preparation for the real typological business of establishing co-variation, can be an arduous task in itself. While some parameters are straightforward (e.g., having or lacking a trial number, although even that one can be tricky), others are internally complex (e.g., Suffixaufnahme, whose prototype and varieties involve a bundle of syntactic and morphological features), and surveying them across languages cannot be done by glancing at one designated paragraph in the respective grammars. Although we take credit for a goodly number of implications, put forward, examined, or rejected in this volume and elsewhere,<sup>21</sup> much effort has gone into mapping out dimensions of variation, yet awaiting to be correlated with others.

Good typology feeds on theory and in turn feeds into good theory. Linguistic theory is about the laws of language, and this is what implicational universals, typol-



ogists' objects of desire, are or can be reduced to. Typology would be ill-advised to expect theory to be taken care of elsewhere: insight does not perforce come with a "framework", subjecting a structural domain to its own distinctive terminology and formalism. However, typologists willing to shoulder theoretical responsibility themselves should perhaps not content themselves with such properties of languages as are easy to see at a glance, but also take on the question of the mental representation of grammars – of the rules, constraints, or whatever other organizing principles of linguistic behaviour.

The work of the EUROTYP Noun Phrase Group has been done without an allegiance to any particular current school or framework. Our descriptive analyses might be characterized as "concrete", insofar as the categories and structures posited are intended to relatively directly reflect elementary formal and distributional patterns of forms in constructions of particular languages; no theoretical framework, however averse to taxonomy and given to facile shorthand (of the sort of  $[\pm N, \pm V]$ ), should be able to do without them in whatever notational guise. Explanations were typically sought in higher-level descriptive generalizations, first within languages and then across them. However, when we were able to state cross-linguistic generalizations as implications, licensing some combinations of properties but proscribing one, then they would typically involve concrete rather than abstract variables, linked directly rather than indirectly. The most general explanatory principles with the greatest appeal for us would be longstanding ones which have often been termed "functional", such as simplicity (formal economy, markedness), clarity (ambiguity avoidance), expressiveness, or iconicity (form being motivated by function). Nothing in our approach, however, militates against explanations being genetic, invoking inherited traits which are evolutionarily advantageous or also arbitrary.

When concrete analyses are favoured over abstract ones in our own typical manner, the risk is incurred of overlooking certain grammatical generalizations which are very real – and which, ironically, a typological approach is best suited to uncover. Let me illustrate this danger with an example of word order in NPs.<sup>22</sup>

When facing variation in the preferred, unmarked, non-contrastive relative ordering of adjectives like that between English (1a), Bahasa Indonesia (1b), and Maltese (1c) – that is, in languages which have attributive adjectives to begin with and which can stack them, if sometimes reluctantly – the priority in our approach would be to make sure that these are indeed the only cross-linguistic options (and ones about equally well represented), with a rather obvious fourth alternative (1d), related to (1c) as (1b) is to (1a), being unattested, and then to look for explanations of one's language-particular and cross-linguistic findings.

- (1) a. a beautiful big red ball  
 b. bola merah besar tjantik  
 'ball red big beautiful'

- c. ballun sabih kbir ahmar  
'ball beautiful big red'
- d. \*'red big beautiful ball'

Disregarding potential interferences from factors such as phonological weight (light tending to come before heavy) or the inclination of inherently emphatic adjectives (such as 'big') to jump the queue, adjectives themselves are evidently ordered in terms of their meanings; adding further semantic classes, rarely met with all at once, would only confirm this conclusion (e.g., *a beautiful big heavy new red woollen Swiss medicine ball*). This insight represents a generalization, since particular adjectives like *ugly* etc., *small* etc., *green* etc. are now seen as falling under the same general rule as *beautiful*, *big*, and *red* respectively. In English, VALUE adjectives precede SIZE adjectives, which in turn precede COLOUR adjectives. In Bahasa Indonesia it is the other way round. Maltese has its adjectives in the same order as English. Considering only languages like English and Bahasa Indonesia, where the mirror-image difference in the ordering among adjectives comes with a difference in the ordering of adjectives relative to their head noun (itself sometimes erroneously believed to follow from an all-encompassing setting of a head-before-dependent/dependent-before-head parameter, also regulating the basic order of object and verb etc.<sup>23</sup>), a higher-level generalization suggests itself, to the effect that the relative distance of semantic classes of adjectives to their head is the same, regardless of heads being final or initial. Generalizing further, the adjective classes involved could be arranged on a scale of nouniness, also determining other grammatical properties of words with such meanings: COLOUR would be nouniest, VALUE least nouny, and SIZE intermediate – a difference also manifesting itself in word class differences, the use of special derivational morphology (thus, in English there are colour terms which can be used as modifiers but which are nouns rather than adjectives and others which need to be formed from nouns by derivation or compounding: *a silver/golden/dove-coloured ball*), or also in adjectives of nounier meaning being unavailable to begin with in particular languages reserving this word class only for words of the most pertinent meanings. Aiming yet higher in one's explanatory aspirations, this mirror-image pattern of (1a/b) might then be explained iconically, as an instance of conceptual affinity (nouniness) motivating linear closeness.<sup>24</sup> The non-attestation of (1d) is only to be expected from this explanation. Alas, Maltese casts serious doubt on it: the way its adjectives are ordered among each other, they are on the wrong side of the noun. And Maltese is by no means a loner: in Europe, the Celtic fringe is equally wrongheaded (with a minor modification, apparently preferring Noun – SIZE – VALUE – COLOUR, but this is also an option in the Maltese family, Semitic), and Romance varies this theme by inserting the noun somewhere in the middle, otherwise conforming to the English rather than the Indonesian inter-adjectival order (e.g., Italian *una bella grande palla rossa* 'a beautiful big ball red').

