

Double Case

Agreement by
Suffixaufnahme

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ABBREVIATIONS

A	transitive-subject form
Abl	ablative case
Abs	absolutive case
A.Case	"associating" use of a case
Acc	accusative case
Act	actual mood
Adj	adjective; adjective marker
Adjct	adjectivizing marker
AdjP	adjective phrase
Adv	adverbial case
All	allative case
Anim	animate
Antipass	antipassive voice
Aor	aoist tense/aspect
Appr	apprehensive mood
Art	article
Ass	associative case
Attr	attribute; attributive marker
Aug	augmentative marker
Avers	aversive case
Ben	benefactive case
Carr	carrier affix
Caus	causative case; causative verb form
C.Case	"complementizing" use of a case
Class	classifier
Coll	collective
Com	comitative case (also "having" case or proprietive)
Comp	comparative degree; comparative case
Conj	conjunction
Conseq	consequential case
Const	construct state
Cont	continuous aspect
CV	connecting vowel
Dat	dative case
Dct	direct case or stem
Def	definitizing marker; definite
Dem	demonstrative pronoun or marker
Deriv	derivational marker
Des	desiderative mood

Abbreviations

Det	determiner
Dir	directional case
Ditrans	ditransitive
Don	verbal donative case
DS	different-subject form
Du	dual number
Eff	effector case
Emph	emphatic
Equ	equative case
Erg	ergative case
Ess	essive case
Excl	exclusive
Ext	extended intransitive
Fem	feminine gender
Fut	future tense
Gen	genitive case
Gen ^{gnrl}	general genitive case
Hort	hortative mood
Ill	illative case
Imp	imperative mood
Imperf	imperfect tense/aspect
Inanim	inanimate
Inch	inchoative aspect/aktionsart
Incl	inclusive
Ind	indicative mood
Indef	indefinite
Indiv	individualizing marker
Inf	infinitive
Ins	instrumental case
Intent	intensive mood
Intrans	intransitive
IObj	indirect object
Irr	irrealis mood
Lat	lative case
Lig	ligative/ligature
Loc	locative case
Masc	masculine gender
Masd	masdar
M.Case	"modal" ⁷¹ use of a case
Mid	middle voice
N	noun
Neg	negation
Neut	neuter gender
Nom	nominative case
Nomin	nominalizing marker
NP	noun phrase

Obj	object case
Obl	oblique case or stem
Oper	operative case
Ord	ordinal-numeral marker
Orient	orientational marker
Orig	origin case
P	object (patient) form
Pass	passive voice
Per	pergressive/perlative case
Perf	perfect tense/aspect
Pl	plural number
Poss	possessive pronominal marker; possessive (case or derivational) form
Postp	postposition
Pot	potential mood/tense
PP	prepositional/postpositional phrase
Pre	prepositive case
Prep	preposition
Pres	present tense
Pret	preterite tense
prim	marker of "primary" relation
Priv	privative (or "lacking") case
Pro	pronominal marker
Prom	prominence marker
Prop	propriative case
Prtcpl	participle
Purp	purposive (noun or verb) form
Qu	question marker
Quot	quotative
R	restrictivity marker
RC	root-complement
Redup	reduplication
Ref	referential article
Rel	relative-clause marker
Res	resultative nominalization
Rlt	relator (article)
Rltn	relational (case or derivational) form
S	sentence; intransitive-subject form
Sbj	subject (case)
sec	marker of "secondary" relation
Sg	singular number
Spec	specific
SS	same-subject form
Stat	stative
Subj	subjunctive mood
T.Case	"T-complementizing" use of a case

Top	topic marker
Trans	transitive
Transl	translative case
Util	utilitive case
Usit	usitative (or past-habitual) tense/aspect
V	verb
voc	vocative case
1/2/3	1st/2nd/3rd person
I/II/III/IV . . .	noun classes
	morpheme boundary (unless stated otherwise)
	clitic boundary
	components in gloss not segmented or segmentable in example (unless stated otherwise)
	Juxtaposition of category labels without intervening blank or boundary symbol (e.g. NomPl , 2Sg) indicates cumulative exponence of the respective categories.

1

(Re-)Introducing Suffixaufnahme

Frans Plank

1. *Avant-Propos*

Although not a household term (yet), Suffixaufnahme has a typological record that is astonishingly long for a rare and seemingly marginal phenomenon. This unsung record merits retracing. As will emerge from the historical narrative to follow (Section 2), the morphological and syntactic issues that Suffixaufnahme has now and then been seen to raise are not really so marginal, and indeed are issues that contemporary typology is increasingly recognizing as formidable challenges. They involve the limits on case marking and on agreement; the word-class distinction of nouns and adjectives, the difference between inflection and derivation, and the status of genitives and other possessive forms in these two respects; the nature of attribution; noun-phrase constituency and, generally, the depth or flatness of syntax; and systematic interdependencies among all kinds of further structural features. In the remaining sections the approach will be systematic rather than historical, presenting the comparative anatomy of Suffixaufnahme in broad outline, to be fleshed out in the rest of this volume.

2. A Double Case History

2.1. *A Genitive Vanishes: Bopp*

The first comparatist to take note of Suffixaufnahme, not yet so christened, was none other than Franz Bopp (1791–1876). On 11 December 1842, addressing the Berlin Academy of Sciences, Bopp saw what he could do to establish the Sanskritic pedigree, as was his custom, of Georgian and its "Iberian" relatives. Finding much that served his purpose, he was somewhat taken aback by the curious habit of Georgian genitives to add, as a rule, the case and perhaps the number ending of their governing noun, as exemplified in a few examples quoted from his source (1848: 275).¹

- (1) a. gwam-isa krist-es-isa
body-Gen Christ-Gen-Gen
'of the body of Christ'
- b. cqoba-sa m̃ter-ta-sa
attack-Dat enemy-ObIPl-Dat
'at the attack of the enemies'
- c. qeli-ta mocikul-ta-ta
hand-ObIPl apostle-ObIPl-ObIPl
'through the hands of the apostles'
- d. cinamsrbol-n-i laṣkar-ta-n-i
forerunner-Pl-Nom army-ObIPl-Pl-Nom
'the vanguard of the armies'

Bopp noted that this pattern, visible of course only when heads were not in the nominative (or absolutive) singular and thus lacking an overt ending, was peculiar to genitives following their heads rather than to those preceding them. What is here glossed as 'ObI[ique] Pl[ural]' was nothing to worry about; Indo-European too knew paradigms with such syncretic rather than specifically genitive forms.

Outlandish though it looked on the face of it, this Georgian phenomenon could upon reflection easily be squared with sound Indo-European practice. What gave initial offense was that it was a noun, of all parts of speech, that agreed with its head in case and sometimes also in number; in the **Boppian** universe such agreement behavior was rather something for adjectives to engage in. But Bopp was not at a loss for ways and means of Indo-Europeanizing the Georgian Sprachgeist: he declared the attributive nouns agreeing in case (and number) really to be possessive adjectives, and the genitive accordingly to be derivational rather than inflectional.

Bopp did not bother to adduce any independent evidence in support of the allegedly adjectival nature of agreeing genitives. It was not inconsistent with his adjective theory that agreeing genitives literally copied the actual endings of their heads, whereas in Indo-European languages adjectival agreement inflection could be formally distinct from the inflection of the corresponding nouns; in Georgian adjectives inflected just like nouns in the first place. But when Bopp went on to observe that attributive adjectives in Georgian could either precede or follow their heads, agreeing with them or failing to inflect in either position, he might have remembered that genitives, by contrast, tended not to agree when prenominal and to agree when postnominal. Another unresolved issue was whether the genitive was also supposed to be deriving adjectives from nouns in other than attributive functions, as in the case of the governing noun in (1a), differing in this respect from other cases used to encode arguments of verbs or adpositions.

Disregarding such difficulties, the adjective theory enabled Bopp, who was wont to adopt a diachronic perspective, to assume that Georgian-style attribu-

tion could have evolved from Indo-European origins, both structurally and formally (compare the Sanskrit genitive desinence *-sya* with Georgian *-(i)sa!*), and that it had stayed within the limits of what was Indo-Europeanly possible. The scenario that he envisaged had genitival case inflection reinterpreted as a suffix deriving possessive adjectives from nouns, after which metamorphosis these attributes could agree in case and number with their preceding head nouns. What Georgian had lost in the process, at least in postnominal position, were straight inflectional genetives, something retained by the offspring of Sanskrit.

It was no concern of Bopp's whether the fate of the genitive in Georgian was perhaps tied up with any other twists of the Iberian branch as it diverged from the Sanskritic stem. Systematic interdependencies of structural traits were something for typologists to ponder—only for quite a while there was none to ponder over case-agreeing genitives in particular. And then came Finck.

2.2. The Group-inflecting **Haupttyp**: Finck

Throughout his life, cut short by a heart attack (or, as rumor had it, a duel), Franz Nikolaus Finck (1867–1910) appears to have been torn between the prosaic and the poetic, as if unable to reconcile his businessman father's stern realism with his beloved mother's genteel sensibilities and fancies.

Young Finck pursued a military career, but after five years of active service he abandoned it to publish poetry and a plea for a new ethics. Taking up jurisprudence at university, he soon turned to the study of language. He trained as an Indo-Europeanist and specialized in historical Balto-Slavic accentology and Armenian philology, but he would not be confined to what was tried and tested, ancient and Aryan. He went on to write grammars of Aran Irish, Eastern Armenian, and the German and Armenian dialects of Romany, some including dictionaries and all researched in the field, as well as a batch of articles on the syntax of Samoan, Greenlandic, Georgian and other Caucasian tongues, and to take stock of the genetic affiliations within the Bantu and the Polynesian families, and indeed globally—all within a decade. Wide though they ranged, his descriptive and historical-comparative productions were impeccably sober, conscientious, and austere. At the same time, his most cherished ambition was to advance typology, and he was not the first nor the last seeker of system to succumb to the temptation of giving free rein to his imagination and indeed prejudice, tarnishing the reputation of the typological enterprise as well as his own.

Finck's frame of reference here was the Humboldtian tradition, especially as lately developed in Franz Misteli's revision of Heymann Steinthal's *Charakteristik der hauptsächlichen Typen des Sprachbaues* (1860/1893) and in James Byrne's awesomely (or awfully) idiosyncratic *General Principles of the Structure of Language* (1885/1892). Notably in his *Der deutsche sprachbau als ausdruck deutscher weltanschauung* (1899), extolling his native *sprachbau* and *weltanschauung* to the skies, Finck came up with a grand system of all kinds of

structural traits, including most importantly the subjectivity of the verb,² that were supposedly motivated by racial temperaments and other psychological predispositions to do with the dominance of cognition and sensation over emotion and with mental excitability. However, the last typological, or “characterological,” work that he was able to complete saw him return from such wild and sometimes ludicrous speculation to paying regard to plain structural facts in their own right, albeit facts selected a trifle impressionistically.³

Die Haupttypen des Sprachbaus (1910), only about 150 pages long, offered descriptive sketches of eight living languages, intended to represent the gamut of structural types that could be distinguished in Finck's classificatory scheme, based on the mental operations of analysis and synthesis. In terminology partly reminiscent of Steinthal and Misteli, the eight types were referred to as root-isolating, incorporating, juxtaposing (anreihend), subordinating, stem-isolating, root-inflecting, stem-inflecting, and group-inflecting; Mandarin Chinese, Greenlandic Eskimo, Subya (South Western Bantu), Turkish (Osmanli), Samoan, Egyptian Arabic, Modern Greek (Dhimótiki), and Georgian were chosen as their respective representatives on account of their supposed typological purity.

In light of the mental operation of analysis, the first of Finck's two overall dimensions of variation, typological diversity was a question of the extent to which the perceptual and cognitive complexes expressed by sentences were analytically fragmented, with words being regarded as the units expressing the fragments. The words of Greenlandic and Subya accordingly represented the opposite extremes of maximal and minimal semantic comprehensiveness, with those of Turkish, Georgian, Arabic, Mandarin (representing the ideal state), Greek, and Samoan being increasingly fragmentary intermediates. In regard to synthesis, the second typological dimension, the differences involved the extent to which the basic fragments were related to one another in their recombination, as manifested by overt connective forms (whose variety supplied Finck's preferred names for his eight types). Finck's most isolating specimens were Mandarin and—a little less so, owing to lexical stem formatives—Samoan; Turkish, Greenlandic, and Subya were intermediate, intimating syntagmatic interrelatedness by relatively loosely-attached grammatical morphology; and the apogee of grammaticalized interrelating was reached with Arabic, Greek, and Georgian, where inflections were tightly fused with roots, stems, and word-groups (i.e., phrases), respectively.

However plausible or otherwise, this two-pronged typology of Finck's was the first to recognize, if not unequivocally, group-inflection as the hallmark of a separate type. Owing to Finck's choice of Georgian as the language illustrating this type, the structural trait that he named *Suffixaufnahme* (1910: 141)⁴ was destined to make its reappearance, this time within the typological rather than the historical-comparative discourse.⁵

Focusing on the traits that were allegedly most characteristic, Finck was struck by what seemed to him a most peculiar mode of encoding attributive constructions that had been prevalent in Georgian up to the eighteenth century but had since been declining. The short illustrative narrative which fol-

lowed his grammar sketch actually provided an appropriate example (with the relevant part in boldface)?

- (2) ra *ṭurpa prinvelia*, *čamoizaxa ert-ma bavšv-ta-gan-ma*
what wonderful bird=is, exclaimed one-Erg child-OblP1-of-Erg
' "What a wonderful bird!" exclaimed one of the children'

As in some of **Bopp's** examples, the attributive noun here carried a cumulative case and number suffix, *-ta* Oblique Plural, comparable to an Indo-European-style genitive plural, which might have seemed to suffice to identify this noun as an attribute (although perhaps not quite unmistakably, owing to its syncretic nature as a general oblique rather than a specifically genitive form). The attribute further carried an enclitic postposition with ablative meaning, *gan*, clearing up all doubts about the grammatical relation borne by its host. Remarkably, however, the attribute further carried an ergative case suffix, *-ma*, which was not really justified by the grammatical relation of the attribute itself, since the ergative was normally reserved for transitive and some intransitive subjects. **Of** course the ergative was relationally appropriate for the head of this attribute, *ert*, functioning as subject of the verb 'exclaim'; and *ert* did indeed show ergative marking. The ergative suffix on the attribute thus could only be made sense of as being a copy of that found on the head, repeating on the attributive constituent the relational marking of the phrase containing it and located on the head of that phrase. Finck suggested the term "Suffixaufnahme" for such uniform case marking on heads and attributive nouns already carrying genitival and perhaps further attributive relational marking.

What Finck did not care to comment on were two further examples in his sample text where Suffixaufnahme might have been expected to apply but did not:

- (3) *ert-s didi kac-is ezo-ši*
one-Dat great man-Gen yard-Loc
'inside a yard of a rich man'
- (4) *saxl-is patron-ma*
house-Gen mistress-Erg
'the mistress of the house'

In the first, the relational marker of the head, *-ši(na)*, was arguably still more an enclitic postposition than a case suffix (although it governed the dative only on the numeral, or indefinite article, with the noun itself appearing in the bare stem form, as with genuine case suffixes), and its at least partly preserved postpositional status perhaps exempted it from Aufnahme. In the second, however, the head carried what was unquestionably a genuine case, and the very same as in (2), but the attribute's genitive here was not followed by a copy of the head's ergative.

Attentive readers could thus have inferred that Suffixaufnahme was merely optional at the stage of Georgian illustrated by Finck's narrative, with this originally Old Georgian pattern perhaps already in a state of decline. They were in no position, however, to be certain whether genitives with and without copies of the case of their heads were alternating randomly or systematically, perhaps depending on the relative order of head and attribute, as Franz Bopp had observed some time before.

Remarkable though Suffixaufnahme seemed to Finck, he did not think it strange that he encountered it in Georgian, of all languages. His reason was not that he considered Georgian to be at root Indo-European; being group-inflecting, Georgian was precisely the type of language in which to expect it, if anywhere. This at least was Finck's conviction.

Apparently the extent of analytic fragmentation was not thought to be a direct influence on Suffixaufnahme. It was not the parameter of analysis but that of synthesis, the manner of recombining basic units, that would or would not create the conditions for Suffixaufnahme to blossom, however modestly and transiently. Parts that were syntagmatically combined had to be overtly interrelated, which ruled out the isolating types as possible Suffixaufnahme territory. For the three types where parts were interrelated by more or less loosely attached grammatical morphology (subordinating, incorporating, or juxtaposing), it would not have been logically impossible to connect heads and nominal attributes in the manner of Suffixaufnahme. Indeed, all three of Finck's type specimens (Turkish, Greenlandic, and Subya) did show agreement of one kind or another, most extensively the Bantu representative; two knew morphological cases, including an attributive one (Subya did not); all distinguished, at least rudimentarily, a word class of nouns (not very well delimited in Turkish, though, and subsuming what was elsewhere expressed by adjectives in Subya); and all had attributive constructions (with those of Subya rather reminding Finck of appositions). The three inflecting types, fusing grammatical relationship indicators more tightly with basic building blocks, likewise met all these logical conditions; but in Finck's opinion, it was the type that had word-groups or phrases rather than roots or stems as the units interrelated by inflections that was alone destined to let Suffixaufnahme develop.