On a concrete analysis, a representation of NPs in Maltese et al. with the head noun in final position, VALUE – SIZE – COLOUR – Noun, would not normally be countenanced: such an ordering is not even used as a marked alternative in this language! And yet, it is only on such an abstract analysis that the iconic explanation of the relative distance of semantic classes of adjectives from nouns can be upheld: Maltese et al. are – abstractly – exactly like English and exact mirror-images of Bahasa Indonesia. The distinctive feature of the grammar of such languages is an extra syntactic rule of Noun Fronting (or Halfway Fronting in Romance), but this too is not without language-particular structural justification.<sup>25</sup> In fact, when asking oneself why it is that some languages have an abstract rule of (Halfway) Noun Fronting while others don't, one is pointed to further differences in their respective grammars, some abstract and others fairly concrete (such as, allegedly, inflectional differences in the marking for gender and number).

The ultimate objects of comparison, then, must be grammars: however concrete or abstract, it is what is represented in the mind which determines the “properties” we are wont to ascribe to “language(s)”. Especially when links between variables in co-variation are not self-evidently direct, as for example in the case of correlations between the architectures of NPs and other kinds of constructions,<sup>26</sup> the ways in which they are mediated cannot be reconstructed other than through the workings of mental grammar.<sup>27</sup>

The next question is whether the involvements that naturally come with doing typology are merely threefold, encompassing description, classification, and theory, or indeed fivefold, also extending to history and geography.

### 3. Typology and diachrony

Like uniformity or perhaps even more so, diversity can be the result of change.<sup>28</sup> In the present volume and elsewhere, all kinds of things that are variable about NP structure are shown or conjectured to have changed in time: from appositive origins NP may become more tightly integrated; agreement and genitive-like marking on dependents in NPs may get grammaticalized from anaphoric pronouns in the process of looser constructions being tightened up (ulterior motives throughout *Double Case*); in the right neighbourhood, NPs may revert and show signs of structural disintegration (see Gil's chapter on Singaporean English); phrases in determiner function may shift towards modifier status (see Koptjevskaja-Tamm in Part II); demonstratives and numerals may get recruited as definite and indefinite personal pronouns and articles (*Working Papers* VII/20 and 23); single-function words may become poly- or macro-functional or perhaps the other way round (see Gil and Stassen); inflections may spread among nominal word classes, especially from pronouns to nouns, and may undergo all sorts of semantic and formal reanalyses, after having

been grammaticalized from non-bound sources (see Kibrik's and Plank's chapters in Part II).

However, no comprehensive portrayal of typological developments of NP structure has been attempted. What a specifically typological perspective on diachrony would have to focus on is concurrent rather than individual changes: if variables are contingent on one another, they should not be able to undergo change independently. Now, there are no two or three or four types of NPs that could change into one another: the parameters along which NPs can differ, and hence change, are legion, and they are not easily ranked in significance either. A full typological scenario of co-variation as co-evolution in NPs is as yet unrealistic.

And it is not really obvious how rewarding it would be for typologists to turn historians. On one view, their only benefit from such further involvement could be heuristic: if two variables undergo change simultaneously (as for example when case inflection is weakening while articles are emerging), this might suggest that they are contingent on one another. Thus alerted, it would still fall on typologists to establish, across all (known) languages at all (known) times (representatively sampled), whether the simultaneity of these changes was a coincidence or whether these variables are indeed implicationally related, and if so, to figure out why. This view, currently espoused in many circles, casts typology as the master and diachrony as the servant. On the one hand, there are universals, unconditional and conditional, which define the limits of cross-linguistic diversity and which are valid everywhere and at all times and any time; these timeless laws of language are the subject matter of typology. On the other hand, there is much that can be observed about changes (their actuation, transition, embedding, and evaluation), but what is regular about it and amenable to lawlike explanation is essentially only that it is constrained by timeless laws: no language can change so as to infringe upon a law, or at any rate not without subsequent changes swiftly redressing the balance one way or another.

Alternatively, however, diachrony can itself be seen to be in charge – and this is how it used to be seen of old, when types were conceived of as stages of evolution.<sup>29</sup> Assuming that particular targets (forms, categories, constructions, rules, constraints) can only result from particular mechanisms of change operating on particular sources, this would impose limits on how languages can differ: they can only be what they could become. If change itself is lawful, timeless laws of typology could be redundant. The search for systematic co-variation would turn out to be a comparative diachronic endeavour.

An extreme way of diachrony being in charge would be in another scenario, but that is not supported by much evidence. Suppose former diversity got drastically reduced without a trace through mass extinction of languages or rather their speakers, then the grammatical traits shared and retained by the fortuitous survivors would have ended up universal.

To see from an NP example how responsibility for co-variation can conceivably be apportioned among typology and (non-terminal) diachrony, compare singular and plural forms of indefinite articles in English (3), vis-à-vis those of the definite article (2):

|        |        |                   |                    |
|--------|--------|-------------------|--------------------|
| (2)    |        | SG                | PL                 |
|        | I read | the poem          | the poems          |
| (3) a. | I read | a poem            | ∅ poems            |
| b.     | I read | sm poem which ... | sm poems which ... |

There is an overt form of the definite article in both singular and plural – indeed the same, *the*, not agreeing with nouns in number in English. The same holds for indefinite *some* [sm], while corresponding to singular *a(n)* there is nothing in the plural.<sup>30</sup> This is no freak peculiarity of English but arguably reflects a law of language:

- (4) If there is an overt indefinite article in plural NPs, then there is one in singular NPs (provided there is an indefinite article at all).

Definite (personal, (5)) and indefinite (6) pronouns may show an analogous asymmetry, here illustrated from varieties of German:

|        |            |             |                |
|--------|------------|-------------|----------------|
| (5)    |            | SG          | PL             |
|        | Aus Gozo   | ist er/sie  | sind sie       |
|        | 'from Gozo | has he/she  | have they      |
|        |            | gekommen    | gekommen       |
|        |            | come        | come'          |
| (6) a. | Aus Gozo   | ist eine(r) | sind welche    |
| b.     |            |             | sind eine [oa] |
| c.     |            |             | sind ∅         |
|        | 'from Gozo | has someone | have some      |
|        |            | come        | come'          |
| d.     | Aus Gozo   | ist man     | sind man       |
|        | 'from Gozo | has one     | has one        |
|        |            | gekommen    | gekommen       |
|        |            | come        | come'          |

Definite pronouns have overt forms in both singular and plural; and so have indefinite pronouns in Standard German (with suppletive interrogative *welche* or formally singular *man* serving as plurals, (6a/d)) and in Bavarian (formally regular plural *eine*, (6b)). In the Palatinate dialect, however, the indefinite plural pronoun is zero even as subject, governing plural verb agreement (6c).<sup>31</sup> Again this is no idiosyncrasy of one dialect of one language: whenever there is a zero form of indefinite pronouns in only one number, then it seems to be where it is in Palatinate German – which suggests this implicational universal:

- (7) If there is an overt plural indefinite pronoun, then there is an overt singular indefinite pronoun.

Markedness is such a pliable explanatory notion that it accommodates (4) and (7), despite first impressions: while plural is marked vis-à-vis singular in definite NPs, requiring some extra formal expenditure, it is probably the other way round in indefinite NPs, with indefiniteness and non-individuation (i.e., non-singular) being mutually conducive, rendering singular the marked number in these circumstances. What we are faced with, thus, is an instance of the general phenomenon of markedness being reversed, from singular being unmarked and plural marked, in marked contexts.<sup>32</sup>

But why invoke timeless laws, no matter how convincing their explanation, when the pattern to be accounted for follows from laws of change anyhow? Indefinite pronouns and especially articles are typically grammaticalized from one particular source: the cardinal numeral 'one'. Owing to its meaning, this numeral will typically be confined to singular uses. Thus, if a word meaning 'one', and perhaps increasingly used in NPs of specific reference ('a certain poem'), acquires the meaning 'indefinite' (that is, if it comes to be more or less obligatory in NPs whose referent is not assumed by the speaker to be identifiable by the hearer on the descriptive information (s)he is given), and perhaps undergoes some reductive formal change as well (as in English *one* > *a(n)*), and provided nothing else happens, there just won't be any form around to express indefiniteness in numbers other than the singular. The asymmetric distribution of zero and non-zero marking of indefiniteness over non-singular and singular thus ensues automatically from how indefinite pronouns and articles are grammaticalized. Typically grammaticalized from (distal) demonstratives, which are equally comfortable with all numbers, definite articles will not suffer from a comparable lack of non-singular forms.<sup>33</sup>

In actual fact, however, there are all kinds of other things that may happen. First, the numeral 'one' is not the only possible source for the grammaticalization of indefinite pronouns and articles: others include generic nouns, existential quantifiers, or interrogative pronouns, all seen in the English and German examples above (*man*, *some*, *welch-*, respectively), and none as dedicated to the singular number as the numeral 'one'. Second, even such a dedicated singular word as the numeral 'one' may have or may acquire non-singular uses – to express higher numerical or quantificational meanings (e.g., 'one-DUAL' meaning 'two', 'one-PLURAL' meaning 'several'), to form a distributive numeral ('one each'), to group accompanying nouns ('one-DUAL shoe', i.e. 'one pair of shoes', vs. 'one-SG shoe'), to agree with dualia/pluralia tantum nouns in number ('one-PLURAL scissors'), to number-agree with any nouns when part of a complex higher numeral ('twenty-one-PL pages'), or also upon conversion to (pro-) nounhood ('Which poems did he read? – The Japanese one-PL'), or just so (as in the case of the Bavarian plural pronoun [ou]).<sup>34</sup> Third, dedicated non-singular words utilized for indefiniteness marking, such as arguably the quantifier *some*,<sup>35</sup> may equally be extended to the singular.

With no other regulations reigning in such a host of possible changes, there could thus come about all conceivable distributions of zero and non-zero indefinite markers

over singular and non-singular numbers. Yet only such distributions seem ever to be encountered as are licensed by (4) and (7). This finding can only mean that change is indeed superintended by such timeless laws or the explanatory principle behind them (markedness, as suggested above). However, this superintendence does not consist in INDIVIDUAL changes being held in check by timeless laws, but in SEPARATE changes – grammaticalizations of indefiniteness markers from various sources, extensions across numbers in opposite directions – not being permitted to be effectuated INDEPENDENTLY of one another. In this sense co-variation is here explained by co-evolution, with concomitance of changes guaranteed by a constraint on co-existing structures rather than on change itself.

This is not to deny that there are genuine regularities of change, such as the semantic change from 'one' to 'indefinite' (with the numerical meaning perhaps persisting) being indeed as unidirectional and irreversible as grammaticalization theory would like to have it for all changes within its domain. Still, even when one only looks at indefinites developing so regularly from this particular numeral source, the explanation of the number asymmetry cannot be exclusively diachronic either. Again, further possible changes have to be taken into consideration, especially ones that would lead to the discontinuation of a 'one'-based marker of indefiniteness: through its complete phonetic erosion, its simply falling into disuse, or its reanalysis as something else (like a pure NP marker, independent of indefiniteness). Conceivably, such discontinuation could be the fate of a single form, but this apparently never happens, or at least not to singulars when plurals hang on. Again, it would seem to be a structural constraint on what can co-exist at any time – no non-singular indefinites without corresponding singulars – which is superintending what can be discontinued by successive generations of speakers.

On the strength of such examples, there is little hope for typologists that they can have their work wholly done by historians. Being about co-variation in co-evolution, it is, however, best done in cooperation.

And typologist-historian teams should be under no illusions what it really is that may show co-variation in co-evolution: grammars, not languages.

It is of course only a manner of speaking to say that languages, or their properties, change in time: languages are not individuals possessing temporal (or also spatial) continuity. What really only exists in time (and space, sort of), other than individual speech acts, are representations in the minds of speakers, i.e. grammars. It is ultimately about these that claims are made when laws of change or variation are being posited.