His reasoning here was not exactly straightforward. The essence of group-inflection was that the elements which formally attracted inflections did so by virtue of being part of a potentially complex group of meaningful elements, which in its entirety was to be syntagmatically interrelated with other such groups by the inflections. By implication, entire groups ought to be inflected only once, rather than inflections being distributed over their components by agreement; but this implication was not highlighted by Finck. What he emphasized instead was that, unlike the situation in root- and stem-inflection where roots or stems plus inflections were tightly-knit words secondarily also forming phrases, in group-inflection words were at best embryonic units, with the groups themselves as the morphosyntactic primes. The internal cohesion of such groups was not at all tight, permitting diverse interpolations. Suffix-

aufnahme, then, was but one manifestation of this looseness of phrase-internal combination. In (2), the connection between the two parts of the subject phrase, *ert* 'one' and *bavšv-ṭa-gan* 'of the children', was sufficiently loose for both of them to merit being related to the rest of the clause individually, by receiving identical subject case marking. Further supposed manifestations were (a) the ability of nouns in the genitive to take further case marking and to function as NPs in their own right (as in *ṭḡav-isa-s* hide-Gen-Dat 'from that of the [horse's] hide'); (b) the ongoing process of attaching loose relational appendages more tightly, i.e., of transforming postpositions into case suffixes (as exemplified by *-gan* and *-ši(na)* in (2) and (3)); and (c) the possibility of separating case suffixes from noun bases by a plural suffix (with Georgian, however, cumulating rather than separating the expression of plural and of a subset of its cases).

Finck's justification of such interdependencies was, to say the least, less than conclusive. On the more obvious interpretation of the principle of group-inflection, Georgian was not its purest possible representative, insofar as adjectives and articles could agree with their nouns in case and number, with more than one component of NPs thus inflecting for these categories. Subordinating Turkish would have fitted the bill much better, as can hardly have escaped Finck. In fact, Suffixaufnahme itself is counter to this principle thus interpreted, since both the head and the attributive noun are case-marked for the relation of what would seem to constitute one phrase; (2'), with subject marking only on the final constituent, in this case a genitive, would correspond better to our current notion of phrase-inflection.

- (2') . . . *čamoḡaxa ert bavšv-ṭa-ma*
 . . . exclaimed one child-ObIP1-Erg

Something else must have been foremost in Finck's mind, then, when he claimed Suffixaufnahme for the group-inflecting type. He appears to have assumed that what ostensibly was a single if complex NP really was not one in Georgian, at least not in the sense of an attributive construction as close-knit as those of root- or stem-inflecting types. If what seemed to be attributive nouns, and perhaps also adjectives and determiners, really formed phrases and indeed referential units of their own that were either independently related to the rest of the clause in essentially the same way as their coreferential nouns were, or were in some kind of loose apposition with these nouns, it was not surprising that they took the same relational marking as these nouns themselves. This made Suffixaufnahme, and perhaps other repeated relational marking in Georgian, less an instance of genuine case agreement in root- or stem-inflecting style than of the same case more or less independently assigned twice.

This reading of Finck raises the question of what typological significance Suffixaufnahme can have had for him. With what other structural traits could it reasonably be supposed to have been linked?

The identical case marking of different but referentially-related phrases

that was termed *Suffixaufnahme* presupposed that nominal phrases had what might be called a flat or nonconfigurational syntax; and such syntax, rather than phrase-inflection in the more obvious sense, apparently seemed to Finck to be a pervasive characteristic of Georgian.' It was a characteristic, though, that he had also perceived in juxtaposing Subya. On Finck's implicit assumptions, this Bantu language might have shown *Suffixaufnahme* too, if only it had been endowed with cases.

Finck's conjecture that hypostasis formations—i.e., nouns in the genitive undergoing further case marking and acting as independent NPs—were a trait akin to *Suffixaufnahme*, differing from it in that there is no overt NP with identical case marking present (schematically '[inside a yard] inside that of a rich man'), was not implausible in view of his idea about the independence of phrases undergoing *Suffixaufnahme*. He probably assumed that *Suffixaufnahme* implies the possibility of hypostasis and vice versa.

Finck's two further correlates of *Suffixaufnahme*—relational markers with a status intermediate between those of postpositions and case suffixes, and a predominance of suffixes not cumulating case with number—were not predicated on the syntactic relationship between nominal phrases. Instead, they were regarded as indicators of the looseness of the connection between inflected elements and their inflections. These two traits, therefore, ought to have been considered characteristics setting apart the subordinating, incorporating, and juxtaposing types as a group from the inflecting types, and they actually were so treated in some of Finck's relevant sketches. But no conclusions were drawn from the fact that of the three inflecting specimens, it was group-inflecting Georgian that resembled these non-inflecting or agglutinative types most closely in this respect. Finck's scheme effectively had no principled reasons to offer as to why *Suffixaufnahme* should have anything to do with agglutinative morphology—implying it, or being implied by it, or both.

In Finck's eight grammar sketches a host of further structural traits made their appearance—in that of Georgian, for example, the availability of distinct syntactic frames for verbs of action and of experience, occasioning a partly ergative alignment of core actants.⁸ Some such traits were only tenuously related to the basic parameters of analysis and synthesis, and the characterological method in general was not one to encourage the rigorous examination of the alleged clustering of traits, however plausible, across a wide range of languages. As for *Suffixaufnahme*, if it was interdependent with anything, as was Finck's tenet, this had not yet been established by induction. As far as *Die Haupttypen des Sprachbaus* was concerned, *Suffixaufnahme* might at worst have been a curiosity unique to (Old) Georgian, not systematically related to anything else and without any wider significance.

Strangely, the adjective theory of so distinguished a predecessor as Franz Bopp was passed over in complete silence. Perhaps it impressed Finck as gratuitously circular. More likely it was inconsistent with his alternative way of explaining away attributive nouns agreeing in case (and number) with their heads through his theory of group-inflection and flat syntax. If *Suffixauf-*

nahme was an ordinary instance of attributive adjectives agreeing with their **head** nouns, the stem- and perhaps the root-inflecting types would have been its natural home, not group-inflecting (Old) Georgian.

Besides, Finck knew how to tell an adjective from a noun, didn't he? In Romany, whose German dialect he spoke reasonably well and described so that others would be able to learn it too (few did, through no fault of Finck's), the attributive forms of nouns were adjectives (1903: 17, 37), like those of Old Georgian in Bopp's view. For Finck, the suffix *-kər-/gər-* added to oblique stems of nouns was derivational rather than being a genitive case inflection, although this was how it had often been labeled. The adjectives derived by means of this suffix agreed with their heads in gender (compare (5a) and (5b)), number (compare (5b) and (5c)), and directness/obliqueness (compare (5a) and (5d)), as did regular adjectives.

- (5) a. i tšāw-és-kər-i dai
 the=DctSgFem boy_{Masc}-OblSg-Adjct-DctSgFem mother,,, (NomSg)
 'the boy's mother'
- b. o tšāw-és-kər-o dad
 the=DctSgMasc boy_{Masc}-OblSg-Adjct-DctSgMasc father,,, (NomSg)
 'the boy's father'
- c. i tšāw-én-gər-e dad-a
 the=DctPlMasc boy_{Masc}-OblPl-Adjct-DctPlMasc father_{Masc}-DctPl
 'the boy's fathers' (also 'the boys'/children's fathers', see below)
- d. i tšāw-és-kər-a dáj-a
 the=OblSgFem boy_{Masc}-OblSg-Adjct-DctSgFem mother_{Fem}-OblSg
 'the boy's mother' (object)

But, although Finck did not elaborate any more than Bopp had done, the fact that these attributes agreed with their heads presumably was not his only reason for being so categorical about their not being nouns in the genitive. Independent evidence was provided by definite articles: they belonged with the head nouns, with which they agreed, subject to certain neutralizations, not with the attributes, despite the definiteness of these (or so Finck's translations of his examples suggested); and if the attributes had been genitives, one might have expected them to definitize their heads (as in the translations), rendering definite articles superfluous. Moreover, unlike nouns, such attributes could not be modified by an adjective in regular syntactic construction; instead, modifying adjectives were, in invariable form, incorporated by them as the first part of compounds (1903: 37):

- (6) a. o bār-o tšáwo
 the=DctSgMasc big-DctSgMasc boy,,, (NomSg)
 'the big boy'

- b. i bāre-tšāw-és-kər-i dai
 the=DctSgFem big-boy_M,,-OblSg-Adjct-DctSgFem mother,,,
 'the big boy's mother'

On the other hand, was Finck not struck by the formal parallelism between purportedly derivational *-kər-/-gər-* and the dative, ablative, instrumental, and prepositional cases? Like denominal attributes, they were all formed from singular or plural oblique stems (cf. dative *tšāw-és-ke*, *tšāw-én-ge*). Moreover, like these case-inflected nouns, and unlike denominal adjectives in languages such as German which could merely agree in number, the denominal attributes could distinguish inherent number by virtue of separate oblique suffixes for singular and plural—at least when their heads were singular. Thus, compare (5a) with (7), where agreement number is the same (singular, final suffix), but inherent number differs.

- (7) i tšāw-én-gər-i dai
 the=DctSgFem boy-OblPl-Adjct-DctSgFem mother,,, (NomSg)
 'the boys'/children's mother'

The limitation of inherent number distinction was that with plural heads the oblique suffix of the attribute was obligatorily plural (1903: 27), as seen in (5c), where one might have expected the contrastive singular form *tšāw-és-kər-e*.⁹

In the German dialect of Romany, as codified by Finck and taking into account only the information provided in Finck's grammar, the distinction between an adjective and a genitival noun thus was not quite as *clearcut* as Finck (and Bopp) would have it. Plainly, attributes in *-kər-/-gər-* shared some properties with bona fide adjectives, but also at least two (or one and a half) with what seemed to be case-inflected nouns. One might have wished to know which party they aligned with on further criteria such as compatibility with the indefinite article and with possessive, demonstrative, and interrogative pronouns; but alas, Finck did not tell us how to say 'a boy's mother' or 'my/this/which boy's mother' in German Romany. On the evidence that he had and shared with us, German Romany would have had to be acknowledged as showing *Suffixaufnahme* at least to a degree—to the degree that case-agreeing attributes in *-kər-/-gər-* were not adjectives but nouns.

So, was German Romany perhaps also group-inflecting to a degree? Finck's grammar was strictly off limits to any such typologizing, but the impression one gets is that he would have classed this exile from India as stem-inflecting. There was no mention of morphological marking accruing to whole phrases rather than to words individually, nor of flat, appositive syntax. However, his supposed correlates of *Suffixaufnahme* in particular were indeed there. First, case suffixes were not always easily distinguishable from postpositions. There was the contrast of direct or basic forms (functioning as subjects and, in the case of inanimates, also as objects) and oblique stems (the object form for animates), and there was a contrast of four cases that all

took oblique stems as base. Given two such paradigmatic contrasts and the syntagmatic combination of forms from the two sets, the difference here might have passed for one between two cases and four postpositions. Second, relational marking was only cumulated with number within the direct-oblique system (*tšā* w-o DctSg, *tšā* w-es OblSg, *tšā* w-e DctPl, *tšā* w-en OblPl); the four other cases (or postpositions or ex-postpositions) were not bound up with number marking, this being handled by the oblique suffixes obligatorily preceding them. Third, attributive forms in *-kār-/gār-* could occur as independent NPs, taking further case inflection, either within syntactic contexts sanctioning the ellipsis of heads or otherwise to create new lexical items, such as *wast-és-kār-o* 'the one of the hand, i.e. glove', *graj-én-gār-o* 'the one of the horses, i.e. horse-dealer', *mas-és/én-k/gār-o* 'the one of the meat, i.e. butcher', and virtually all other occupational terms.

2.3. The Spread of Suffixaufnahme: Bork I, Bork II

Followers of Franz Nikolaus Finck in his interpretation of Suffixaufnahme might have been expected to keep their eyes peeled for further specimens of group-inflection so as to be able to ascertain that it was indeed a characteristic of this type rather than being uniquely (Old) Georgian. Die Haupttypen des *Sprachbaus* would have been of little help as a guide, though, giving no indication at all where else to look.

However, while Finck's book was still in the making, emerging from lectures given at the universities of Marburg (over ten years prior to publication, according to the preface) and Berlin (since 1903), the incidence of Suffixaufnahme-like patterns had in fact already been shown to be higher, beyond Romany. In May 1905 the *Orientalistische Literatur-Zeitung* carried a short notice by Ferdinand Bork (1871–1962), pointing to affinities between the two groups of languages in which the schoolteacher from Königsberg was specializing in his spare time, Caucasian and Ancient Near Eastern.¹⁰ Chief among these was the curiosity that Finck was to call, or was already calling, Suffixaufnahme.

Bork's point of departure was Elamite (spoken until the first century CE in the Luristan and Khuzistan areas of today's Iran, of no known affiliation—but Bork knew better), whose genitive had been claimed to have an almost adjective-like character. Given an areal or genetic propensity for adjectival rather than nominal attribution, it would only be natural, in languages richer in cases than Elamite (where the genitive, if it was a case, was a loner), for attributive genitives to be turned into real adjectives by the copying of endings from their heads. Far from merely speculating, Bork could cite examples. In the language preserved in the Mittani Letter of the second millennium BCE and originally spoken in northern Mesopotamia (but the Hurrian dominions at times extended far into southeastern Anatolia, northern Syria, and also eastward), appropriate passages such as (8) had recently been deciphered in which an attribute's genitive suffix and a "lengthening syllable" *-ne* were followed by a copy of the head's genitive.¹¹

- (8) Immoria-ve KUR Mizirre-ve-ne-ve evri-ve
 Immoria-Gen land Egypt-Gen-ne-Genlord-Gen
 'of Immoria, of the land of Egypt's lord'

For Hittite and Luwian of Anatolia, both Indo-European (not necessarily for Bork, though), analogous patterns had allegedly been demonstrated beyond doubt. (Some doubts rearose later.) Moving north, Bork did not neglect Old Georgian, where what had been called *Suffixanreihung* ("suffix-stringing") in orientalist circles was so exuberant as to occur repeatedly on the last, though not on the middle, of a series of attributes:

- (9) *klite-n-i* *sasupevel-isa* *ca-ta-jsa-n-i*
 key-P1-Nom kingdom-Gen heaven-OblPl-Gen-P1-Nom
 '(the) keys of the kingdom of (the) heavens'

Even postpositions on their way toward casehood, such as *gan* with ablative meaning and governing the genitive, could be resumed on attributes, although not in the form of a true copy; rather, they were substituted for by the dative, originally a general local case and perhaps also a source of genitive *-isa*:

- (10) *pir-isa-gan* *uymrto-ta-sa*
 face-Gen-in infidel-OblPl-Dat
 'from the face of the infidels'

Concerning Tsakhur, a member of Lezgian, the southernmost branch of Northeast Caucasian, Bork had specialist information that attributive genitives had formerly copied the plural suffix of their heads in like manner, with the examples that he had seen lacking case marking on heads:

- (11) *jak-bi* *dekhk-in-bi*
 axe-P1 father-GenSg-Pl
 'the axes of the father'

Some years later, in a brief sequel to his notice, Bork (1913) drew attention also to Bats, a member of Northeast (or North-Central) Caucasian but spoken in the South Caucasian area, which according to his source¹² likewise permitted attributive genitives and ablatives to resume the cases of their preceding heads, either directly or after adjectivalization by means of *-čō*:

- (12) a. *bakhe-v th̃e* *dad* *Daivth-e-v*
 mouth-Instructiveour father David-Gen-Instructive
 'through the mouth of our father David'
 (Daivthe being the genitive of Davith)
 b. *chana-v* *bhestak-re-Eo-v*
 one-Instructive warrior-Abl-Adjct-Instructive
 'through one of the warriors'

Bork now also announced the discovery of such agreement in Elamite.

Thus Suffixaufnahme could no longer be presumed unique to (Old) Georgian. According to Bork, its spread was not random but areally defined, extending (a) to the Caucasus, especially in the south but including more Caucasian languages than merely the Kartvel ones, and (b) the Ancient Near East, especially around Mesopotamia and Anatolia, including what by latter-day standards were two genetic groups (Hurrian-Urartian, Indo-European **Anatolian**) plus one isolate (Elamite). It represented a major affinity between what Bork termed the "Caucasian" and "Hittite clusters" (Sprachkreise), but whether it was due to common origin or to diffusion was best left undecided.

Although Bork introduced Suffixaufnahme as an ostensibly weird and wonderful pattern, he explained it as, in principle, something quite ordinary. Genitival attributes agreeing in case and/or number with their governing nouns were genuine adjectives; if anything was out of the ordinary, it was that there were no two kinds of attributive constituents coexisting. It was only a few days before writing the sequel on Bats that Bork discovered that in this he was concurring with Bopp.

Now, if Bork's story was about straightforward adjective agreement, one wonders why he found it worth telling. Agreeing attributive adjectives were nothing peculiar to the Caucasian and "Hittite" clusters, and he could have concluded with Bopp that what he was dealing with were natural developments of hard-core Indo-European. In fact, unlike Bopp, Bork did not speculate about the reanalysis of genitive inflection as denominal derivation. What he regarded as crucial was a deep-rooted need in the Caucasian and "Hittite" clusters overtly to relate the rectum to the *regens* (1905: 185); but he had no reasons to offer for the special urgency of this need in these clusters. In principle he could have done without the adjective theory altogether. He would only have had to abandon the axiom that adjectives were the only words ever able to agree in case and/or number with nouns. If the need of the old Caucasians and "Hittites" to relate the rectum to the *regens* was really so urgent, why should they have bothered which word class a rectum happened to belong to? After all, so far as Bork knew, only in Bats could genitives be manifestly adjectivalized before agreeing.

In actual fact, Bork tacitly abandoned the adjective theory even before his discovery that Bopp had anticipated him. Now borrowing his terms from Heinrich Winkler, especially from his demonstration that Caucasian was morphosyntactically special vis-a-vis other eastern languages (1896), he characterized the sentences of Hurrian in the first thorough interpretation of the Mittani Letter (1909) as agglomerations of essentially autonomous parts, loosely and non-obligatorily related to one another by the resumption of suffixes. At the heart of this essentially appositive mode of syntax were predicates which were not really verbal but participial (or adjectival or nominal), which were indifferent to any distinction of verbal voices, which did not really establish a relational frame in the sense of valencies to be filled by nominals in particular verb-determined syntactic relations, and which accordingly did not establish a clear contrast between complements (subject, object) and circum-

stances. With predicates failing inherently to bind any nominals, these needed to be indicated on the predicate by pronominal elements. And this technique of having elements on a phrase that pointed to its partner, establishing dependencies where there was mere juxtaposition, was generalized to all syntactic levels. Whether pronominal or otherwise, affixes carried by one constituent were most conveniently used for such pointing; they only needed to be repeated on the phrase that was to be related to the original carrier phrase. An instance of this were nominal groups in juxtaposition, one denoting the possessed and the other the possessor, where the latter could be bracketed with the former by simply resuming its suffixes. Despite its own relational marking, the possessor itself was not inherently related to the possessed as its attribute; it was syntactically independent like all phrases, but it took some general locative (rather than specifically genitive) marker roughly reflecting its semantic contribution to the whole clause—schematically 'the roof, that on the house' rather than 'the roof of the house'.