In customary parlance, laws of change are universal generalizations about which particular states of a language can or cannot result from which particular prior states and about the mechanisms potentially effectuating the transitions. Put less metaphorically, diachronic (or simply chronic) laws are ones which force particular grammatical or lexical representations upon learners or more advanced speakers, or put

such representations out of their reach, whenever they encounter data of a particular kind, and these data have been produced by previous speakers on the basis of different internal representations. By contrast, when laws are said to be achronic (or panchronic), the proper understanding is that there can never be different representations of the same data. Learners or more advanced speakers abiding by such achronic laws may also need temporal experiences to trigger a representation (if a law is implicational, the implicans will need to be encountered as a trigger of the implicatum); but what is invariable, and in this sense timeless, are the representations which successive generations may form of such data.

The fieldwork of both the historian and the typologist, thus, has to be done in the field of the acquisition and restructuring of grammar(s). The universe from which they have to draw a representative sample to meaningfully extrapolate universals is not that of languages but the vast one of individual restructurings (including the terminal one of discontinuing a whole grammar): in toto, these are what ultimately accounts for diversity and uniformity across languages.<sup>36</sup>

#### 4. Typology and geography

The prepositional phrase subjoined to the main noun phrase of the title of this volume, "in the languages of Europe", and the name of the series in which this book is included raise contradictory expectations. Discerning readers might want to be certain what they are letting themselves in for, typology or areal studies, for on the face of it the two have got next to nothing inherently to do with each other.

Residing in the heads of speakers and hearers, grammars are as mobile as these. Nothing linguistic can prevent a European grammar from thus migrating to, say, Tasmania. Nothing that is universal about it will change. No change of location will license the combination of null singular with non-null plural indefinites or COLOUR before SIZE before VALUE adjectives before nouns. If valid, universals of grammar, which is what typology is about, are not only true at all times (achronically or chronically), but at all places where human languages are spoken. There are no genuinely areal laws of grammar. All that is in essence local about grammar, or for that matter language, is that speech acts have got to take place somewhere. Admittedly, for chronic universals which determine how successive grammars can or must be constructed differently in light of the same linguistic experiences, or also for those achronic ones which need to be triggered, it does matter that those occasioning a learning experience by engaging in speech acts and those acquiring or restructuring their own grammars on this basis are in sufficiently close spatiotemporal contact to establish communication.

But this was not the motivation for the areal slant of the EUROTYP programme. The idea simply was to shed more light on the grammatical uniformity and diversity



of a group of some 130–150 languages spoken of old in an area which is geographically and politically reasonably well delimitable, though not always unarbitrarily: Eurasia from the Atlantic to the Urals, including the Caucasus and Transcaucasia. The genetic affiliations of these EUROTYP languages, hailing in very unequal numbers from seven well established families (Afroasiatic, Indo-European, Uralic, Altaic, Northwest Caucasian, Northeast Caucasian, South Caucasian) joined by a lone survivor (Basque) and a few long defunct apparent isolates without known descendants (Etruscan and suchlike *Trümmersprachen* as Iberian and Ligurian), are not nearly as diverse and controversial as those in many other neighbourhoods of the world, and the histories of many of them are reasonably well documented; so one could also expect to get an advantageous angle on the traditional historical concern of the *Sprachbund*, namely on how languages in areal proximity, however historically different, converge.<sup>37</sup>

In compliance with the EUROTYP areal remit, the Noun Phrase Group was paying special in-depth attention to selected languages of Greater Europe, ensured especially good coverage of the full set in cross-linguistic comparisons, and was seeking to put this set in perspective by holding it against other sets (worldwide samples, including or excluding Europe, or also other areal sets).

We nonetheless remained in the business of typology. We would sometimes draw maps out of general curiosity, but such geographical involvement did not seem to us (or at any rate, me) conducive to insight of a specifically typological nature. As typologists, whose business is the discovery of co-variation, we might with equal or indeed better justification have drawn contour maps showing distributions of grammatical features by numbers of speakers, by altitude levels of the habitats of speech communities, or by average annual local rainfall – for who knows whether such extra-grammatical variables might not co-vary with grammatical ones, directly or indirectly.

Though perhaps sometimes more Eurocentric in our cross-linguistic coverage than usual, we remained aware of the need to base typological claims on STRUCTURALLY diversified samples. This is not to say that typological samples would a priori be useless unless well-balanced in areal terms. Areal diversity as such is as little guarantee of structural diversity as is genetic diversity – and structural diversity is what counts for typology. But it so happens that for many grammatical parameters the EUROTYP set, although spread over a relatively large area, is known to be seriously lacking in this respect.<sup>38</sup> Many valid implications would remain unsuspected on so unvariegated a basis; or, even worse, implications can come out as impeccably valid whose exact opposite is the worldwide rule (like that of inclusive-exclusive and a dual mutually excluding each other in European pronominal inflection, as observed in Plank's chapter in Part II).

Though instrumental in coining and spreading the term “euroversal” and other such areo-versal EUROTYP neologisms, it eluded us what theoretical or practical

value such notions could have for typology. Assuming it is valid for the intended areal domain and provided it is not valid everywhere else too (like (ii) presumably is), information like the following might conceivably be found worthy to be treasured in the great storehouse of human knowledge: for all European languages, (i) if basic word order is VSO, then there will be verbal nouns; (ii) there is a distinction of plural and singular number; (iii) actions, unlike necessarily states, are expressed verbally, hence distinct from nouns (three of the euroversals of Haarmann 1976: 105–112); (iv) in Europe, grammaticalized words for distinguishing definite and indefinite non-pronominal NPs (i.e., articles) are more frequent than anywhere else (apocryphal); (v) in Europe, plural words (as opposed to inflections and quantifiers) are less frequent than in some other areas (inferred from Dryer 1989); (vi) Northern Europe is one of the very few places, and perhaps the only one partnering Australia, where there is agreement within NPs but not at clause level (*EUROTYP Working Papers VII/23*: 11); (vii) for all Greater European languages, if personal pronouns distinguish inclusive and exclusive, then they do not inflect for dual, and vice versa (Plank in Part II of this volume). However, such truths about Europe, which could easily be multiplied, are hardly useful knowledge for typologists on duty: their truths have to be universal. More appreciative should be historians, taking stock of the current grammatical state of affairs in Europe and comparing it to earlier states, with languages appearing in this macro-area and others disappearing and with those staying on changing around their grammars in situ.

No real effort, therefore, went into elaborating upon the notion of a “typically European NP”, collecting the traits shared by the NPs of all languages in the area and by none or few outside, at least in this combination. In a companion *EUROTYP* volume such a characterization has been attempted by Rijkhoff (1998), listing such traits as the well-integrated, non-appositive structure of European NPs; their relatively clearcut major word class distinctions, with adjectives more on the nominal side; their aversion to expressing cardinality by verbs; the rarity of numeral classifiers; the existence of such subclasses as individual, collective, and mass nouns, but not that of “conceptual” nouns; the rich diversity of kinds of modifiers, and the virtually unlimited possibility of stacking them. Again, however, knowing that such traits of NPs characteristically combine in the languages of Europe has no typological surplus value. It is factual information, generalizing over two areally circumscribed subsets of languages, those of Greater Europe vs. the rest or vs. all languages including those of Europe. A priori, no further conclusions can be drawn from this. No comparisons with other areal subsets will lead typologists anywhere either. Only historical comparisons will, focusing on both grammars and places.

What behoves typologists, however, is to take note of the outcome of such comparisons and perhaps to give counsel.

There can be only three historical reasons for grammatical traits of different languages coming to be in geographical proximity: population movements, linguistic

diffusion (in the extreme case amounting to language shift), and independent developments fortuitously coinciding. If traits are universal, these will of course always be the joint possessions of all neighbours.

Roaming populations, pushed or on the move of their own free will, may enter or vacate areas, and as they bring along and retain their own languages, new contiguities or rifts will appear on maps of grammatical features. This should teach typologists caution in generalizing. What they perceive as universal or widespread may lack any inherently linguistic rationale; conceivably, what they are dealing with may be grammatical traits which happen to be shared by expansive populations, having driven others off the face of the earth, or into such marginal neighbourhoods where there was little point for them in continuing their old language or where they easily escape typological notice. Controlling typological samples in terms of known areas of expansion<sup>39</sup> is an important and long-neglected safeguard against positing laws of grammar where the law that has asserted itself was that of the jungle. In this respect maps matter for typology.

With or without peoples moving, grammatical traits (or of course lexical items) can be "borrowed" among languages whose speakers have come in contact, which usually implies areal proximity. Borrowing speakers will to some extent be bi- or multilingual; but in the extreme case of an entire language being thus borrowed, as for instance one brought in by a newly dominant élite, later generations may again be monolingual, though with certain traits of the language which their ancestors used to speak preserved as a substratum. The typological interest of such local reductions of cross-linguistic diversity in the wake of diffusion depends on the kind of traits borrowed, or also those retained as a substratum. Traits which are individually universal will be omnipresent anyhow, hence need no special arealist attention. Traits which are individually variable can be independent of others, but what typology is about are those which universally co-vary.

Now, among languages in contact plenty of traits get borrowed which are not interdependent. Surveying the lists of grammatical characteristics defining acknowledged Sprachbünde, especially those of small and medium size, very few of these areally shared, non-inherited innovations are known to be implicated in universal co-variation.<sup>40</sup> No known set of Sprachbund traits is typologically consistent. On the other hand, when one trait of two or more established as being in co-variation is getting borrowed, the other(s) would be expected to be borrowed as well – on the assumption that languages in contact are not exempt from the general (achronic or chronic) laws of language. Such concomitant borrowings are also on record, if perhaps distributed in macro- rather than micro-areal dimensions.<sup>41</sup> As to substrata on record, some of their traits are typologically rather salient and some sets of such traits are typologically rather consistent (for instance, those attributed to Afroasiatic in Celtic<sup>42</sup>), while others are typologically as random as Sprachbund traits tend to be.

The benefit of areal studies for typology would thus be that sometimes, when relevant traits are getting borrowed or are retained as a substratum, confirmation is provided of the expected, namely that co-variation shows historically in concomitant changes or retentions. It is again change (or also non-change) that is at issue, then, that is, the restructuring of grammars in the course of acquiring more than one language – not geography. Drawing maps of grammatical traits in geographical space is not the primary research that could shed light on this matter.

In seeking to clarify the relationship between typology and diachrony, chronic laws have above been distinguished from achronic ones. The former are about linguistic experience lawfully calling for different analyses in successive grammars in acquisition; the latter impose the same grammatical representations regardless of particular experiences. A real question which areally minded typologists might help to answer, in association with historical linguists and others professionally interested in the acquisition of first and further grammars, would be whether concomitant restructurings of grammars differ in substance depending on whether or not the grammar for another set of linguistic experiences (that is, for another language) is interfering. Universal constraints specific to “borrowing”, as opposed to same-language learning and all chronic in the above sense, have been suggested by Moravcsik (1978), excluding for example the borrowing of only non-nouns, or of dependents (such as adpositions) without the ordering relative to their heads. But this needs further empirical examination.

However pretty geographers' maps of linguistic structures will be to look at, and however much they reveal about population movements, grammatical diffusion, and language shifts, ultimately mental maps or brain imagings might afford typologists even more telling insights into their own particular subject matter – structural co-variation.

## Appendix:

### Further publications of the EUROTYP Noun Phrase Group

#### A. *EUROTYP Working Papers VIII/1–25.*

1. Frans Plank, Suffix copying as a mirror-image phenomenon. (February 1990.) [Published in: *Linguistics* 28: 1039–1045 (1990).]
2. Frans Plank, On the selective elaboration of nominal or pronominal inflection. (May 1990.) [Published in this volume.]
3. Greville G. Corbett, Gender and gender systems. (June 1990.) [Published in: R. E. Asher et al. (eds.), *The encyclopedia of language and linguistics*. Oxford: Pergamon Press, vol. 3, 1347–1353 (1994).]
4. Edith A. Moravcsik, Descriptors of noun-phrase-internal structure. (August 1990.)