The fullest statement of Winkler's own relational typology had actually been given in his *Zur sprachgeschichte* (1887). In the chapter on adnominal constructions Winkler (1887: 245–274) distinguished two functions of overt marking: to bind two nominals to one another, and to identify their mutual relationship as one of possession or more generally mere relatedness. He further distinguished the syntactic relationships thus marked as ones of subordination or of loosely appositive or explicative juxtaposition. In the latter case—schematically 'the house, this one, (of) the king' or 'the lion, that is, his tail'—there was not, strictly speaking, an adnominal relation between the two nominals concerned, since syntactically they were of the same rank; their overt encoding, if any other than plain sequence, was accordingly entrusted to binding rather than relationship-identifying elements. It was demonstrative elements that typically served as such juxtapositional binders, often indiscriminately binding nominals as well as adjectives and relative clauses. The genitive case was the prototypical pure relationship-identifier; but subordination could also be encoded, if less purely, by cross-referential (possessive) pronominals linking the possessor or return with its following *regens*. Diachronically, subordination could develop from juxtaposition, and genitives in particular could evolve from demonstrative binders, from expressions of local relations, or from full words designating 'property'. Genitives could in turn be reinterpreted as derivational, changing the word class of nouns to be related to a head; or they could be lost for phonetic or other reasons, heralding a return to the juxtapositional stage. According to Winkler, Africa and Melanesia, Polynesia, and Malaya were domains of juxtaposition, and most of Eurasia and the Americas of adnominal subordination. Australia struck him as special insofar as there was a genitive, suggesting adnominal subordination, but this genitive seemed to be formed from locative cases, which were a dominant trait in the generally appositive syntax of Australian languages.

Suffixaufnahme might have put him in a dilemma: the resumption of case and perhaps other marking was an obvious instance of binding, pointing to loose juxtaposition; but the resuming nominals were in the genitive, like

attributes in tight subordination. No wonder Winkler did not recognize a Suffixaufnahme when he saw one: double genitives in Old Georgian, one resumed from the possession, were mistaken by him for instances of emphatic suffix iteration ('of the man, yes indeed, of the man'), supposedly underlining the identity of the possessor (Winkler 1907). Encountering Suffixaufnahme in the Caucasus and the Near East, and (generally) recognizing it for what it was, Winkler's acquaintance Bork allayed his uneasiness about such contradictorily motivated double marking by seizing on Winkler's Australian speculations about the primarily local rather than strictly attributive role of these remote genitives.

Bork's new Winklerian rationale behind the Mittanians' need to relate by means of identical case and perhaps other marking what ostensibly were rectum and *regens*, thus, was quite un-Boppian but reminiscent of Finck. There was no more mention of suffix-resuming genitival attributes being possessive adjectives (the possible product of metamorphosis from genitives in Winkler's scheme, presupposing subordinative attribution); in this type of language, strictly speaking, there was no tight syntactic relation of attribution in the first place, nor was there a genuine genitive, and what seemed to be rectum and *regens* were more or less independent juxtaposed phrases in need of overt bracketing.

Subsequently Bork did become aware of Finck's Haupttypen, and he immediately endorsed the notion of group-inflection. It was on the grounds of their being predominantly group-inflecting that Bork, following in Winkler's footsteps, included virtually all Caucasian languages and those of the Ancient Near East, and also Basque and perhaps other ancient languages between Mesopotamia and the Gulf of Biscay, in one "Caucasian" family, conceding that it was perhaps the result of a mixture of two older families, his former "clusters." Suffixaufnahme was the grammatical key fossil of Bork's "Caucasian" (1924: 174) and had already proven widespread throughout its several branches, although on different premises. Conveniently omitting Basque, Bork (1924: 174) confirmed Suffixaufnahme for Elamite and further added Sumerian on the evidence of examples such as these, respectively:

- (13) puhu-ri sijan Inšušinak-mi-ra
 issue-Def_{person} temple Inšušinak-Def_{thing}-Def_{person}
 'the issue of the temple of Inšušinak'
- (14) é^dNin Girsu-k-ak-e
 house lord Girsu-Gen-Gen-Dem
 'this house of the lord of Girsu'

According to Bork, nouns in Elamite (13) had different definite suffixes for persons (-ri/-ra) and things (-me/-mi, omissible from the noun itself), which were resumed by nouns, or at least by the last in a sequence of nouns, to be bracketed with a definite person or thing designation; thus, -mi and -ra on

Inšušinak pointed to a thing and a person to which this name was to be related.¹³ What happened in Sumerian (14) was that the genitive intended to relate the whole phrase *4Nin* Girsu-k to *é* was not placed after its core member, *4Nin*, but after this entire phrase, following upon the primary genitive of *Girsu*. Although it was in the spirit of group-inflection (recall (2') above), this Sumerian pattern was in fact not identical to Suffixaufnahme in the Old Georgian or Hurrian sense because there was no agreement: the genitive of *4Nin* was only marked once, phrase-finally, rather than on both constituents to be bracketed (*4Nin-ak* Girsu-k-ak). Bork glossed over this difference, offering "suffix-accumulation" (*Suffixhäufung*) as a term supposedly equivalent to Finck's Suffixaufnahme. Elamite Suffixaufnahme conformed to Finck's pattern, except that the suffixes resumed were not suffixes of case (and number).

Although Bork would occasionally observe that group-inflection was like pre-agglutination, with affixes not yet glued to their hosts firmly enough to resist being played around with, and that appositional clause structures required the incorporation of pronominals into the predicate, the relationship of his group-inflecting "Caucasian" to the agglutinative (or, in Finck's terminology, subordinating) and the incorporating types did not come up for discussion. One presumes he would have been surprised to encounter the key fossil of "Caucasian" anywhere else except between Mesopotamia and the Gulf of Biscay. Perhaps he would not have been surprised at the Roma practicing Suffixaufnahme to a degree, since they might have picked it up, incompletely, during their wanderings.

2.4. *Miscegenation: Bourgeois*

For Henri Bourgeois of Brussels, who does not figure in any history of linguistics or biographical dictionary, the Ibero-Caucasian family was fantasy, not science. In the manner of Winkler or Bork any language could have been proved a first cousin of any other, and in particular of illiterate Abkhaz and Circassian and timeworn Elamite, Mittanian, Etruscan, and Ligurian. For sober Bourgeois, what structural similarities existed were in the first instance due to typological affinity (or chance), not to genetic affiliation.

Like Basque, Finnish, Estonian, Hungarian, Turkish, indeed Ural-Altaic in toto, Malay, etc., and unlike Aryan influences on it such as Armenian and Greek, Old Georgian was agglutinative, and so was Modern Georgian, since agglutinative languages were less changeable than *flective*¹⁴ ones (witness Greek and Armenian) if not interfered with. For Bourgeois (1909a), unaware of group-inflection, the chief diagnostic of agglutination was affixes, in particular suffixes, that did not cumulate several categories and that were strung out mechanically after their roots. Further morphological characteristics were (a) that inflection was essentially uniform for all words of a class, (b) that nouns, adjectives, and to some extent pronouns did not much differ in inflection, and (c) that attributes were invariable instead of co-varying with their primaries. As to syntax, agglutinative languages could either arrange words in their natural order, which was *déterminé* before *déterminant*, and largely dispense

with relation-identifying markers, or they could invert natural order and add relational markers. Malay did the former and Ural-Altaic the latter, respectively rendering 'le chien du voisin de mon frère est beau' as 'chien-voisin-frkre-moi-beau' or 'de moi-de frkre-de voisin-chien-beau-est' (1909b: 294).¹⁵

The objective of Bourgeois's article in the *Revue de linguistique et de philologie comparée* of 1909, published in two instalments despite its brevity, was to reduce to order Old Georgian nominal inflection—as attested in translations of the Bible from the fifth and the seventh century, the oldest texts available—in line with what agglutinative morphology could be expected to be like. As he saw it, there were bare roots, being indeterminate denotations of concepts and of an adjectival nature (such as *kac* 'man, to be man, like man'), and three layers of accretions: first, case suffixes simultaneously rendering roots determinate (e.g. genitive *kac-is(a)* 'of (the) one who is man'); second, relational appendages taking case-inflected forms as bases (e.g. ablative *kac-is(a)-gan* 'of/from (the) one who is man'); and third, though virtually indistinguishable from these, postpositions or adverbs governing local cases or the genitive. Not quite living up to the agglutinative ideal, case was cumulated with number in the first series of accretions (cf. genitive singular *kac-is(a)* and plural *kac-ta*, with *-ta* the plural also of locative-dative); the later introduction of a separate plural suffix *-eb* (thus *kac-eb-is(a)* man-Pl-Gen) was to be welcomed from this perspective.

Nouns proper arose only from the case and number marking plus determination of adjectival roots. Apart from being syntactic primaries, these nouns could also serve as secondaries, as attributes to principal nouns. When following their primaries, attributes agreed with them through resuming their case-number-cum-determination suffixes; and the agglutinative structure lent itself to repetition of this process:

- (15) *asul-ni-mk vidr-ta kalak-isa-ta-ni*
 daughter-NomPl-? inhabitant-GenPl town-GenSg-GenPl-NomPl
 'the daughters of the inhabitants, those of those of the town'

(The first attribute here was in fact skipped in this process. Second-layer appendages such as ablative *-gan* generally did not participate in it either, according to Bourgeois.) Owing to inflectional similarities, there was little point in distinguishing determinate forms as nouns and adjectives; all that needed to be said was that when determinate forms were syntactic secondaries and followed their primaries, they agreed with these.

For almost all of this Bourgeois could cite parallels in other agglutinative languages such as Basque, Hungarian, and Finnish. It was only the agreement of attributes with their principals that was not intrinsic to the agglutinative type. Bourgeois was inclined to believe that any inconsistencies in this respect were due to influences from languages of a type that permitted or even required agreement. For Georgian the culprits clearly were Greek and Armenian, providing the blueprint for the earliest biblical translations. Although

Bourgeois did not elaborate, Greek was especially pertinent since, apart from having agreeing adjectives, its postnominal genitival and prepositional attributes resumed the case-number(-gender)-inflecting definite article of their principals:

- (16) **hai thugatér-es hai tōn polit-ōn**
the=NomPIFem daughter_{Fem}-NomPl the=NomPIFem the=GenPlMasc
citizen_{Masc}-GenPl
'the daughters[the ones] of the citizens'

The Greek models of Old Georgian translations which Bourgeois cited did not actually have this article-Aufnahmeconstruction, but rather its alternative with genitival attributes between the principals' definite article and the principal noun ('the of the citizens daughters'). At any rate, once Georgian had freed itself of pernicious agreeing influences, its attributes were reverting to the original agglutinative mode, preceding their primaries, carrying markers identifying them as secondaries (such as *-is(a)*), and shunning Suffixaufnahme — just as in Ural-Altaic.

For Henri Bourgeois, then, Suffixaufnahme was a kind of mongrel issuing from the meeting of malleable agglutinative morphology with the flective type and not destined to survive. Nonetheless, considering the frequency of such meetings, at least in Eurasia, such hybrids, if short-lived, might have been more numerous.

2.5. Why Not Armenian: Vogt

Armenian had not been granted membership in Bork's "Caucasian," despite its location. Its Indo-European credentials were by now too incontrovertible. Its genitives, however, were not quite as well-behaved as one would have expected from a member of that worthy stem-inflecting family. As first pointed out by Heinrich Hiibschmann in a very short notice (1906), which had obviously escaped Henri Bourgeois's attention, Classical Armenian could replace the ordinary genitive on attributes with the case of the head, especially if this was an ablative or instrumental:

- (17) a. **i knoĵ-ê t'agawor-i-n**
by wife-AblSg king-GenSg-Def
 b. **i knoĵ-ê t'agawor-ē-n**
by wife-AblSg king-AblSg-Def
'by the wife of the king'

It was Hans Vogt (1903–1986) who assigned to such sporadic case attractions more than curiosity value. An expert on Kartvel but apparently unaware of the typological considerations this family had occasioned in Finck's

Haupttypen, Vogt (1932) recognized Classical Armenian case attractions as functionally analogous to Suffixaufnahme in Old Georgian, itself touched on again in a later publication of Vogt's (1947: 129–131).¹⁶ As was seen when comparing (17b) to its Old Georgian equivalent (18), with an enclitic ablative postposition governing the genitive in lieu of the instrumental, the sole difference was that Armenian attributive nouns dropped their original genitive when resuming the case of the head while those of Old Georgian retained it.

- (18) **col-isa-gan m-is mep-isa-jsa**
wife-Gen-by the-Gen king-Gen-Gen
'by the wife of the king'

Unwittingly echoing Heinrich Winkler (who was in the same article chided for his ridiculous interpretation of double genitives as emphatic iteration), Vogt ascribed a dual function to case inflection in Old Georgian: (a) that of identifying the role of a word or group of words within its phrase, which in fact was to some extent already achieved by linear order, and (b) that of indicating which words belonged with which others. By Suffixaufnahme the attribute—for Vogt self-evidently a noun—was stamped as a member of the NP that also contained the carrier of the case copied. The repetition of prepositions (including that of definite accusative, *z5*) on several members of prepositional phrases, as well as the phrase-final placement of the definite article, were signs of a similar tendency toward the inflectional marking of words as co-members of nominal groups in Armenian; the replacement of the genitive by the case of the head, especially the non-syncretic ablative and instrumental, was another manifestation of this tendency.

Vogt had no typological explanation for the use of inflections for grouping purposes in both Old Georgian and Classical Armenian, nor could he account for the difference between the two languages in regard to the retention or dropping of the inner genitive. He did not really question his assumption that two nominals bound together by identical case inflections were a *déterminant* and a *déterminé* in close-knit construction. Admittedly, he occasionally found it difficult to distinguish in Armenian between genuine attribution and the juxtaposition of nominals in asyndetic apposition; but this did not suggest to him that the syntax corresponding to the grouping type of inflection was somehow different.

What explanations Vogt had to offer were historical, invoking an Ancient Near Eastern substratum (a little too ancient perhaps for Roma to benefit from it). Armenian-style case attraction purportedly had parallels in Hittite, and Suffixaufnahme, its functional analogue, was not limited to Old Georgian either, definitely occurring also in Mittani Hurrian and perhaps, although much was still obscure about this language, in Vannic Khaldean (i.e., Urartian). Judging by pairs of examples such as (19), the so-called *genitivus genitivi* in Etruscan belonged here as well.

- (19) a. *larð cuclnie(s) velður-us*
 Larð Cuclnie Velður-Gen
 ‘*Larð Cuclnie the son of Velður*’
- b. *larð-al cuclnie-s velður-us-la*
 Larð-Gen Cuclnie-Gen Velður-Gen-Gen
 ‘*of Larð Cuclnie the son of Velður*’

The genitive on the last attribute seemed to appear only if the head was also in the **genitive**.¹⁷ The identical case marking on heads and nominal attributes was not the only feature that Vogt saw as stemming from an ancient substratum, possibly to be identified as South **Caucasian**.¹⁸ Others, shared at least by Georgian and Armenian, were the trend toward ordering the *déterminant* before the *déterminé* (with the verb thus coming last), and the **case-inflectability** of genitives lacking an overt head (20).

- (20) a. *ymrt-isa-j*
 god-Gen-Nom(Def)
 ‘*that of/belonging to god*’
- b. *astuc-oy-k^c-n*
 god-GenSg-NomPl-Def
 ‘*those of god*’

What one might have gone on asking is whether there were any necessary structural links between these various features, or whether it was by accident that precisely these features rather than any others were found to co-occur in languages once or still neighbors.¹⁹

2.6. *The Lingering of the* Haupttypen: *Lewy, Lohmann, Wagner*

Although the *Haupttypen des Sprachbaus* did not prove a popular success, in Norway or elsewhere, there were a few followers in Finck's footsteps. Apart from the later Bork, these were Ernst Lewy (1881–1966), a student at Berlin in Finck's time and an *émigré* to Ireland as Nazism held sway over many areas of whose languages Lewy had taken cognizance;²⁰ Johannes Lohmann (1895–1983), a renegade Indo-Europeanist who latterly believed that an injection of Heideggerian philosophy would benefit linguistics (as a professor at Freiburg im Breisgau it was hard not to succumb to the *genius loci*); and Heinrich Wagner (1923–1988), a Swiss-born Celticist based at Belfast and then Dublin whose interests extended to the languages of all lands once perhaps roamed by the Celts, and beyond.²⁰ With this fringe group, Finckian typology went areal.

2.6.1. While not uncritical of Finck's typology, Lewy wholeheartedly adopted the notion of group-inflection, in the straightforward sense of **inflec-**

tions accruing to whole phrases rather than to words or stems. Intent on mapping the geographical distribution of structural types—a subject not broached in Finck's Haupttypen—he would go far beyond Bork's "Caucasian" and variously mention Ket and Kott (of the Yenisei-Ostyak group based in Siberia), Mordva (of the Volgaic branch of Finno-Ugric, purportedly Caucasian-influenced), Avar and indeed all of Northeast and also Northwest Caucasian, Lycian (an Indo-European language of ancient Anatolia, another favorite of Bork's), the modern Iranian languages, Basque at its earlier stages, Coptic (the last stage of Egyptian), Nama (Khoisan), Aranda (Pama-Nyungan) and other Australian languages as well as those of New Guinea, and Mayan Quiché alongside South Caucasian as showing significant features of group-inflection, and he would speculate that group-inflection was perhaps an old principle often superseded by the currently more widespread types.²¹ He saw, on the other hand, certain similarities between group-inflection and what he called "inflection-isolation," representing a possible development of stem-inflection and exemplified in English, for example, by the group-genitive (his uncle and aunt's good graces) and prepositionally introduced subordinate clauses (the mystery of why she had invited them). Among the further correlates of group-inflection that he suggested were ergative alignment or the prevalence of clause constructions other than the accusative-type active transitive one, and, more enigmatic to him, the absence of nominal classification or gender.