5. Greville G. Corbett, Agreement: An overview. (September 1990.) [Published in: R. E. Asher et al. (eds.), *The encyclopedia of language and linguistics*. Oxford: Pergamon Press, vol. 1, 54–60 (1994).]
6. Frans Plank, Review of *Agreement in Natural Language*, ed. by Michael Barlow & Charles A. Ferguson, Stanford: CSLI, 1988. (October 1990.) [Published in: *Journal of Linguistics* 27: 532–542 (1991).]
7. Maria Koptjevskaja-Tamm, Action nominal constructions in the European languages. (November 1990.) [Published in this volume.]
8. Jim Hurford, An inventory of noun phrase universals: Format and specimen list. (November 1990.) [Later developed by Simon Kirby into the searchable EURO TYP Noun Phrase Universals Archive, available on the internet at: <http://www.ling.ed.ac.uk/~eurotyp/>]
9. Greville G. Corbett, The head of the noun phrase: Evidence from Russian numeral expressions. (January 1991.) [Published in: Greville G. Corbett, Norman M. Fraser, & Scott McGlashan (eds.), *Heads in grammatical theory*. Cambridge: Cambridge University Press, 11–35 (1993).]
10. Frans Plank, Inflection and derivation. (March 1991.) [Published in abridged form in: R. E. Asher et al. (eds.), *The encyclopedia of language and linguistics*. Oxford: Pergamon Press, vol. 3, 1671–1678 (1994).]
11. Frans Plank, On determiners. 1. Ellipsis and inflection; 2. Co-occurrence of possessives. (April 1991.) [Published in part as: “Possessives and the distinction between determiners and modifiers”, *Journal of Linguistics* 28: 453–468 (1992).]
12. David Gil, Universal quantifiers: A typological study. (April 1991.) [Published as part of: “Universal quantifiers and distributivity”, in: Emmon Bach, Eloise Jelinek, Angelika Kratzer, & Barbara H. Partee (eds.), *Quantification in natural languages*. Dordrecht: Kluwer, 321–362 (1995).]
13. Frans Plank, From cases to adpositions. (July 1991.) [Published in: Nicola Pantaleo (ed.), *Aspects of English diachronic linguistics*. Fasano: Schena, 17–61 (1992).]
14. Kristiina Jokinen, On the two genitives in Finnish. (July 1991.)
15. Greville G. Corbett, A typology of number systems. (March 1992.)
16. Aleksandr E. Kibrik, Defective paradigms: Number in Daghestanian. (June 1992.) [Incorporated into his chapter in this volume.]
17. Frans Plank, Advantage Albanian: Grouping in multiple attribution. (June 1992.) [Published in: Heinz Vater et al. (eds.), *Festschrift für Winfried Boeder*. Frankfurt am Main: Lang (2002).]

18. Aleksandr E. Kibrik (ed.), *The noun phrase in the Andalal dialect of Avar as spoken at Sogratl*. (May 1993.)  
 With chapters by Aleksandr Kibrik, Yakov Testelec, Sergey Tatevosov, Konstantin Kazenin, Ekaterina Bogdanova, Elena Kalinina.
19. David Gil (ed.), *Studies in number and quantification*. (December 1993.)  
 Containing:  
 Greville G. Corbett, *Systems of grammatical number in Slavonic*. [Published in: *Slavonic and East European Review* 72: 201–217 (1994).]  
 David Gil, *Conjunctive operators: Areal phenomena or semantic universals?* [Published as: “Conjunctive operators: A unified semantic analysis”, in: Peter Bosch & R. van der Sandt (eds.), *Focus and natural language processing. Volume 2: Semantics* (Working Papers of the Institute for Logic and Linguistics, Working Paper 7, IBM TR-80.94-007), 311–322 (1994).]  
 David Gil, *Some principles governing the number marking of anaphors*.  
 Geraint Wong, *The use of numbers in idiomatic expressions in Mandarin Chinese*.
20. *Conversations on noun phrases*. (April 1994.)  
 Containing:  
 David Gil and the LINGUIST List, *Numeral classifiers: An e-mail conversation*.  
 David Gil and the LINGUIST List, *Adjectives without nouns: An e-mail conversation*.  
 Frans Plank and the Extended Noun Phrase Group, *A panel on the lawfulness of the double life of the definite article*.  
 Frans Plank, Edith Moravcsik, Greville G. Corbett, Johan van der Auwera, & Wolfgang Schellinger, *On Greenberg 45, mostly*.  
 Seventh Expert, *Definite double life: An afterthought*.
21. Aleksandr E. Kibrik (ed.), *Godoberi's noun phrase*. (April 1994.) [Published as parts of: Aleksandr E. Kibrik (ed.), *Godoberi*. München: LINCOM Europa (1996).]  
 With chapters by Aleksandr E. Kibrik, Sandro V. Kodzasov, Olga Fedorova, J. Gisatullina & S. Toldova, Konstantin I. Kazenin, Sergej G. Tatevosov, Olga Fedorova & Julia Sidorenko, T. Sosenskaja.
22. *The noun phrase sketch book*. (May 1994.)  
 Containing:  
 Gianguido Manzelli, *Descriptive sketches: Italian, Albanian, Komi-Zyrian, Chuvash, Maltese, Lingala, Summary*.  
 David Gil, *Hebrew noun phrase checklist*.  
 Maria Koptjevskaja-Tamm, *Noun phrases in Swedish and Russian*.