In regard to *Suffixaufnahme*, it seemed to Lewy an especially telling and not at all enigmatic characteristic of the group-inflecting type, because it proved suffixes to be appendages so loose that they could gain independence and be repeated on another constituent, bracketing it with the word from which the suffix was copied and thus establishing the boundaries of a complex syntactic group (Lewy 1951: §7). On another occasion (Lewy 1942: §272), taking his cue from Heinrich Winkler, he paraphrased the latter function as "explicative" or "pointing" and even "correcting" (*deutend, berichtigend*), somewhat comparable to that of cross-referencing pronominals on verbs in languages of the Balkans. Looseness of inflections was a theme borrowed from Finck, and it was pointed out above that the attribution of this trait specifically to group-inflection is unorthodox; it is at least as characteristic of the subordinating type (better known as agglutinating) and of Lewy's own inflection-isolating one (better known as analytic). Still, by emphasizing the separability of inflections Lewy arguably sought to distinguish *Suffixaufnahme* from plain agreement in the stem- or root-inflecting types, not normally involving the repetition of actual desinences but more abstract *categorical* correspondences. Thus the adjective theory evidently was not to Lewy's liking; his taking the function of *Suffixaufnahme* to be the bracketing of constituents was certainly closer in spirit to Finck and the later Bork than to Bopp and the early Bork. Nonetheless, he had once not seemed averse to regarding *Suffixaufnahme* or similar patterns as a source of adjective agreement (cf. Lewy 1920: §12).

Considering its purported typological significance, Lewy must have been

exasperated by the scarceness of Suffixaufnahme in the languages where he perceived markedly group-inflecting tendencies. In fact, he only knew it in Old Georgian, and therefore was glad early on to have found traces of what seemed a similar pattern in Erzya Mordva (Lewy 1920). In texts elicited from a man who some ten years before had left the area of Saratov on the Volga for that of Tomsk in Siberia and was now a prisoner of war, there were four instances of the postposition *mara* 'with' resuming the case and, if present, definiteness and number suffixes of a noun outside the postpositional phrase:

- (21) a. sure-n-t' kolt's'a mare-n-t' tapar'ik' pangksta
 finger-Gen-Def (Sg) ring with-Gen-Def wrap=up patches
 'Wrap up the finger with the ring with patches!'
- b. ton s'e puz'iri-n-t' w'er' mare-n-t' putik kawalet alu
 you this (?) bladder-Gen-Def (Sg) blood with-Gen-Def put
 your=armpit under
 'Put this bladder with blood under your armpit!'
- c. ki kantsindz'e w'edra-t-n'i-n' w'ed' mare-t-n'i-n'
 who carries bucket-P1-Def-Gen water with-P1-Def-Gen
 'Who carries the buckets with water?'
- d. awanza putiz'e koika-s pruzhina mare-s
 his=mother he=laid bedstead-I11 (SgIndef) springs with-I11
 'He laid his mother into a bedstead with springs'

This Erzya pattern differed from Old Georgian Suffixaufnahme in that the carrier of the suffix copied was not a case-inflected noun but a postposition; there was a genitive case in Erzya, but it did not do what its Old Georgian analogue was known to be doing. Moreover, *mara* was the only Erzya postposition on record in Lewy's texts as showing Suffixaufnahme. Lewy's interpretation of this peculiarly circumscribed pattern was that the copied suffixes strengthened the cohesion of the phrase consisting of a noun and the postposition and at the same time bracketed the postpositional phrase with the head noun that it complemented. And these were also the purposes served by Finck's Suffixaufnahme. As to bracketing, Lewy might have added that without Suffixaufnahme there could have been a danger of ambiguity in regard to the constituency of such postpositional phrases, or to their relational status as attributes or adverbials or secondary predicates. In an example such as 'Kuzma laid his mother into a bedstead with a pitchfork' the *mara*-phrase could conceivably be associated with the oblique object in the illative (with the bed's construction somehow including a pitchfork), the direct object (with the mother clutching her pitchfork), or the subject of the action (with Kuzma using a pitchfork for the transferral). Under such circumstances Suffixaufnahme is likely to disambiguate.

I have been unable to confirm Lewy's find from other accounts of **Mordva**.²² He himself struck gold no more. Bork's pertinent discoveries in his

"Caucasian" continued to be **unappreciated**.²³ In Strehlow's *Aranda Phonetics and Grammar* (1944) he saw enough to convince him that group-inflection also reigned in Australia. Aranda's genitives were a case in point:

- (22) a. worra ingkata-kana-la
son chief-Gen-Erg
b. ingkata-ka worra-la
chief-Gen son-Erg
'the son of the chief'

The case that marked the external relation of the entire group of a head noun and its nominal attribute, **ergative/locative** -la, came at its very end, irrespective of whether the last constituent was the attribute in the genitive, hence carrying two cases, or the head. Why the genitive was -kana when followed by another case and -ka when alone eluded Lewy (1953b: 252); he might have found similar "lengthening syllables" after genitives with Suffixaufnahme in the Mittani language, had he paid heed to Bork. Group-inflecting though the first pattern looked, it was not Suffixaufnahme in Finck's sense since case marking was not repeated. It will be remembered that Bork had been less discriminating than Lewy was, lumping Sumerian "suffix-accumulation," analogous to (22a), with Suffixaufnahme à la Old Georgian and Hurrian.

2.6.2. Johannes Lohmann's aim was to replace Finck's psychological foundation of his eight cardinal types with an ontological one, based on how the relationship between "thing" and "attribution" (the suppositio of medieval logic) was conceived of on the one hand, and on how constituents were overtly interrelated on the other. As to the syntax of suppositio, Lohmann (1948, 1954) distinguished four types of clause construction: purely verbal, purely nominal, mixed verbo-nominal, and nominal and verbal clauses coexisting. As to morphology, he accepted Finck's eight modes of synthesis. The purely verbal clause construction was an "objective" rendering of predication, with all participants registered on the verb by means of pronominals (as schematically in 'the women they-give-him-it the beggar the bread') and without a distinction of active and passive voices and perhaps also of Aktionsarten (instead expressed in the encoding of the actants). This type of clause construction was, according to Lohmann, the necessary correlate of group-inflecting morphology. The areal domain of this twinning of traits was the lands around the Mediterranean, with Caucasian, Basque, and Sumerian specifically mentioned by Lohmann. That incorporation as practiced in America generated what seemed to be the same type of verbal construction did not bother Lohmann any more than it had Bork; he surmised that the group-inflecting type was perhaps only a refinement of the incorporating one.

Suffixaufnahme as such appears not to have riveted Lohmann's attention. Not that he would have found its explanation difficult: it was just another instance of relating expressions (for such of course included cases) being

loosely appended to notional expressions and thus bracketing them to single units, comparable to the pronominal copies clustering around the verb. Someone holding that group-inflection was a trait virtually immune to change (1948: 65) might have been perturbed by the recent scarcity of Suffixaufnahme in the circum-Mediterranean area; there are no indications that Lohmann was.

But then, Lohmann's typology never got very far beyond the *a priori*. On the subject of group-inflection he might as well have reedited the mature Ferdinand Bork's writings on "Caucasian," with annotations from Heinrich Winkler and Hans Vogt.

2.6.3. The group-inflecting type, Finck's innovation and Lewy's object of desire, appears to have lost its appeal entirely for Lewy's friend, Heinrich Wagner. Outside Celtic and its alleged Near Eastern and African connections, Wagner's areal interests, none too circumscribed, were centered on the great Eurasian mountain belt extending from the Pyrenees via the Alps, Anatolia, the Caucasus, the Hindukush and the Karakorum range, the Himalayas and Tibet to the highlands of Yunnan Province and Indochina. For Wagner (cf. 1978, 1985) this vast area was one heartland of the subordinating (alias agglutinative) type; the three others were northern Eurasia and the Arctic region, central Asia including Korea and Japan, and New Guinea and Australia. The most salient structural traits of the subordinating type, apart from agglutinative morphology, supposedly were the ergative construction (missing in Altaic, though, and sometimes elsewhere too), the lack of personal or subjective verbs in the strict Indo-European sense, and SOV and allied word orders of Greenberg's (1963) Type III. The addition to verbs of pronominals cross-referencing subjects, objects, and perhaps further nominals was the preferred method of interrelating clausal constituents, with verbs lacking inherent relationality. The incorporation of entire nominals themselves, as in Paleosiberian and American languages and also occasionally in the Eurasian mountain Sprachbund, was but a radicalization of this method.

Without much ado virtually all of Finck's, Bork's, and Lewy's candidates for group-inflection were thus reclaimed for the subordinating type by Wagner. As the group-inflecting type merged with the subordinating one, Suffixaufnahme lost its hard-gained prominence: once the hallmark of a separate type, it was tacitly reduced to an inconspicuous optional ornament of the subordinating supertype. Considering the contours of Wagner's areal typology, this was rather surprising, for eastern Asia Minor, northwestern Mesopotamia, northern Syria, and the northwestern and southern Caucasus represented the core area of his Eurasian mountain Sprachbund, and it was here that Suffixaufnahme had first been discovered.

In fact, it is difficult to tell whether Wagner cold-shouldered Suffixaufnahme deliberately or unwittingly. When commenting on the typically subordinating ways of encoding attribution (1978: 54f.; 1985: 54, 69–72), he suggested that the simple juxtaposition of dependent and governing noun was the basic or

original strategy, often complemented by the addition of "pseudo-genitival" suffixes to dependents; furthermore, with increased morphological complexity **attributive** encoding would tend to become "pleonastic," with the dependent noun in the genitive and the governing noun agreeing with the preceding dependent in person, number, and perhaps gender—schematically, 'the king's his (-)palace'.²⁴ **Hattic** (an extinct isolate of Asia Minor), **Sumerian**, **Old Hittite**, **Ossetic** (Northeastern Iranian, spoken in the Caucasus), **Abkhaz** (Northwest Caucasian), **Mordva**, **Votyak** (Permian branch of Finno-Ugric), and his native **Alemannic** (i.e., Alpine German) were languages where Wagner detected this pleonastic pattern. However, patterns which are formally quite different were also alluded to as characteristic of the subordinating type: the replacement of genitival nouns by derived adjectives as in the Anatolian group of Indo-European, and "inflected genitives." Under this latter rubric Wagner lumped three different things: suffix-accumulation à la Sumerian and Aranda (see (14) and (22a) above), Suffixaufnahme as in (Old) Georgian (getting only the most fleeting of mentions²⁵), and genitives lacking overt governors but case-inflected like independent NPs as in the Anatolian group, extinct Akkadian (North Semitic), and Basque. Wagner may have had a reason not to overemphasize formal differences here: functionally, all these varieties of attributive encoding encountered in the subordinating type—with the exception of suffix accumulation, all in a sense pleonastic—could be seen as serving the single purpose of bracketing the dependent with its governing noun, just as nominals were bracketed with their verbs by means of verbal cross-reference markers. The less charitable interpretation is that Wagner—odd though it seems for someone out to salvage the heritage of Finck, Bork, and Lewy—did not realize that the three kinds of double case marking in particular were different, and thus he was in no position to gauge their respective areal or typological significance.

It is fair to say, at any rate, that as **Finck's** structural types were areally anchored in the manner of Bork, Lewy, Lohmann, or Wagner, **Suffixaufnahme** was not the main beneficiary. At worst, it was the chief casualty, along with the group-inflecting type.

2.7. *Encore*

After a brief interval the curtain rose again on a new cast reenacting the parts of Franz Bopp, Franz Nikolaus Finck, Ferdinand Bork, Henri Bourgeois, Hans Vogt, and Ernst Lewy et al., with the script slightly modernized to suit the taste of the 1980s.

2.7.1. Contemporary linguistics owes much to Igor Mel'čuk for the tidying up of its terminology. In the course of his effort to end all loose talk about cases, he surveyed various current subclassifications of cases ("cases 2," to be more precise), one of which distinguishes between governed cases and cases induced by agreement (1977: 20, 31f.; 1986: 36f., 68–70, 83f.). Properly speaking, the latter should not be known by the same name as the former; **Mel'čuk**

suggested distinguishing the latter variety as *casus concordatus* as opposed to *casus rectus*.

Casus concordati are typically found on adjectives, but according to Mel'Euk nouns may also agree in case when occurring as dependents in a syntactic relation amenable to agreement marking. As Old Georgian demonstrates, a governed case (genitive) and an agreement case (instrumental) may co-occur on a single noun:

- (23) *saxel-ita mam-isa-jta*
 name-Ins father-Gen-Ins
 'with father's name'

Asked by two colleagues, T. V. Bulygina and A. A. Zaliznjak, whether *casus concordatus nominalis georgicus antiquus* was not the same thing as the rather better-known *casus concordatus adjectivalis* as found in Russian, Mel'Euk conceded that there is a functional similarity, but he also pointed out a crucial difference: Russian words agreeing in case and other relevant categories with head nouns, such as *otc-ov-ym* father-Adjct-InsSg, are adjectives, while their supposed Old Georgian analogues, such as *mam-isa-jta*, are nouns; suffixes such as Russian *-ov* are derivational, turning nouns into agreeing adjectives, while the Old Georgian genitive, providing the base for *casus concordati*, is inflectional. And Mel'Euk argued his case, if frugally. In Russian, words such as *otcovym* occupy the position of adjectives and cannot be modified by a further adjective, "etc." (1977: 31); in Old Georgian, words such as *mamisajta* occur after their heads, which (allegedly) is not the position of attributive adjectives, and can themselves be modified by attributive adjectives, "etc." (1977: 32). In another context Mel'Euk (1986: 68) said that *casus concordati* on nouns are "physically identical with (or similar to)" the *casus recti* of these nouns, which does not necessarily apply to case-agreeing desinences of adjectives. Admitting that the distinction between adjective and noun may not always be clearcut, Mel'Euk cited possessive adjectives in Slovak as permitting, in noun-like fashion, determination by a possessive pronoun in the genitive, where one might have expected the possessive to agree with the ultimate head, in adjective-like fashion and along with the derived adjective:

- (24) *vašej materina dcéra*
 your=GenSg mother=Adjct=NomSgFem daughter,,, (NomSg)
 'the daughter of your mother'

But since possessive pronouns are the only kind of words to show such aberrant behavior in the company of words such as *materin-*, Mel'Euk categorized these as adjectives, and he was confident that a distinction between *casus concordatus nominalis* and *adjectivalis* would always be feasible. A perusal of Finck's grammar of German Romany might have served as an antidote.

By 1986 Mel'Euk had become aware of *casus concordati*, supposedly likewise *nominales*, in languages other than Old Georgian, mentioning Basque

(erroneously) and Ngarluma and Kayardild, both Australian. In Ngarluma the attributive constituents displaying *casus concordati* in Mel'čuk's example were actually relative clauses rather than simple nouns in the genitive; in addition to having its own case, each noun in a relative clause would here resume the case of the relative's head. For Kayardild Mel'čuk could report (courtesy of Nick Evans) a maximum of no fewer than four cases in a sequence. Thus in (25) the attribute (shown in boldface) first takes the genitive case, owing to its attributive function; then the instrumental, copied from its head; then the modal ablative (**M.Abl**), signaling the sentence's modality (low reality status) and distributed over all its nominals other than the subject; and finally the purposive case (**Purp**), linking up a sentence with the previous discourse (its force here being that of a contradiction) and again distributed over all its parts, including the verb.

- (25) ngijuwa yalawu-jarra-nthayakuri-naa-ntha waytpala-karra-nguni-naa-ntha
 mijil-nguni-naa-ntha
 I=Nom=Purp catch-Past-Purp fish-M.Abl-Purp **white=man-Gen-Ins-M. Abl-**
Purp net-Ins-M.Abl-Purp
 'Yes, I did catch some fish with the white man's net'

Further categories of case or case-like notions had to be introduced to account for such distributed marking that was distinct from both *casus rectus* and *casus concordatus*.

Daghestanian Tsakhur, mentioned en passant (1986: 82f. n. 12), forced Mel'čuk to recognize three separate genitives by his criteria of case distinction. The choice between these depends on the noun class (classes I to III vs. class IV) and case (nominative vs. oblique) of the head, as exemplified in (26).

- (26) a. hammaz-na dek^h
 friend-Gen1 father, (Nom)
 'friend's father'
 b. hammaz-in jik
 friend-Gen2 heart,, (Nom)
 'friend's heart'
 c. hamaz-ni dek-is / jik-is
 friend-Gen3 father,-Dat / heart,-Dat
 'to friend's father / heart'

Ferdinand Bork would have been glad to know this; it might have fitted in with the information he had about Tsakhur genitives resuming the plural of their heads. For Mel'čuk the plurality of Tsakhur genitives, also found in the Tsez group of Northeast Caucasian, appears to have borne no resemblance to *casus concordatus nominalis*.

Mel'čuk's (perhaps unwitting) contributions to the Suffixaufnahme de-

bate, then, were four: (a) he actually argued against, as opposed to merely rejected, Bopp's adjective theory for Old Georgian; (b) he accepted the possibility of nouns agreeing with other nouns in case; (c) he noted similarities between relative clauses and attributive nouns with respect to case agreement with their heads; and (d) he put Australian on the map. As to (b) and (c), he assumed nouns and relative clauses carrying a *casus concordatus* to be ordinary attributes, which deprived him of the motive that Finck, the later Bork, and Lewy could adduce as the *raison d'être* and typological correlate of Suffixaufnahme. In dealing with the forms of case marking, Mel'čuk did touch on typological parameters such as agglutination (with non-cumulative exponents of case and number exemplified from Georgian) and group-inflection (with the principle of "one inflection per phrase" exemplified for phrases with coordinate or subordinate members from Tocharian, Gilyak, English, and Basque); but syntactic correlates of any such morphological differences were not part of his contribution. Among the instances of double case marking not involving a *casus concordatus* Mel'čuk mentioned Basque genitives, inflecting for case when functioning as independent NPs (lumped with Suffixaufnahme by Wagner):

- (27) gizon-aren-ari
man-Genl-Dat
'to that of the man'

The question of a possible correlation between such hypostasis formations and *casus concordatus nominalis* once more remained unasked. And why should it have been asked if the topic were definitions?