- Igor' V. Nedjalkov, Syntactic types of Evenki noun phrases.
- Frans Plank, Teaching myself noun phrases: (Scottish) Gaelic, Samoan.
- Robert Mullally, The internal structure of the noun phrase in Scottish Gaelic.
- John R. Payne, Persian and Lithuanian noun phrases.
- Edith Moravcsik, Inflectional morphology in the Hungarian noun phrase – a typological assessment. [Published in this volume.]
23. Agreement gender number genitive &. (November 1994.)  
Containing:
- Greville G. Corbett, Types of typology, illustrated from gender systems. [Published in this volume.]
- Frans Plank, What agrees with what in what, generally speaking?
- Frans Plank, The unlikely plurals of ONE in Bavarian and Miskito.
- Frans Plank, Homonymy vs. suppletion: A riddle.
- Frans Plank & Wolfgang Schellinger, More and less trouble for Greenberg 45. [Published as: "The uneven distribution of genders over numbers: Greenberg Nos. 37 and 45", *Linguistic Typology* 1: 53–101 (1997).]
- David Gil, Genitives, number and (in)definiteness: Some data from English, Singlish, Mandarin and Malay.
- David Gil, "Everything also must grab": A unified semantic analysis for Singlish *also*. [Published as: "Singlish *also*: A unified semantic representation", in: *Proceedings, INTELEC '94, International English Language Education Conference, National and International Challenges and Responses*. Kuala Lumpur: Language Centre, Universiti Kebangsaan Malaysia, 197–210 (1995).]
24. Frans Plank (ed.), Overdetermination. (May 1995.)  
Containing:
- Frans Plank, Double articulation. [Published in this volume.]
- Kersti Börjars, Double determination in Swedish (mainly). [Published as part of: "Swedish double determination in a European typological perspective", *Nordic Journal of Linguistics* 17: 219–252 (1994).]
- Maria Koptjevskaja-Tamm, A woman of sin, a man of duty, and a hell of a mess: Non-determiner genitives in Swedish. [Published in this volume.]
- Johan van der Auwera, On double determination in Dutch, Lebanese Arabic, Swedish, and Danish.
- Edith Moravcsik, The distribution of definiteness marking in Hungarian noun phrases. [Published in this volume.]
- David Gil, Multiple (in)definiteness marking in Hebrew, Mandarin, Tagalog, Indonesian and Singlish.

David Gil, Noun-phrase constructions in Singlish: A questionnaire survey. [Published as: "Patterns of macrofunctionality in Singlish noun phrases: A questionnaire survey", in: S. L. Chelliah & W. J. de Reuse (eds.), *Papers from the Fifth Annual Meeting of the Southeast Asian Linguistics Society*. Tempe: Arizona State University, 147–182 (1998).]

25. Albert Borg & Frans Plank (eds.), *The Maltese noun phrase meets typology*. (June 1995.) [Published as: *Rivista di Linguistica* 8–1 (1996).]

Containing:

Albert Borg, *The structure of the noun phrase in Maltese*.

Manwel Mifsud, *The collective in Maltese*.

David Gil, "Collective nouns": A typological perspective.

Greville G. Corbett, *Minor number and the plurality split*.

Edward Fenech, *Functions of the dual suffix in Maltese*.

Albert Borg, *Distributive and universal quantification in Maltese*.

David Gil, *The Maltese universal quantifier: An areal-diachronic perspective*.

John R. Payne, *The syntax of Maltese cardinal numerals*.

Ray Fabri, *The construct state and the pseudo-construct state in Maltese*.

Maria Koptjevskaja-Tamm, *Possessive noun phrases in Maltese: Alienability, iconicity, and grammaticalization*.

Martin Haspelmath & Josephine Caruana, *Indefinite pronouns in Maltese*.

Frans Plank, Edith Moravcsik, & David Gil, *The Maltese article: Language-particulars and universals*.

Leon Stassen, *The switcher's paradise: Nonverbal predication in Maltese*.

- B. Frans Plank (ed.) (1995), *Double case: Agreement by Suffixaufnahme*. New York: Oxford University Press.

Containing:

Frans Plank, *(Re-)Introducing Suffixaufnahme*.

Gernot Wilhelm, *Suffixaufnahme in Hurrian and Urartian*.

Ilse Wegner, *Suffixaufnahme in Hurrian: Normal cases and special cases*.

Winfried Boeder, *Suffixaufnahme in Kartvelian*.

Aleksandr E. Kibrik, *Direct-oblique agreement of attributes in Daghestanian*.

Ol'ga Ju. Boguslavskaja, *Genitives and adjectives as attributes in Daghestanian*.

Francisco Villar, *Indo-European o-stems and feminine stems in -ī*.

Greville G. Corbett, *Slavonic's closest approach to Suffixaufnahme: The possessive adjective*.

John R. Payne, *Inflecting postpositions in Indic and Kashmiri*.

Maria Koptjevskaja-Tamm, *Possessive and relational forms in Chukchi*.



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- Maria Koptjevskaja-Tamm, Possessive noun phrases in Maltese: Alienability, iconicity, and grammaticalization.
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## Notes

1. Speaking for myself, for five very special years of EUROTYPE I am especially grateful to the late Simon Dik, Christoph Mühlberg (then with the ESF), my noun phrase friends, and those who helped to bridge the caesura afterwards. Collectively, we thank the ESF and those who initiated and guided EUROTYPE for setting us to work on noun phrases.
2. Many items have meanwhile been revised and properly published, but connoisseurs will always treasure the green-covered grey originals.
3. Follow-up work of ours will be mentioned *en passant*.