2.7.2. The Australian connection was one rarely missed since. In Christian Lehmann's (1984) panorama of relative clauses, old Hurrian found itself in the immediate vicinity of newly famous (if dying) Dyirbal—of all languages—sharing with it not only embedded postnominal relative clauses with non-initial subordinator and (nominalized) relative clauses case-marked in agreement with their heads on their last constituent, but a host of further features as well, such as agglutinative and exclusively suffixing morphology, a rich supply of cases, unmarked verb-final and object-before-subject constituent order, some positional freedom of attributes, ergativity in syntax as well as morphology, and Suffixaufnahme (1984: 73–75):

- (28) šen-iffu-ŭe-ne-ŭe ašti-ŭe nigari
brother-1SgPoss-Gen-ArtSg-Gen wife-Gen dowry
'dowry of the wife of my brother'
- (29) bagul wagal-gu baŋul-din-gu yaŋa-ŋu-n din-gu
ClassI=Dat boomerang-Dat ClassI=Gen-Lig-Dat man-Gen-Lig-Dat
'the man's boomerang (Dat)'

In regard to Suffixaufnahme, there were even such identical details as the presence of a "catalytic" or "ligative" (Lig) suffix, in Hurrian an article distinguishing number, in between the genitive and the resumed case. Although interdependencies other than those to do with relative clauses were not **Lehmann's** topic, his sample might have suggested that Suffixaufnahme was not an isolated trait but implied some or even all the others that Hurrian and Dyirbal had in common. Some of them would also have been encountered in Old Georgian, had it been included. The implications clearly did not hold the other way round, since Suffixaufnahme was missing from numerous languages in the sample sharing much else with Hurrian and Dyirbal, such as Turkish, Quechua, Japanese, the Dravidian family (all non-ergative), Basque, Sumerian, and Greenlandic (all ergative).

Recognizing a distinction between nouns and adjectives in his two Suffixaufnahme languages, Lehmann considered case-resuming words in the genitive to be (inflected) nouns rather than (derived) adjectives, although possessive adjectives could in other languages be used to perform partly similar functions (1983: 362).

As to the syntactic relationship between the words or phrases linked by Suffixaufnahme, it was not conceived of as differing fundamentally from that of genitival dependents and their heads elsewhere. In principle, genitival dependents could be adnominal modifiers or governed complements of their heads; but since complements were not supposed to agree in case with their governors, Suffixaufnahme proved genitival dependents to be modifiers (cf. Lehmann 1982, 1983). The more radical difference in Lehmann's taxonomy of relations was between dependency and "sociation," with coordination and apposition subsumed under the latter. For relative clauses non-dependency was a real option, with adjoined and appositional varieties not forming subordinate co-constituents with the nominals with which they referentially belong. But genitival attributes, and also adjectival ones, were supposedly different, being inherently so closely bound up with their heads as to preclude the head's anaphoric resumption (schematically 'the keys, those of heaven') and to resist extraposition ('the keys were lost of heaven') (Lehmann 1984: 205, 231). Finck, Bork II, and Lewy would have begged to differ. For them, even apposition as defined by Lehmann, requiring the appositum to form an immediate constituent with the nominal it is apposed to, might still have seemed too tight a relation for partners in Suffixaufnahme.

2.7.3. With notices of a certain exuberance of relational marking on nominal accumulating in descriptive accounts of individual Australian languages, comparatists down under had got something to answer for.

2.7.3.1. Although he conventionally listed the genitive among cases, Dixon (1980: 300, 321) was not quite sure whether it is really properly inflectional. Unlike other cases and like the "having" and "lacking" suffixes widespread in Australia (sometimes referred to as propriative and privative cases), the genitive or the dative, also encoding possessors, can be followed—or according to

Dixon (1972: 12,105; 1980: 321), is "normally" followed in "all" or "almost all" or "most" Australian languages —by a further case inflection, with the attribute thus agreeing with the possessed noun that it modifies. Armed with the axiom that a nominal word consists of a root and a case inflection, with any affixes in between being derivational, this distributional evidence inclined Dixon (cf. also 1977: 134) toward considering the genitive and its functional equivalents to be derivational, forming adjectival stems that could take case agreement.²⁶ After Bork's defection, Franz Bopp had again recruited a disciple.

Not all readers of *The Dyirbal Language of North Queensland* noticed, though. In a popular survey of inflectional morphology by Anderson (1985: 188), Dyirbal serves as the only example of that rarity, nouns (which was not what Dixon was convinced they were), those most reluctant agreeers, agreeing in case, of all categories, upon inflecting (which was not what Dixon believed they did) for genitive. It was Dyirbal's ergative rather than its genitive that attracted the most attention at the time.

2.7.3.2. In Blake's overview of Australian Aboriginal grammar (1987: 31f., 77–99), however, genitives—and other markers of possessors which are followed by the cases that identify the relation of the possessed nominal within its clause—were beginning to catch up. They got a new label: "pre-cases." In phrase-marking (or group-inflecting) languages such as Alyawarra (30) or Aranda (22), such pre-cases, located on the final member of the possessor phrase, are followed by a case suffix doing duty for the entire phrase, whereas in word-marking languages such as Kalkatungu (31) or Dyirbal (29), the head nominals themselves are also case-marked, with the case suffix after the pre-case merely a copy.

- (30) ayliyla artwa ampu-kinh-ila
boomerang man old-Gen-Ins
'with the old man's boomerang'
- (31) kalpin-kuwa-thu yaun-kuwa-thu thuku-yu (ityayi-ngi)
man-Gen-Erg big-Gen-Erg dog-Erg (bite-me)
'the big man's dog (bit me)'

While both patterns illustrate "Suffixhaufung" in Bork II's sense, Suffixaufnahme in the narrower sense presupposes word-marking.

Reconsidering the question of the inflectional or derivational status of pre-cases, Blake's results were somewhat inconclusive. There are some properties that pre-cases share with bona fide inflections: they are very productive and semantically more or less regular; some are also found to mark complements of verbs. More on the derivational side are the possibilities of pre-case forms being lexicalized and undergoing bona fide derivation, changing their wordclass. Yet further properties, in particular their phrasal scope in phrase-marking languages, seem equally difficult to reconcile with either interpretation. Curiously, the fact that words carrying a pre-case agree in case in word-marking languages seemed to Blake (1987: 88f.) highly suggestive of

their inflectional status; for Bopp/Dixon this was the clincher in favor of derivation. Overall, Blake's leanings were more toward derivation, but this was little more than a gut feeling. He might more profitably have asked what pre-cases implied for the feasibility of neatly compartmentalizing morphology, rather than taking the two compartments for granted and worrying about the proper allocation of pre-cases.

What Blake was not very specific about was the word class of words derived or inflected by means of pre-cases. And this was perhaps not an inadvertent omission. How could one decide whether such words were nouns or adjectives if the two word classes were not really distinguished in the first place? For Australian languages the received wisdom was that adjectives are merely a subclass of nominals, inflecting like nouns and differing from them only in syntactic **distribution**.²⁷ But it was precisely their syntactic distribution, acting as attributes, that had often earned nouns in the genitive (especially if they also agreed in case) the reputation of being adjectives, in Australia and elsewhere.

However, informed by the analyses of individual Australian languages that had become increasingly popular since the late 1970s (including Heath 1978), Blake showed a way of accounting for the syntactic distribution and agreement behavior of nominals with pre-cases without assuming that they were genuine attributes. What seemed to be attributes from a Standard Average European perspective might really be nominals in their own right, contracting their own relationships with the predicate, as expressed by their pre-cases; what seemed complex NPs consisting of possessor and possession might not be phrases but appositive collocations of nominals in parallel, taking the same case in recognition of their parallelism (Blake 1987: 89; also 1983). A more accurate English rendering of a sentence such as (31) above might thus be something like 'the man-owned one, the one owned by a big one, the dog bit me'. Evidence for the lack of phrasal cohesion would be the freedom of linear order, the splitting up of possessor and possession by clitics and other material, and intermediate pauses. Also, the use of pre-cases followed by agreement cases extended beyond possessor phrases in some Australian languages such as Warlpiri (32), pointing to a parallel syntactic status of all nominals with pre-cases.²⁸

- (32) ngarrka-ngku kurdu watyilipu-ngu ngurra-kurra-rlu
 man-Erg child (Nom) chase-Past camp-Allative-Erg
 'The man chased the child to the camp'

Finck, Bork II, Lewy, and Vogt would have enthusiastically embraced this theory of a flat or non-configurational syntax corresponding to *Suffixaufnahme* morphology in *terra australis* no longer *incognita*. Now older and wiser, they might have sensed, though, that the notion of apposition was in need of further clarification, for it was hardly consistent with standard usage to say that two nominals in apposition with one another (hence agreeing in case) were independently contracting relationships with the predicate (hence their inner or pre-case marking).

2.7.3.3. The first systematic attempt to survey multiple case marking in Australia in its entirety was made by Dench and Evans (1988). Distinguishing several functions that cases can fulfill in Australian languages—called relational, adnominal, referential, and complementizing—Dench and Evans showed that the potential for multiple case marking is considerable, with the agreement in case between a nominal in the genitive or another possessor case and the nominal denoting the possession being only one source of it.

Dench and Evans were unimpressed by the arguments previously mustered in favor of the derivational nature of genitives and other pre-cases. Their relative word-internal order preceding other cases could not be decisive: a sequence of inflectional affixes outside derivational ones is not in principle objectionable; and there supposedly are clear instances in Australian languages of impeccable case suffixes being followed by unquestionably derivational ones. In Dench and Evans's opinion it was productivity, semantic regularity, and phrasal scope which really counted, and these criteria argued for inflection. The question of the word class of case-agreeing inflected words was largely irrelevant because most Australian languages arguably did not distinguish adjectives from nouns to begin with.

In Dench and Evans's opinion, the drawback of Blake's notion of pre-cases was that it failed to delimit a reasonably invariable subset of items across Australian languages. Often suffixes that would typically occur in pre-case position could also be unaccompanied by another case and mark subject or object functions; and sometimes, as in Warlpiri, virtually any case could occupy pre-case position.

For Dench and Evans, then, the morphological fact of case-inflected nominal further inflecting for case, by virtue of agreement or otherwise, was not to be explained away. They adopted a cautious stance on the question of how agreement case marking could be motivated syntactically. While acknowledging the possibility of possessor and possession not forming a single NP but being in apposition, they were reluctant to accept this as the general rule for all Australian languages with Suffixaufnahme.

What their examples of agreeing adnominal cases other than genitive, proprietive, and privative effectively showed, however, is how unclear the dividing line can be between attributes forming constituents with their heads on the one hand, and nominals related to one another referentially but not syntactically on the other. In (33), from Warlpiri, the nominal in the perlocative case is supposed to be an attribute to the indirect object in the dative, agreeing with its head.

- (33) ngarrka ka-rla marlu-ku jaarlparnka yuwurru-wana-ku
 man (Nom) Nonpast-3SgIObj kangaroo-Dat intercept scrub-Per-Dat
 'The man is intercepting the kangaroo on its way through the scrub'

Replacing the outer dative on the perlocative nominal by zero, the marker of nominative, would suffice to relate this nominal to the subject instead ('the man is intercepting the kangaroo on his own way through the scrub'), as in

(32) above — supposedly illustrating the referential function of case marking, where the nominals related by case agreement do not form a constituent; and the net semantic difference might be almost negligible under the circumstances. In (34), from *Panyjima*, the nominal in the locative is supposed to be an attribute of, hence to agree with, the nominal in the accusative:

- (34) *ngunha watharri-ku nyurna-yu warrapa-la-ku*
 that look=for-Pres snake-Acc grass-Loc-Acc
 'He is looking for the snake in the grass'

In (35), from *Martuthunira*, accusative agreement likewise relates two nominals, one denoting a part and the other the whole; although these are not supposed to form a constituent, it is only the lack of an inner non-agreement case on the nominal denoting the whole that would seem to distinguish (35) from (34).

- (35) *ngayu nhuwa-rminyji nyimi-i ngurnaa mui-i*
 I=Nom spear-Fut rib-Acc that=Acc dog-Acc
 'I'll spear that dog in the ribs'

One is tempted to conclude from such examples that case agreement generally serves to establish the appropriate semantic connections, performing a referential function in Dench and Evans's terms, with syntactic constituency being largely immaterial. Nor would syntactic constituency seem crucial for "pre-cases." Their function might be to identify the semantic relationship of their nominals within their clauses or sentences (relational in Dench and Evans's terms); it would be immaterial, and sometimes perhaps indeterminable, whether such relationships are contracted with another nominal or with the predicate, with two nominals potentially contracting the same relationship to it.

2.7.3.4. It is unlikely that an awareness of its Old World equivalents would have sent those prospecting for Suffixaufnahme in Australia on a search for common historical origins or channels of diffusion. Clearly (at least for those with lingering doubts about proto-World), if there was an explanation for this transcontinental joint possession (provided the phenomenon indeed was the same) it had to be typological rather than genetic or areal. The two factors that competed in Australianist circles as the crucial conditions for the prospering of Suffixaufnahme were the derivational status of the genitive and appositive syntax; both had alternatively been invoked also for Greater "Caucasian." The predominantly agglutinative nature of Australian morphology, resembling that of Greater "Caucasian" or indeed the Great Eurasian Mountain Belt, might have been reckoned with too, as might ergativity; but neither were. On the other hand, as Dench and Evans (1988: 13 fn. 9) intimated, the difference between languages with and without Suffixaufnahme might as well be unrelated to almost anything else: it might

simply be that double case marking is either permitted (as in Martuthunira, Kayardild, or Old Georgian) or it is not (as in Russian and almost everywhere else), for no particular reason either way. The only possible correlate of Suffixaufnahme on this agnostic view would be other kinds of double case marking. It will be remembered that Old World comparatists had sometimes mentioned case-inflecting genitives in hypostasis as an *implicatum* of Suffixaufnahme.

Incidentally, what was never quite sorted out was whether all, almost all, most, or merely many Australian languages were practicing the custom at issue.

2.7.4. In modern times, the agglutinative type owed its most elaborate portrayal to Vladimir Skalička. Among the mutually supportive traits of Skalička's agglutinative "construct" were these: predominantly non-cumulative morphological markers; loose ties between stems or roots and affixes, manifesting themselves in easily recognizable word-internal morpheme boundaries, few morphologically conditioned word-internal alternations, the syllabic autonomy of affixes, and little word-internal bonding other than by vowel harmony; large inflectional paradigms and correspondingly less extensive use of function words (such as adpositions, articles, possessive and personal pronouns, conjunctions, auxiliaries); potentially long strings of affixes, especially suffixes, with the possibility of syntagmatically combining markers of the same paradigmatic category (such as case); uniform declension and conjugation, owing to the absence of synonymous inflections; little homonymy of inflections; systematic zero-expression of basic paradigmatic categories (such as **nominative/absolutive** and singular); a blurring of the distinction between derivation and inflection; no rigid lexical discrimination of wordclasses; an abundance of morphological modifiers of verbs; no nominal classes, and in particular no genders; phrasal marking rather than word-marking, with each category only marked once per phrase, which precludes agreement; a coexistence of different kinds of clause construction, in particular a verbal and a nominal one; a predominance of nominalizations over finite subordinate clauses; and relatively rigid word order.²⁹

In a characterological sketch of Hurrian, second to none in ergativity, Plank (1988) confronted Suffixaufnahme with this agglutinative construct. Although largely based on Turkish, Skalička's admittedly idealized agglutinative profile bore a striking likeness to Hurrian, and could pass for a not-too-distorting outline of the structure of other languages with Suffixaufnahme. Even multiple case marking had been provided for, although Skalička was thinking of inflected genitives in hypostasis formations and combinations of local cases rather than of Suffixaufnahme. And there was the rub. While overall more harmonious with the agglutinative type than with any other, granting that Skalička's constructs were not entirely unfounded, Suffixaufnahme was in fact at odds with one agglutinative habit: the disinclination to have categories dis-

tributed all over a phrase by virtue of agreement. This had also been the point of the long-forgotten Henri Bourgeois.

Suffixaufnahme would be reconciled with the agglutinative construct if it turned out not to be ordinary NP-internal agreement like that of attributive adjectives with their heads, as Bourgeois (1909a, b) and Plank (1988) failed to notice. From this perspective too, then, the issue is seen to be one of syntax. If Hurrian, Old Georgian, Dyirbal, etc., have NPs in loose apposition rather than tight attribution, Suffixaufnahme might yet win accolades as being the ultimate in agglutination. But was not such syntax also the prerequisite of the group-inflection of old? The tacit subsuming of the group-inflecting type under the agglutinative one was not unprecedented. The factual basis of discrimination or lumping remained as unfirm as ever.

2.7.5. Australia, incidentally, was not the only continent where there were yet discoveries to be made. Thus, after some to-ing and fro-ing among the few experts, Wilhelm (1976) definitively established Suffixaufnahme also for Urartian, the shadowy close relative of Hurrian—itsself meanwhile clarified considerably by Bush (1964) and Thiel (1975), among others. In Indo-European languages of ancient Anatolia, in particular Luwian (Hieroglyphic and Cuneiform) and Lycian (A and B), patterns were noticed, or perceived more distinctly, the extent of whose similarity to Suffixaufnahme in neighboring Hurrian-Urartian provoked some in-group discussion, notably by Mittelberger (1966), Stefanini (1969), and Neumann (1982). In eastern Africa the Ethiopian highlands, home to speakers of the Cushitic branch of Afroasiatic, also emerged as potentially fertile soil, judging by specialist accounts such as those of Palmer (1958), Hetzron (1976), and Hudson (1976). However, like similar tidings a little earlier from the Siberian tundra—inhabited, among other peoples, by speakers of Tungusic languages not averse to the occasional Suffixaufnahme, according to authorities such as Poppe (1927), Bouda (1950), and Benzing (1955a)—such news now rarely roused typological circles. Alas, the promising question No. 2.1.1.7 in Comrie and Smith's questionnaire for Croom *Helm née Lingua Descriptive Studies* (1977: 33):

Does the language display double case-marking? In other words, do nouns standing in a particular attributive relationship to another (head) noun exhibit, in addition to their own case-marking, case-agreement with the head noun? If this is so, describe: under what circumstances it occurs; which combinations of cases are possible; whether it is optional or obligatory to have the second case-marking.

failed to elicit a straightforwardly positive answer of the right sort for any of the languages covered before the regrettable demise of the series.

But we have been straying from the past and the present perfect well into the present continuous.³⁰ Before history continues, it is time to take stock and look at Suffixaufnahme from a systematic rather than historiographical angle.

3. Nominals Interrelated: A Taxonomy

3.1. Functions and Patterns

It was always against a backdrop of seemingly more ordinary forms of overt marking that *Suffixaufnahme* has sporadically attracted typological attention as something special—at least initially, with its apparent anomaly rendering it liable to be rationalized as not really so remarkable after all. Before passing judgment on its curiosity value or beginning to explain it away, however, it is appropriate to ask to what *Suffixaufnahme* actually is an alternative.

Bearing in mind rationalizations like those pioneered by Bopp and Finck, it would be unwise to adopt too narrow a view on parts of speech and on the nature of syntactic relationships in surveying the range of options that is to include *Suffixaufnahme*. The following taxonomy of marking patterns is therefore intended to be neutral (a) as to whether the nominal to be related to another is a noun or something else (such as a derived adjective), and (b) as to whether its relationship is one of attribution or of some other kind (such as apposition)—and indeed, whether this relationship is that of an immediate adnominal constituent or not. The nominals in relation will be neutrally referred to as "primary" and "secondary." Attributes are prototypical secondaries vis-à-vis their heads, and they provide the bulk of the subsequent examples; but on referential and distributional grounds, secondary rank is also justified for the appositum in apposition or for a nominal indirectly related to another as a secondary predicate or the like.

In encoding expressions containing primaries and secondaries there are two complementary tasks (as Heinrich Winkler had not failed to grasp): to identify the relations which the two nominals have in the expression in which they occur, and to indicate which are the nominals to be related to one another. The relations identified may be those of secondary (No. 1 in Table 1.1) or of primary (No. 2) or of both (No. 3), with the markers normally associated, morphologically or syntactically, with the respective nominals themselves. **Relatedness**-indicators may occur on the secondary (No. 4), reflecting some property of the primary that it belongs with (such as its number, gender/class, person, or case); or they may be on the primary (No. 5), reflecting some property of the secondary that it belongs with, or on both (No. 6). If relatedness-indicators are specific to particular constructions, they may thus also serve to identify relations. (For example, in languages where attributes are indicated on nouns and subjects or objects on verbs, such person-number marking is sometimes formally differentiated, thus identifying its carriers as either a nominal head or a verbal predicate.) The two basic marking techniques may be used individually (Nos. 1–6) or in combination (Nos. 7–15). In combined **relationship**-identification and relatedness-indication the marking may be separate, as shown schematically in Table 1.1, or cumulative, with single markers being simultaneously relationship-identifying and relatedness-indicating.

There may alternatively be markers of the entire construction, linking primary and secondary without forming a morphological co-constituent of

Table 1.1. Patterns of Marking

	Primary	Secondary
1.	X	Y-sec
2.	X-prim	Y
3.	X-prim	Y-sec
4.	X	Y-x
5.	X-y	Y
6.	X-y	Y-x
7. (=1.+4.)	X	Y-sec-x
8. (=1.+5.)	X-y	Y-sec
9. (=1.+6.)	X-y	Y-sec-x
10. (=2.+4.)	X-prim	Y-x
11. (=2.+5.)	X-prim-y	Y
12. (=2.+6.)	X-prim-y	Y-x
13. (=3.+4.)	X-prim	Y-sec-x
14. (=3.+5.)	X-prim-y	Y-sec
15. (=3.+6.)	X-prim-y	Y-sec-X
16.	X	Link Y
17.	X	Link-x Y
18.	X	Link-y Y
19.	X	Link-x-y Y
20.	X	# Y
21.	X	+ Y

either (No. 16); such links ("associative" markers or lexical items such as 'thing', 'possession/belong', 'place') may themselves be combined with indicators of the nominals thus related (Nos. 17–19), and the nominals may carry additional markers of their relation. Lastly, relationship-identification and relatedness-indication may be entrusted to the linear ordering of primary and secondary, joined in syntactic (No. 20) or morphological (No. 21) construction, either without any further segmental or suprasegmental marking or accompanied by any of the marking patterns above.

Table 1.1 lists all twenty-one marking patterns that can be distinguished along such functional lines.³¹ Lower-case letters *x* and *y* symbolize any properties of the corresponding primaries or secondaries (represented by upper-case letters *X* and *Y*) that may be utilized for relatedness-indication; *-prim* and *-sec* symbolize any markers of the respective relations.


The more plentiful the marking, the safer. Pattern No. 15 leaves little to be desired: either nominal is marked for its relation as well as for its partner, precluding any misinterpretation. While in general one would expect languages to strike a balance between clarity and economy and to avoid such formal overexpenditure, it is especially in attributive constructions, rather than in verbal ones, that relational non-ambiguity is at a premium.³² Sometimes the safety precautions of double or even triple marking, as in Nos. 3, 7, 8 and 9, 13, 14, are indeed being taken; nonetheless, it is still some of the formally more generous patterns that are cross-linguistically least favored,

with Nos. 10 and 11 (both double marking), 12 (triple marking), and 15 (quadruple marking) being unrepresented in my current **sample**.³³

In the following subsection all attested patterns except Nos. 20 and 21 are illustrated and sparsely annotated, with examples mostly culled from standard reference grammars (not specifically acknowledged here). Many, perhaps most, languages utilize more than one pattern; sometimes these alternatives are mentioned, though normally without dwelling on the factors—such as the alienability or inalienability of possession—that determine the choices between them.³⁴

3.2. Illustration

No. 1: **X Y-sec**

- (36) Latin (Italic, Indo-European)
 domu-s/-ī rēg-is
 house-NomSg/DatSg king-GenSg
 '(to) the house of the king'
 domu-s frātr-is reg-is
 house-NomSg brother-GenSg king-GenSg
 'the house of the brother of the king'
- (37) Mangarayi (ungrouped, Australian)
 na-muyg ŋaya-Bagurgiya
 NomMasc-dog,,,, GenFem-Bagurniya_{Fem}
 'Bagurgiya's dog' (alternatively No. 8 (71))
- (38) Igbo (Kwa, Niger-Congo)

 ísí éyú
 head goat:Ass
 'the head of a goat' (both words have high tone on all syllables, as in isolation, but there is a pitch-fall or 'downstep' on the attribute, functioning as a suprasegmental associative marker)
- (39) Israeli Hebrew (Northwest Semitic, Afroasiatic)
 talmid-im šel zamar-im
 student_{Masc}-PlMasc of singer_{Masc}-PlMasc
 'students of singers' (known as periphrastic genitive; alternatively Nos. 2 (45), 8 (69), and 14 (77))³⁵
- (40) English (Germanic, Indo-European)
 coast-al waters
 mother-ly kisses
 royal [< king-ly] palace
- (41) Sumerian (isolate, Ancient Near East)
 é lugal-ak
 house king-Gen
 'house of the king'

é lugal-ak-a

house king-Gen-Loc

'in the house of the king' (cf. also (14) above; alternatively No. 8 (66))

é šeš lugal-ak-ak-a

house brother king-Gen-Gen-Loc

'in the house of the brother of the king'

- (42) (Late) Elamite (isolate, Ancient Near East)

siyan d.**Inšušinak-ni(-)ma**

temple **Inshushinak-Gen(-)in**

'in Inshushinak's temple' (alternatively Nos. 4 (50) and 5 (61))

- (43) Kanuri (East Saharan, Nilo-Saharan)

tátà kámu-vè-qa rúskínà

son woman-Gen-Acc I=have=seen

'I have seen the woman's son' (alternatively No. 8 (71))

Latin, Mangarayi, Igbo, and Israeli Hebrew illustrate the marking of secondaries by suffixes, prefixes, tone, and prepositions respectively, with the affixes happening to cumulate case and another inflectional category (number in Latin, gender/class in Mangarayi). English will do to show that the marking of secondaries may be derivational rather than inflectional, with basic nouns uncontroversially recategorized as adjectives. Sumerian, (Late) Elamite, and Kanuri—as well as Aranda (22) and Alyawarra (30), appearing in Section 1—differ only superficially from Latin, insofar as the markers of secondary status, like all other case marking, occur at the end of the whole phrase of which they are part rather than being bound to their **nominals**.³⁶ If a secondary follows its primary, it will accordingly acquire the case which encodes the external relationship of the primary in addition to its own secondary marking; and since attribution is recursive, a batch of cases may accumulate on the last member of the entire phrase (three are exemplified for **Sumerian**).³⁷

No. 2: *X-prim Y*

- (44) East Aramaic (Northwest Semitic, Afroasiatic)

bne mātā

sons=Const village

'villagers' (bne being the construct state of *bnūni*)

- (45) Israeli Hebrew (Northwest Semitic, Afroasiatic)

talmid-ey zamar-im

student_{Masc}-ConstPlMasc singer_{Masc}-PlMasc

'students of singers' (known as synthetic genitive; alternatively Nos. 1 (39), 8 (69), 14 (77))

- (46) Arbore (Lowland East Cushitic, Afroasiatic)

hikič-i hóǵǵattu

axe-Head laborer

'(the) laborer's axe' (cf. (47) at No. 3; vowel-final nouns take none of the head suffixes, thus exemplifying No. 21, disregarding possible tonal marking of attribute alone or of both attribute and head)

Affixal or other markers identifying the relation of primary rather than secondary — prominent in, though not exclusive to, Afroasiatic — are traditionally referred to as "states" rather than "cases;" a nominal is in the construct state, contrasting with the absolute state, when accompanied by an attribute. In Israeli Hebrew, the suffix which identifies the noun as a primary also marks its number and gender.

No. 3: *X-prim Y-sec*

- (47) Arbore (Lowland East Cushitic, Afroasiatic)
 hikič-i hóǵǵattu-t
 axe-Head laborer-Gen
 '(the) laborer's axe' (genitive is optional, cf. (46) at No. 2)
- (48) Ndunga (Adamawa-Eastern, Niger-Congo)
 ma-1-8 ta ṅgúlù
 head-ClassNumberIII-Const of pig
 'head of a pig' (ta may be a linking particle rather than a co-constituent of the secondary, in which case Ndunga would exemplify pattern No. 16, with additional marking of the primary function; alternatively No. 13 (75))
- (49) Pitta-Pitta (Pama-Nyungan, Australian)
 kupakupa-ga t̪i̪i-wara-lu
 old= man-Dat brother-Possessed-Erg
 'the old man's brother'

Markers identifying a nominal as a primary accompanied by a possession, as here illustrated from Pitta-Pitta and glossed as 'Possessed', are sometimes referred to as cases among Australianists; on this analysis, double case marking may ensue from primary nominals further attracting the case which encodes the external relation of the entire phrase, as illustrated in (30).

No. 4: *X Y-x*

- (50) Elamite (isolate, Ancient Near East)
 pahi-r sunki-p-r(i)
 protector-3SgAnim king-3P1-3SgAnim
 'protector of kings' (alternatively Nos. 1 (42) and 5 (61))
- (51) Pitjantjatjara (Pama-Nyungan, Australian)
 ngayu-la kata-ngka
 me-Loc head-Loc

'on my head' (such case agreement is only used with body parts in part-whole relationships)

- (52) Ritharngu (**Pama-Nyungan**, Australian)

nu-gu dawal

you-Gen country (Abs)

'your country'

nu:-kala-li? dawal-li?

you-Lig-All country-All

'to your country' (such case agreement is only used with locative, allative, ablative, and pergressive as primary cases) ~

- (53) Alawa (**Maran**, Australian)

gguyumu-ndu ggudar-if

nose-Loc hill-Loc

'along the point of the hill' (part obligatorily precedes whole; with alienable possession: X-Case Y-Gen, i.e. No. 1)

- (54) Classical Armenian (Indo-European)

bazmowt'-eamb zawr-awk'-n Hay-oc'

crowd-InsSg force-InsPl-Def Armenian-GenPl

'with the crowd of the forces of the Armenians' (cf. (17); attested, as an alternative to No. 1, only with ablative or instrumental as cases of the primary; otherwise No. 1, as exemplified by the second attribute, is obligatory)

- (55) Middle Hittite (Anatolian, Indo-European)

^DKumarbiy-aza E-ir-za

Kumarbi-AblSg house-AblSg

'out of Kumarbi's house'

- (56) Ancient Greek (Hellenic, Indo-European)

Dēiopítē-n outasen ōmo-n

Deiopites-AccSg he=wounded shoulder-AccSg

'He wounded Deiopites' shoulder; he wounded Deiopites at the shoulder' (an alternative to No. 1 in certain constructions, often involving nominals denoting parts and wholes, where it is unclear which is primary and which is secondary and whether they are co-constituents³⁸)

- (57) Latin (Italic, Indo-European)

sen-em dein dēdolābo viscer-a

old=man-AccSg then I=will=hew intestine-AccPl

'then I will hew away the intestines of the old man' (alternative to No. 1 under roughly the same circumstances as in Greek, (56)³⁹)

Among the morphological categories through which secondaries may indicate which primaries they are to be related to, those illustrated from Elamite—person, number, and animacy—are fairly common. The case of the primary is utilized far less frequently for this purpose, and apparently

never fully productively. There are probably few languages other than the Australian and ancient Indo-European ones listed at (51)–(55)—to which Martuthunira (35) must be added—in which the sole (segmental) marking of secondarihood consists in the secondary nominal, by a process that has been called case attraction or assimilation, being in the same case as the corresponding primary. (Part-whole constructions as in Ancient Greek (56) and Latin (57) are found more frequently.) As Pitjantjatjara, Alawa, and Latin clearly show, it is not necessarily the actual case marker of the primary that gets copied onto the secondary, but rather the case category, realized by the allomorph that is appropriate for the noun on which it ends up. As the Classical Armenian and Latin examples demonstrate, when case is expressed cumulatively with number, number need not be involved in the transfer of categories from primary to secondary.

No. 5: X-y Y

- (58) Turkish (Turkic, Altaic)
 çoban kız-ı
 shepherd girl-3SgPoss
 'the shepherd-girl' (alternatively No. 8 (67))
- (59) Yagua (Peba-Yaguan, Ge-Pano-Carib)
 sa-rooriy **Tomáása**
 3SgClass-house Tom
 'Tom's house'
- (60) Early Modern English (Germanic, Indo-European)
 the daulphin of France his power
 Juno hir bedde
 estrangers their ships
 (alternative to No. 1, possibly owing to the reanalysis of the genitive suffix -es
 as the possessive pronoun (*h*)is)
- (61) Elamite (isolate, Ancient Near East)
 f.d.Nahhunte-untu par-e
 Nahhunte-untu descendants-3
 'Nahhunte-untu's descendants' (-e being number- and gender-neutral;
 alternatively Nos. 1 (42) and 4 (50))

The categories of secondaries that are utilized by primaries—perhaps accompanied by an appropriate pronoun—in order to indicate their partners frequently include person, number, and gender or class. Theoretically the case of the secondary could also be used for this purpose, in analogy to No. 4; but a relationship-identifying case marker on the secondary would define a different pattern to begin with (see further at No. 8, with reference to Berta).

No. 6: X-y Y-x

This pattern is probably found in Gola (West Atlantic, Niger-Congo), where according to Ultan (1978: 22) possessors may be marked for the noun class of the possessee and vice versa. In Mono (Uto-Aztec; Langacker 1977: 25), marking is normally according to No. 5, with relatedness-indication on **pos-sessees** in terms of person and number; but when possessor and possessee are discontinuous, being interrupted for instance by a subject pronoun gravitating to its preferred second position in the sentence, the possessor in addition copies the case suffix of the possessee:

- (62) **pahapi**"ci-na **nii** a-"ki"ki-na a-na-"pu"ni-"ti
 bear-Acc I 3SgPoss-feet-Acc it-nearly-see-Tense
 'I saw the bear's tracks'

No. 7: X Y-sec-x

- (63) Luo (Chari-Nile, Nilo-Saharan)
 duong' ma-r piny
 greatness=Sg Prep-Sg land
 'the greatness of the land'
 kinde ma-g yueyo
 times=Pl Prep-Pl rest
 'times of rest' (alternatively, especially with inalienable possession, No. 2, with primary noun in construct state and without preposition)
- (64) Swahili (Bantu, Niger-Congo)
m-toto w-a Ali
 ClassSg-child ClassSg-of Ali
wa-toto w[a]-a Ali
 ClassPl-child ClassPl-of Ali
 'Ali's **child/children**'
 ki-tanda zh-a Ali
 ClassSg-bed ClassSg-of Ali
 'Ali's bed'

The categories through which secondaries, already identified as such by adpositions (or associative markers), may point to their corresponding primaries include number (also utilized by Tsakhur (11)) and class or gender. In the most obvious instances of case being used for the same purpose, the marking of secondarihood appears to be derivational rather than inflectional: the denominal possessive adjectives of Latin, Russian, Finnish, and scores of other languages agree with their head nouns in, among other things, case:

- (65) Latin (Italic, Indo-European)
domu-s reg-i-us
 house,,,,-NomSg king-Adjct-NomSgMasc

domu-ī rēg-i-ō
 house,,,,-Dat Sg king-Adjct-DatSgMasc
 '(to) the royal house'

Insofar as the case of the primary was among the relatedness-indicating categories on secondaries marked as such, the bulk of the illustrations in Section 1—from Hurrian (8, 28), Old Georgian (1, 2, 9, 10, 15, 18, 23), Bats (12), Tsakhur (26), Ancient Greek (16), Erzya Mordva (21), Kayardild (25), Dyirbal (29), Kalkatungu (31), Warlpiri (32, 33), and Panyjima (34)—likewise fall under this pattern. To determine what is nevertheless special about these, is the aim of this volume. For the time being, a reference back to German Romany (5–7) or Slovak (24) ought to suffice as a reminder that differences may not always be clearcut.