4. However elaborately samples are controlled in genetic, areal, and other non-structural terms (see for example Rijkhoff & Bakker 1998), independence in these respects obviously is no guarantee of structural diversity. But see below, Sections 3 and 4, on how diachrony and geography might relate to typology.
5. See further Corbett (1999).
6. See further Stassen (1997).
7. A more basic parameter of external grammar, seemingly trivial but typologically potent, is the NP density per clause; see Munro & Gordon (1982: Section 4.3).
8. In *EUROTYP Working Paper VII/4* (1990) Moravcsik provided an initial checklist of descriptors of NP-internal structure couched in maximally elementary terms; but putting this format into comparative practice was not always found convenient. In *EUROTYP Working Papers VII/18* (1993), 21 (1994), 22 (1994), and 25 (1995), NPs of particular languages have been described, or sketched, in this format and in others.
9. See recently Lehmann (1991) for a distinction between "nominal group" and "noun phrase" on the criterion of contiguity, suggesting that Latin has a nominal group but no NP. A nominal group supposedly behaves as a unit in terms of its external grammar – which is what is questionable with really flat, non-phrasal syntax, as found in Australia. See *Double Case*.
10. See especially Rijkhoff (1998).
11. See further Moravcsik (1993) on government.
12. See further Plank (1992).
13. This example is inspired by Tuscarora, as portrayed in Mithun Williams (1976). In fact, strong arguments for a word class of nouns in Iroquoian languages have later been given by Mithun (2000), contra Sasse (1988, 1993) and other lumpers.
14. See further Moravcsik (2000) on nouns, Anward, Moravcsik, & Stassen (1997) on elementary questions of word class distinction, and Gil (1994) for a dissenting voice concerning the universality of noun vs. non-noun or indeed whatever.
15. See now also Stassen (1997) on subclasses of adjectives, some rather nouny or verby; and Dahl & Koptjevskaja-Tamm (2001) on kin terms.
16. See further Koptjevskaja-Tamm (2001).
17. Concerning adjectival lexical fields, see further Davies, Sosenskaja, & Corbett (1999) on colour, adding a new basic term ('turquoise') to the universally permissible inventory, Plank & Plank (1995) on smell terminology, often wrongly suspected to be only derived, and Sutrop (1998) and Koptjevskaja-Tamm & Raxilina (1999) on basic and derived temperature terms.
18. See further Corbett & Mithun (1996) and Plank & Schellinger (2000) on less common numbers, the associative and the dual respectively.
19. See further Plank (1999).
20. See further Kibrik (ed.) (1999).
21. Implicational universals relating to NPs, including our own, were collected as part of our EUROTYP collaboration; see Kirby (1995). A more extensive and up to date archive of universals, likewise searchable on the internet (<http://ling.uni-konstanz.de/pages/proj/sprachbau/htm>), has since been built up at Konstanz; see Plank & Filimonova (2000) for an introduction.

22. The voluminous relevant cross-linguistic literature includes, most importantly, Hetzron (1978) and Sproat & Shih (1990). I have broached this topic in my contribution to *The Noun Phrase Sketch Book (EUROTYP Working Papers VII/22 (1994))*.
23. The independence of adjective–noun and verb–object ordering has been demonstrated by Dryer (1988).
24. And it is not obvious that this explanation would be of a functional rather than a formal nature.
25. Such analyses, drawing some inspiration from Semitic construct state constructions (Ritter 1988) and assuming heads of NPs other than nouns (it is allegedly to head positions that nouns are moving), have become standard in Romance and Celtic generative syntax since Cinque (1993), Longobardi (1994), and Rouveret (1994). An extra explanandum here is why there is Noun Fronting but no analogous Noun Backing producing (1d) from (1b); presumably, there are general principles of grammar determining the direction of such movements and possible landing sites.
26. Or also when implications go across domains, such as phonology on the one hand and morphology and syntax on the other (as surveyed in Plank 1998).
27. This conclusion seems to me ineluctable regardless of whether mental grammar is conceived of as rules, constraints, or connectionist networks.
28. This is not to deny, obviously, that it is conceivable for instances of variation to be primordial and immune to change.
29. See Plank (2001) for the early history of typology-as-byproduct-of-diachrony. Most prominently today, though often overlooked by too selective readers of the relevant half of his oeuvre (as sampled in Greenberg 1990), Greenberg's "dynamicization" of typology is in this spirit. From a contemporary grammaticalization angle this view is most radically articulated in Heine (1997), though with less emphasis that what matters is systematic CO-evolution, not systematic evolution per se. See further discussion in Plank (1999), with particular reference to morphological typology. In this volume, Plank's chapter in Part II seeks a diachronic explanation for interdependencies of nominal and pronominal inflection.
30. As this example is only intended for illustration of a general point, many details are ignored, including the indefinite articulation of mass nouns, which may align with plural or with singular count nouns (as in English and Bavarian German, respectively).
31. As objects, zero indefinite plural pronouns are more common. See Glaser (1993) on the dialectal variation in plural indefinites.
32. Though more familiar from phonology, markedness reversal is at home in syntax and morphology too; see Plank (1977).
33. Recently this has been the essence of the story of Heine (1997: Chapter 4).
34. On such ways of extending 'one' beyond singular, in Europe and elsewhere, see further my "The unlikely plurals of ONE in Bavarian and Miskito" in *EUROTYP Working Papers VII/23 (1994)*.
35. "Dedicated non-singular" because it is plural (or mass) when used on its own (e.g., *Some left*) and needs the support of *one* to be singularized (*Someone left*).
36. This insight is Joseph Greenberg's (Bell 1978: 146).
37. EUROTYP has since spawned two other such ventures surveying areas included in or

- overlapping with Greater Europe, the Circum-Baltic and the Circum-Mediterranean ones; see Dahl & Koptjevskaja-Tamm (eds.) (2001) and Cristofaro & Putzu (eds.) (2000).
38. For certain domains, such as verbal voice, even single languages can be like microcosms, comprising virtually everything that is cross-linguistically possible, if sometimes only incipiently grammaticalized. Even if this were true for NP structures too, glimpsing the possibilities of universal variation in an individual language would not be tantamount to recognizing the laws of co-variation.
  39. As in Dryer (1989b) and much subsequent work, including in particular Nichols (1992), substantiating the idea that linguistic diversity is patterned in terms of macro-areas.
  40. The Sprachbund literature is voluminous, but a good concise survey is Campbell (1996), who can certainly not be accused of giving short shrift to typologically relevant traits. Authors referring to areal studies as "areal typology" (including recently, with EUROTYP background, Ramat 1998) tend to gloss over the scarcity of such traits.
  41. Work like that by Nichols (1992) or Stassen (1997, also in this volume) points in this direction.
  42. See Gensler (1993) and Comrie (1999).

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