No. 8: X-y Y-sec

- (66) Sumerian (isolate, Ancient Near East)
 lugal-ak **é-ani**
 king-Gen house-3SgAnim
 'the king's house' (alternatively No. 1 (41))
- (67) Turkish (Turkic, Altaic)
çoban-in kız-ı
 shepherd-Gen daughter-3SgPoss
 'the shepherd's daughter' (alternatively No. 5 (58))
- (68) Colloquial German (Germanic, Indo-European)
 dem König sein **Haus**
 the=**DatSgMasc** king_{,,,,}= **DatSg** Poss=**3SgMasc** house
 'the king's house'
- (69) Israeli Hebrew (Northwest Semitic, Afroasiatic)
beit-o šel Dan
 house-3SgMascPoss of Dan_{,,,,}
beit-a šel Miriam
 house-3SgFemPoss of Miriam_,
 'Dan's/Miriam's house' (alternatively Nos. 1 (39), 2 (45), 14 (77))
- (70) Ngandi (Gunwingguan, Australian)
ma-warngurra'-gu gu-rerr-'nguthayi
 Class-bandicoot-Gen Class-camp-its
 'the bandicoot's camp'
- (71) Mangarayi (ungrouped, Australian)
 na-bugbug-gu na-banam-nawu-yan
GenMasc-old=man_{Masc}-GenMasc LocNeut-camp_{Neut}-3SgPoss-LocNeut
 'in the old man's camp' (alternatively No. 1 (37))

- (72) Kanuri (Saharan, Nilo-Saharan)
 áli-bè fâr-nzǎ
 Ali-Gen horse-3Sg
 'Ali's horse' (alternatively No. 1 (43), with alienable possession only)
 áli-bè yâ-nzǎ
 Ali-Gen mother-3Sg
 yâ-nzǎ áli-bè(-qa)
 mother-3Sg Ali-Gen(-Acc)
 'Ali's mother' (inalienable possession lacks alternative No. 1)

Several formal varieties of secondarihood marking are here illustrated in combination with relatedness-marking on the primary, which in turn may be in terms of the secondary's person, number, animacy, gender or class (without full exemplification of relevant contrasts). Relatedness-marking in terms of the secondary's case—in a way the mirror image of No. 5—is probably an option in Berta, although the facts are unclear (to the extent that it must remain dubious whether there is any case marking in the first place).

- (73) Berta (Chari-Nile, Nilo-Saharan)
 šul(-a) ma:b-u
 house(-Gen) man-Gen
 'house of the man' (exemplifying No. 1 when the genitive is omitted from the head)

No. 9: X-y Y-sec-x

- (74) Huallaga Quechua (Andean, Andean-Equatorial)
 hipash-nin-ta kuya-: Hwan-pa-ta
 daughter-3Poss-Acc love-1 Juan-Gen-Acc
 'I love Juan's daughter' (only if possessor is separated from possessed;
 otherwise No. 8:
 Hwan-pa hipash-nin-ta kuya-:
 Juan-Gen daughter-3Poss-Acc love-1)

While the primary relates to its secondary in terms of person, the secondary, identified as such by its genitive, indicates its primary in terms of the case encoding the primary's external relation (accusative in this example).

No. 10: X-prim Y-x

No. 11: X-prim-y Y

No. 12: X-prim-y Y-x

All three are unattested in the present sample.

No. 13: X-prim Y-sec-x

- (75) Ndunga (Adamawa-Eastern, Niger-Congo)

k-ǎ ta kúmû ko-k-á

ClassNumberV-it of forest tree-ClassNumberV-Const

'the tree of the forest' (alternatively No. 3 (48))

- (76) Ge'ez (South Semitic, Afroasiatic)

ʔas'-a (za) hǎywät

tree_{Masc}(Sg)-Const (Particle=MascSg) life

'the tree of life' (the particle optionally marking the secondary is also used as a relative pronoun; if omitted, we have pattern No. 2)

In addition to construct-state primarihood marking and the marking of secondarihood by an attributive preposition or particle, the secondaries indicate their primaries in terms of number and gender or class, marked either on a special carrier pronoun accompanying the secondary or on the particle itself.

No. 14: X-prim-y Y-sec

- (77) Israeli Hebrew (Northwest Semitic, Afroasiatic)

talmid-ey-hem šel zamar-im

student_{Masc}-ConstPlMasc-3PlMasc of singer_{Masc}-PlMasc

'students of singers' (known as double genitive; alternatively Nos. 1 (39), 2 (45), 8 (69))

Relatedness-indication on the primary is in terms of the secondary's person, number, and gender.

No. 15: ~~X-prim-y~~ Y-sec-x

Unattested in present sample.

No. 16: X Link Y

- (78) Balanta (West Atlantic, Niger-Congo)

bko ne esige

head of cow

'the cow's head'

No. 17: X Link-x Y

- (79) Biafada (West Atlantic, Niger-Congo)

boofa babe usa

head,,,, of=Class man

nnaga bbe usa

cow_{Class} of=Class man

'the man's head/cow'

No. 18: X Link-y Y

- (80) Nalu (West Atlantic, Niger-Congo)

gki gam nam-cel

head of=Sg Sg-man

ŋki gga be-cel

head of=Pl Pl-man

'the man's/men's head'

No. 19: X Link-x-y Y

- (81) Laragia (Larakian, Australian)

mangulmili-ma bilo-va bir-nagi-ma

canoe-ClassIV man-ClassI ClassI-3SgPoss-ClassIV

'the man's canoe' (only if possessor is human and alienable possession does not belong to the same class but requires an independent possessive pronoun;

otherwise No. 18:

gwiɟarmaŋ-gwa madjir-a bie-nagi

feather-ClassV bird-ClassI ClassI-3SgPoss

'the bird's feather')

- (82) Maasai (Eastern Sudanic, Chari-Nile, Nilo-Saharan)

ɔl-cərə́ lɔ́ l-payyán

MascSg-friend of=Masc^{Prim}=MascSg^{Sec} Masc-elder

'friend of the elder'

il-cərə́-ta lɔ́ l-payyán

MascPl-friend-Pl of=Masc^{Prim}=MascSg^{Sec} Masc-elder

'friends of the elder'

ɔl-cərə́ lɔ́ l-payyan-í

MascSg-friend of=Masc^{Prim}=MascPl^{Sec} Masc-elder-Pl

'friend of the elders'

ɔl-cərə́ lɛ́ ŋ-kerai

MascSg-friend of=Masc^{Prim}=FemSg^{Sec} FemSg-child

'friend of the child'

en-tókì ɔ́ l-payyán

FemSg-thing of=Fem^{Prim}=MascSg^{Sec} Masc-elder

'thing of the elder'

en-tókì 35 l-payyan-í

FemSg-thing of=Fem^{Prim}=MascPl^{Sec} Masc-elder-Pl

'thing of the elders'

Relatedness-indication on a linking element, itself a pronoun agreeing in person and number with the primary in Laragia, is preferably in terms of class and/or number in patterns Nos. 17–19. In Maasai the linking particle relates to the primary solely in terms of gender and to the secondary in terms of both gender and number, consisting of *l-/Ø-* for masculine/feminine primary, and *-ɔ́/-é* for masculine/feminine singular secondary and *-ɔ́* for plural secondary.

4. Tema con variazioni

4.1. The Prototype

Suffixaufnahme has traditionally been seen as a special instance of pattern No. 7, X Y-sec-x, although there has been the occasional temptation, not yet overcome **completely**,⁴⁰ to lump it with "Suffixhaufung," i.e. that variety of pattern No. 1, X Y-sec, in which all case marking accumulates at the end of a phrase, with phrase-final secondaries thus carrying the case of their primary (not itself case-marked) in addition to their own. Now, in order to avoid underestimating or exaggerating its peculiarity, it is necessary to get some preliminary idea of (a) the relationship of this pattern to others, (b) its relationship to other instances of the same pattern, and (c) its range of formal variation. Reassuringly, there is some resemblance among the prospects set out in the preview to follow, Moravcsik's final retrospective, and what is sandwiched in between, although the viewpoints and highlights will often be found to differ.

In what can be recognized as the prototype of Suffixaufnahme there is a nominal consisting of (what there are reasons to believe is) a **noun or a personal pronoun** in a relationship of (what there are reasons to believe is) **attribution** to another nominal, in (what there are reasons to believe is) the **basic** form that attributive constructions take in the language concerned, with the head nominal **morphologically** marked by a case **suffix** for its external syntactic relation, with the (bona fide) attribute carrying (what there are reasons to believe is) the **inflectional** marking of **genitive case**, and—crucially—with the attribute **itself** in addition **separately** marked for the **same** case, **plus** perhaps further categories expressed by suffixes, as the head. Words in boldface refer to parameters for possible variation; parentheses forebode controversy.

Marking patterns in Chukchi and perhaps other **Chukchi-Kamchatkan** languages (whose "possessive" forms largely correspond to Indo-European-style genitives), Old Georgian and perhaps further Kartvelian languages and dialects, Bats (pending disconfirmation of the data in Schiefner 1856), Hurrian and Urartian, Awngi, and many Australian languages—and nowhere else—can reasonably, if not always uncontroversially, be supposed to answer to this description. The following samples exemplify what is covered extensively later in this volume by Koptjevskaja-Tamm for Chukchi, Boeder for Kartvel, Wilhelm and Wegner for the Ancient Near East, Hetzron and Aristar for Cushitic, and Schweiger, Austin, Dench, and Evans for Australian:

(83) Chukchi (Chukchi-Kamchatkan)

Rulta-n-ine-k tumg-ak

Rultyn-Sg-Poss-Locfriend-Loc

'at Rultyn's friend'

- (84) Old Georgian (Kartvel, Caucasian)
 perx-n-i [. . .] kac-isa-n-i
 foot-P1-Nom [. . .] man-Gen-P1-Nom
 '(the) feet of the man'
- (85) Bats (Northeast or North-Central Caucasian)
 bakhe-v th̃ɛ dad Daivth-e-v
 mouth-Instructive our father David-Gen-Instructive
 'through the mouth of our father David' (=12a above)
- (86) Hurrian (Hurrian-Urartian)
 šēn-iffu-ūe-nē-ž ašti-ž
 brother-1SgPoss-Gen-ArtSg-Erg wife-Erg
 'my brother's wife'
- (87) Urartian (Hurrian-Urartian)
 Haldi-i-ne-ni alsuiši-ni
 Haldi-Gen-ArtSg-Ins greatness-Ins
 'through the greatness of Haldi'
- (88) Awngi (Central Cushitic, Afroasiatic)
 wolijí-k^w-des aqi-k^w-des ḡán-ká-des
 old-Gen^{P1}-Abl man-Gen^{P1}-Abl house-P1-Abl
 'from the old man's houses'
- (89) Yidiny (Pama-Nyungan, Australian)
 wagal-ni-ggu gudaga-ggu
 wife-Gen-Erg dog-Erg
 '(my) wife's dog'

With the exception of Chukchi (and possibly Kerek, Koryak, Alutor, and Itelmen, its relatives) and Awngi, all these languages or families with prototypical *Suffixaufnahme* are old acquaintances from the historical narrative above.

4.2. More or Less Relational Marking

4.2.1. Case marking of nominals for secondariness as well as for the case of the primary they belong with is to be found in more than one pattern of Table 1.1. No. 7, not always easily distinguished from No. 17, X Link-x Y (with the linking element generally tending toward the secondary — but there are presently no such examples with case being utilized for relatedness-indication), shows such double marking of secondaries without further adornments, while Nos. 9, 13, 15, and 19, containing Y-sec-x, add markers on the primary (or on the link) identifying it as such *and/or* indicating its partner.

As long as their Y-sec-x part meets the specifications of *Suffixaufnahme*, such patterns with more lavish marking presumably warrant being lumped

together with their more economical counterparts; in functional terms, at any rate, their similarity to Nos. 7/17 is evidently closer than that of the "suffix-accumulating" variety of No. 1, not practicing relatedness-indication at all.

Empirically, though, such patterns turn out to be very unpopular, Representing the ultimate in formal marking, No. 15, X-prim-y Y-sec-x, is probably too cumbersome to be used anywhere. No specimen of No. 13, X-prim Y-sec-x, is on record where relatedness-indication is by case; in the examples given above the head is in the construct state and lacks case marking for its external syntactic relation. Nos. 9 and 19, X-y Y-sec-x and X Link-x-y Y, are in fact attested, but the kinds of Suffixaufnahme found in Quechua and Maasai deviate from the prototype, as will be seen presently.⁴¹

4.2.2. Comparing No. 7 (and No. 17) to patterns whose marking is minimally less extensive, No. 1, X Y-sec (and No. 16, X Link Y, in respect to No. 17) only differs from it by doing without relatedness-indication, while No. 4, X Y-x, instead forgoes relationship-identification on the secondary. Analogously, all further patterns containing Y-sec-x are more extensive by one degree than corresponding patterns containing either Y-sec or Y-x.

However easily such hyperclasses can be defined by downplaying or ignoring individual markers present on secondaries, they need to prove their worth by figuring in typological generalizations and perhaps also in diachronic scenarios of transitions between classes.

A priori, at any rate, pattern No. 4 would seem to be a good candidate for higher-level conflation with No. 7, with case apparently being the least common choice among the categories utilized for relatedness-indication in both patterns. Of the few languages of pattern No. 4 that opt for case, virtually all (only Ancient Greek and Latin excepted) are relatives and/or neighbors of languages of Australia, the Caucasus, or the Ancient Near East in which Suffixaufnahme occurs in its prototypical form, owing to additional relationship-identification on secondaries—which is absent in the relevant constructions of Pitjantjatjara, Ritharngu, Alawa, Classical Armenian, Middle Hittite, Ancient Greek, and Latin. These areal and genetic distributions suggest that the relatedness-indicating part of the pattern may have been borrowed, or alternatively that the relationship identifying part may have been lost. Insofar as the case marking on secondaries in pattern No. 4 is to be accounted for in terms of a process of case attraction or assimilation, one might argue that secondaries are indeed case-marked for their own relationship "underlyingly" and that this case marking is then exploited, following the genius loci, for the different purpose of relatedness-indication, undergoing the appropriate changes. The difference of such case attraction from Suffixaufnahme would thus be that nominals being assigned two cases—once by government, once by agreement—give the latter requirement precedence over the former (see further Moravcsik on this theme). When case is expressed on its own, secondaries may or may not accommodate two such cases; when case is cumulated with number or another category, they tend to

tolerate no more than one. Doubly-case-marking Old Georgian would be exceptional in this **respect**, since Suffixaufnahme is not precluded by case being cumulated with **number**.⁴²

There may in fact be transitions between the suffix-accumulating varieties of No. 1 and No. 7, the two patterns sometimes lumped together wholesale under the label of Suffixaufnahme understood broadly. Thus, basically, Oromo (or **Galla**) is purely relationship-identifying: it has secondaries in the genitive, and a case suffix (or perhaps rather an enclitic) marking an external relation of the entire NP other than those of subject, direct object, and attribute is added to the secondary in the genitive as the last member of the NP (Tucker and Bryan 1966: 515, Gragg 1976: 182–184):

- (90) a. ilm hayy-dd
 son (Abs) chief-Gen
 'the son of a chief' (direct object)
- b. ilm hayy-úú-tí
 son (Abs) chief-Gen-Dat
 'to the son of a chief'

When they are subjects, nouns are in the nominative, and this relational marking—unlike dative, etc.—is not passed on to the last word of the NP:

- (90) c. ilm-i hayy-uu
 son-Nom chief-Gen
 'the son of a chief' (subject)

By this unusual turn, which seems unparalleled in Lowland East Cushitic (in Somali, for instance, primaries are always in the **absolutive/accusative** and all external case marking is added to the genitive marking of secondaries) or indeed elsewhere, the external relation of NPs is thus marked twice: on the primary, where nominative contrasts with absolutive depending on whether the NP is subject (90c) or non-subject (90a/b); and on the secondary, whose own genitive suffix is followed, or not, by a further case marker depending on whether the NP is an indirect or oblique object on the one hand (90b) or a subject or direct object on the other (90a/c). In a way, such interdependent case markings—wherea dative or other post-genitival case on the secondary implies absolutive on the primary, and nominative on the primary implies no further post-genitival case on the secondary—serve **the** purpose of relatedness-indication. It is when secondaries carry two overt cases, as in (90b), that the similarity to Suffixaufnahme is closest.

4.3. Aufnahme of Case or Other Categories

Owing to its functional rationale, the particular categories used for relatedness-indication were disregarded in the typology of Table 1.1. Thus Luo and Swahili,

for example, as well as Finck's Subya, join Chukchi, Old Georgian, Hurrian, Awngi, and Yidiny patternwise; and their application for membership in the exclusive circle of Suffixaufnahme languages—or indeed, a little less exclusively, of Aufnahme languages, considering that the elements resumed in Swahili are prefixes—might therefore be sympathetically considered. Occasionally such languages have indeed been admitted: recall Ferdinand Bork on Tsakhur and Elamite and Grande on Mishnaic Hebrew. Of course, subtypes can easily be distinguished depending on whether or not case is among the categories put to such use. Again, the question is whether this is a distinction that matters.

A positive answer is suggested by the narrow view that has traditionally tended to be taken on what is to be regarded as Suffixaufnahme proper. However, as far as I can see, the point has never really been argued that Luo, Swahili, Subya, Mishnaic Hebrew, and their kind differ from the founder members of the Aufnahme club in anything other than the choice of relatedness-indicating categories—for instance, in the syntax of attribution. (Finck had surmised, though, that the relevant constructions in Swahili's relative Subya are appositive rather than attributive.) In fact, it does not assist this argument that this choice is virtually forced on a language, depending on the availability of case marking on primaries in the first place.⁴³ On the other hand, the comparative infrequency of relatedness-indication on secondary nouns in terms of case, vis-à-vis the ordinariness and wider genetic and areal spread of the agreement categories of number, gender/class, or person, might bespeak some special status. Diverse structural correlates of relatedness-indication by means of case or non-case would also underline the significance of this distinction; however, previous suggestions to this effect, recorded in Section 2, have not been unambiguous and need thorough checking. What the present volume has to offer in this respect sheds little light on the typological unity or diversity of case and non-case Suffixaufnahme, since the latter is largely disregarded.

What all examples illustrating pattern No. 7 above have in common is that the categories concerned, case or non-case, are overtly marked on the primaries themselves. This is not necessarily so for all relatedness-indication: distinctions of person and of gender/class of the primary nominal may overtly appear only on the secondary (as in Early Modern English *Jupiter/Juno his/hir bedde*, although lacking relational identification on the secondary). An even wider view of Aufnahme phenomena might also take into account such categories lacking overt marking on primaries, suffixal or otherwise.

4.4. Aufnahme of Case Plus Other Categories

If relatedness happens to be indicated on secondaries by case, it is conceivable that case may be the only category involved in Suffixaufnahme, or that it may be accompanied by other categories. While in most of the prototypical examples given above, case ostensibly was the only category of the primary to reappear on the secondary noun, plural also did so in the Old Georgian example (84).

Obviously, as is shown by a further example from Chukchi (91), if case is expressed cumulatively with other categories, in particular number, such unsegmentable suffixes cannot possibly be torn apart, and any process pertaining to such cumulative markers is bound to involve both categories (or neither).

- (91) *ŋinqe-j-ərg-ine-t tumg-at*
 boy-Pl-Poss-AbsPl friend-AbsPl
 '(the) friends of (the) boys'

Conceivably, the category cumulated with case could simply be disregarded in indicating relatedness, with case mapped correctly onto the secondary and with number returning to unmarked singular value (with AbsSg instead of AbsPl as the final suffix of 'boy' in (91)); but this never actually happens.⁴⁴

Of course, in the examples above where case is the only category involved, the primaries were not overtly marked for number, with zero forms functioning as singulars in typically agglutinative manner. When separate plural suffixes are added to those of case, both are seen to be subject to Suffixaufnahme in the Old Georgian example (84), and this indeed appears to be the general rule: there is no evidence from any of the languages with prototypical Suffixaufnahme to suggest that case may part company with overt number, as hypothetically illustrated in (84').

- (84') **perx-n-i ƙac-isa-j*
 foot-Pl-Nom man-Gen-Nom
 '(the) feet of the man'

Note that in Awngi (88) the plural suffix of the primary, although not literally repeated on the secondary, is nevertheless reflected in the choice of its genitive alternant. In Hurrian and Urartian the elements between the secondary's genitive and the case copied from the secondary, glossed above as singular "articles," in fact reflect the primary's number rather than the secondary's. As to Tsakhur, where Suffixaufnahme is less prototypical (see Sections 4.12 and 4.15), the observations of Bork (11) and Mel'čuk (26) combine to show that here too both case and number are involved in relatedness-indication.

In case attraction, by contrast, the number of the primary may be dissociated from its case. Recall that in Classical Armenian, when secondaries exchange their genitive so as to conform to the ablative or instrumental of the primary, exemplifying pattern No. 4, their number as such remains uninfluenced by the primary's number:

- (92) *bazmowt^ε-eamb zawr-awk^ε-n . . .*
 crowd-InsSg force-InsPl-Def . . .
 'with the crowd of the forces . . .' (=54)

While it is not uncommon for nouns to inflect for number but not for case, case inflection without number inflection is rare. Number is thus very likely to

be a second inflectional category whenever case is one. If Suffixaufnahme is appropriately characterized, then, as inflection-Aufnahme in languages where noun inflection includes case, case-Aufnahme is very likely to be accompanied by **number-Aufnahme**.⁴⁵ When number escapes attraction along with case, as opposed to Aufnahme, it is presumably because referential information would otherwise be lost.

If inflection comprises several subsystems of case marking, with cases on single nominals potentially coming in several layers, all of them ought to undergo Aufnahme on the principle that it applies generally to all inflections present on primaries—which is what they do in the most profusely case-marking language known:

- (93) Kayardild (Tangkic, Australian)
 maku-ntha yalawu-jarra-ntha yakuri-naa-ntha dangka-karra-nguni-naa-ntha
 mijil-nguni-naa-nth
 woman-Purp catch-Past-Purp fish-M.Abl-Purp man-Gen-Ins-M.Abl-Purp net-
 Ins-M.Abl-Purp
 'The woman must have caught fish with the man's net'

The secondary (in boldface) adds, after its own genitive, the relational case (instrumental) of its primary as well as the modal ablative and the oblique case (purposive) that the primary has acquired owing to its further syntactic associations in Kayardild (cf. (25) above, and see further Dench and Evans 1988 and Evans in this volume).

In principle Suffixaufnahme might even extend beyond inflection, copying all morphological markings of primaries onto secondaries. It hardly ever does, though. For Hurrian, certain adverbial and derivational suffixes have been mentioned as accompanying the essive case in Suffixaufnahme; but the constituent parts of the relevant suffix conglomerates have so far resisted unequivocal identification.

4.5. *Aufnahme of All or Some Cases*

It is tacitly understood that whenever case is subject to Suffixaufnahme, all terms realizing this category participate in the process; and analogously for number and perhaps further inflectional categories involved. Theoretically, however, it would be possible for Suffixaufnahme to be limited to any arbitrary or natural subset of cases (or numbers).

Where case is used for relatedness-indication in the manner of pattern No. 4, X Y-x, several languages do indeed impose such limits. Ritharngu (52) copies only the locative, allative, ablative, and pergressive from primaries onto secondaries; Classical Armenian (54) copies only the ablative and instrumental, and Ancient Greek (56) and Latin (57) preferably only the accusative.

In languages where secondaries are more elaborately marked Y-sec-x,

analogous restrictions do not seem to obtain. What may happen, however—**preferably** on the condition that the marking of secondariness and of relatedness-indication in terms of case are fused, as illustrated presently in Section 4.12—is that the case contrasts on secondaries are fewer than the corresponding ones on primaries. Thus in the Tsez family of Northeast Caucasian, cases come in two subsets, direct (nominative) and oblique (comprising all other cases), with the latter often adding a stem formative; the contrast of **genitives** on secondaries is only binary, reflecting that between direct and oblique (rather than between all individual cases) on primaries (see Kibrik in this volume). In the Cushitic languages Darasa and Burji, where relatedness-indicators on secondaries are less easily segmented than in Awngi, the genitival alternation is likewise a two-way, i.e., minimal one; but here the case paradigm itself has no more than three members in the first place. On Boeder's interpretation (in this volume) of the alternation between short and long genitive (-is vs. *-isa*) in Old Georgian as determined by the head being either in the absolutive (the only case without overt suffix) or in any of the other cases, this would be an analogous instance of the reduction of a case paradigm to a two-way contrast for purposes of relatedness-indication; however, relatedness-indicating -a would here be segmentable from relationship-identifying -is.

4.6. Aufnahme of Suffix, Prefix, or Tone

4.6.1. The very term "Suffixaufnahme" implies a constraint on the expression of case (plus perhaps further inflectional categories) amenable to Aufnahme. Nonetheless, as illustrated above at (36)–(38), morphologically bound relationship-identification of the kind traditionally regarded as case marking is formally diverse, creating a potential for variation.

Considering the overwhelming predominance of case suffixation, it is not in fact surprising that Aufnahme should prototypically involve suffixes rather than prefixes. Contrary to occasional claims, however, case prefixes are not nonexistent. Languages where at least some case marking on nouns or pronouns is arguably prefixal, as opposed to prepositional, are to be found in Australian (Mangarayi, Nungali, Burarra, Mara, and Alawa—five non-Pama-Nyungan languages of the Northern Territory that are geographically very close to one another, but with only Mara and Alawa as co-members of a low-level genetic group), Philippine Austronesian (Murut), Indo-European (Classical Armenian), Ugric (Hungarian⁴⁶), South Semitic (Amharic), Kwa (Idoma), South Eastern Bantu (Zulu), Khoisan (Eastern Bushman), Penutian (Coos, Siuslaw, Tsimshian), Hokan (Huamelultec Chontal), and Salish (Squamish).⁴⁷ There are prefixes, then, that are in principle available for Aufnahme.

When searching for actual instances of Prefixaufnahme, one is encouraged by the observation that the habitat of some languages with case prefixes is in Suffixaufnahme territory. It is surely in Australia that the expectations of such

discoveries are highest, although none is made in Schweiger's 50-language search later in this volume.

As seen earlier, Mangarayi encodes attributive constructions according to patterns Nos. 1 (37) and 8 (71) and thus does not practice *Aufnahme* at all (Merlan 1982). On the information available to me (Glasgow 1984), Burarra has "descriptives" (attributive adjectives) which agree in case and class with their heads, but its possessive pronouns lack such agreement, and there does not seem to be a genitive case or its equivalent.

Alawa's cases are suffixal, but gender-marked nominals (most feminines and agreeing adjectives, and a few masculines, mainly kin terms) have a prefix distinguishing gender as well as case (nominative *an-lna-*, all other cases *a?-la-*, feminine and masculine respectively), and these lack a separate ergative suffix. Alienable possession is expressed according to pattern No. 1, and inalienable possession according to pattern No. 4, with the secondary (possessor) copying the case of the primary (possessed) but lacking genitival marking (see above, (53)). Unfortunately, Sharpe (1970, 1976), my source for Alawa, does not include examples analogous to (53) with the primaries and possibly the secondaries carrying such gender-cum-case prefixes — schematically, *a?-PRIMARY-Loc (aʃ-?)SECONDARY-Loc*.

Closely related Mara (Heath 1981) has five cases likewise marked by suffixes, including a genitive or rather a more general purposive, plus a zero-marked nominative. Class and number prefixes, which distinguish masculine singular, feminine singular, neuter, dual, and plural, come in two sets, one for absolutive (intransitive subject and direct object, where case is nominative) and another for oblique relations (including transitive subject and instrument, also marked by nominative case), and thus they participate in relational marking. Such prefixes of primaries reappear on secondaries in the genitive just as their case suffixes do, in constructions which thus conform to pattern No. 7 and exhibit both *Präfixaufnahme* and *Suffixaufnahme*, both without ligative:

- (94) a. *n-ŋa-ɾadbur n-jawuru*
 Class-Neut^{Abs}-camp_{Neut} (Nom) Class-3Sg=Gen
 'his camp'⁴⁸
- b. *ña-ɾadbur-yu(r) ña-yawuru-yu(r)*
 Neut^{Obl}-camp_{Neut}-All Neut^{Obl}-3Sg=Gen-All
 'to his camp'

No example with a noun instead of a pronoun as secondary could be found.

Nungali (a member of the Djamindjungan group, now probably extinct; cf. Hoddinott and Kofod 1976 and Bolt, Cleverly, and Hoddinott 1970) has five to seven cases, depending on the part of speech inflected, and four noun classes (below identified by roman numerals). These classes are distinguished by prefixes that simultaneously distinguish the cases, with elative and allative in addition taking suffixes. Pronouns have suffixes for dative and possessive.

Some nouns, mainly borrowings from neighboring Ngaliwuru, do not take these case-and-class prefixes and use plain case suffixes instead. The case-and-class prefixes of primaries are copied, *inter alia* (indeed all inflectable words related to the primary), onto secondaries marked by the *dativ*/possessive (a prefix) if nominal, or by the distinct possessive (a suffix) if pronominal, again without *ligative*:⁴⁹

- (95) a. gi-garg-ina gi-ya-mad
 DatI-me-Poss DatI-Male-sibling_I
 'to/of my brother'
- b. gi-ganji-garug gi-ya-mad
 DatI-DatII-woman_{II} DatI-Male-sibling,
 'to the woman's brother'

The example with a pronoun as secondary (95a) is attested in Hoddinott *et al.*; that with a noun (95b) is constructed and must be taken with a pinch of salt, according to my Australianist consultants.

In view of the scarcity of case prefixes, the chances are that Mara and Nungali are the only two languages in the world with *Präfixaufnahme*. Since the prefixes undergoing *Aufnahme* here happen to cumulate case with *gender/class* and possibly with number, there is no analogue to *Suffixaufnahme* involving pure case markers.

Aufnahme of case infixes or circumfixes, if there are any, has not been recorded, nor has *Aufnahme* of non-additive marking, including subtraction (such as the omission of class prefixes from nouns in certain adverbial, especially locative, relations in Eastern Nilotic) and segmental modification (such as metathesis or gradation in Estonian—e.g., *teder* vs. *tedre* 'black grouse', *tuba* vs. *toa* 'room', nominative vs. genitive singular respectively—or initial mutations in Celtic—e.g., Irish *an bad* vs. *an bhaid* 'the boat', nominative/accusative vs. genitive).

4.6.2. A further rare form of case marking, common only in Eastern Nilotic (or Paraniotic) and attested also in Cushitic (and perhaps Omotic) and Bantu, *Bantoid*, and Kwa (cf. Igbo "downstep" at (38)), is accomplished exclusively by *tone*.⁵⁰ *Tone-Aufnahme* is thus a theoretical possibility; in fact, it is not at all a figment of the imagination.

Paraniotic Maasai (Tucker and Tompo *ole Mpaayei* 1955, Tucker and Bryan 1966: 443–494) has two principal cases: accusative (or absolute), used among other things for the possessor after the particle linking it to the possession; and nominative, used among other things for subjects. The two cases are distinguished solely by tone. The tonal contrast differs depending on the tone class of the noun; compare the accusative vs. nominative contrasts in *en-tito* vs. *en-tító* 'girl' (tone class I), *in-toki-tín* vs. *in-tóki-tín* 'things' (tone class II), and *en-tóki* vs. *en-tóki* 'thing' (tone class III). (Tone marks: *á* high level, a low level, *â* high-low falling, a mid level.) Nouns are marked for gender by *pre-*

fixes, and plural is expressed mainly by suffixes, with plurals usually being in a different tone class than corresponding singulars. As exemplified above at (82), the attributive construction of Maasai conforms to pattern No. 19, X Link-x-y Y, with the linking particle relating to the primary in terms of gender and to the secondary in terms of gender and number. What was disregarded earlier is the fact that the secondary noun is always in the accusative case, marked tonally; but the primary may be in the accusative or nominative, also marked tonally, depending on its external syntactic relation. When the secondary noun is singular, the case of the primary is immaterial to the linking particle. However, with plural secondaries the linking particle consists of two vocalic segments, and their tones differ depending on whether the primary is accusative (mid level, then high level) or nominative (high level, then mid level):

- (96) a. en-toki 35 l-payyan-í
 FemSg-thing: Acc of = Fem^{Prim} = MascPl^{Sec}:Acc Masc-elder-Pl:Acc
- b. en-tóki 53 l-payyan-í
 FemSg-thing: Nom of = Fem^{Prim} = MascPl^{Sec}:Nom Masc-elder-Pl:Acc
 'the thing of the elders' (object|subject)
- c. ol-córé lóó l-ayíô-k
 MascSg-friend: Acc of = Masc^{Prim} = MascPl^{Sec}:Acc Masc-boy-Pl:Acc
- d. ol-córe lóó l-ayíô-k
 MascSg-friend: Nom of = Masc^{Prim} = MascPl^{Sec}:Nom Masc-boy-Pl:Acc
 'the friend of the boys' (object|subject)

(A colon instead of a hyphen in the glosses indicates that the marking is suprasegmental.) The linking particle that appears with plural secondaries can thus be considered an element itself amenable to case marking by tone.

The relational encoding of attribution in Maasai exceeds the minimum required for it to qualify as an instance of Aufnahme, viz. Y-sec-x or Link-x Y; illustrating pattern No. 19, with Link-x-y, rather than No. 17, it nevertheless resembles Suffixaufnahme patterns by virtue of the tonal case of the linking particle corresponding to the case of the primary.

In the (ki-)Ntaandu dialect of Kongo (central western area of Bantu) nouns fall into four tone classes and are inflected by changes in their respective patterns of high and low tones. According to Daeleman (1983), four tonal cases can be distinguished (here identified by roman numerals): a joint case for subject and object (I); another for predicative and attributive function (II); a third for the head constituent of a phrase in subject or object function (III), thus simultaneously marking headhood and external relation; and lastly one for negated predicate nominals (IV). In terms of segmental marking, attributive constructions conform to pattern No. 17 in typically Bantu manner, with a pronominal copy of the head's class-and-number prefix serving as a link between head and attribute.⁵¹ Tonal marking, however, also contributes to

identifying both the head and the attributive relation, and that of the attribute varies with the tonal case of the head. If the head is in case II, marking **predicative** function, attributes (themselves also in case II) undergo and induce further tonal alternations: they form a "tone-bridge" with their head by raising all tones between the first high tone of the head and their own last high tone; when they are of tone class 4 (such as *ma-bulukutu*, *ma-bulukutu* 'Lippia (Verbena)', case I and II forms respectively) they additionally advance their high tone to the preceding syllable, raising it to extra-high.

- (97) a. *ma-zina ma bí-ménína*
ClassNumber-name:II ClassNumber ClassNumber-plant:IIa
'[these are] the names of the plants'
- b. *tu-káyá tu ma-bulukutu*
ClassNumber-leave:II ClassNumber ClassNumber-Lippia:IIa
'[these are] the leaves of the Lippia'

(Acute indicates high tone, double acute extra-high; low tone is unmarked. IIa indicates the tonal alternations accompanying case II here.) Without the tone-bridge and high-advancement adjustments, the case II forms of the attributive nouns in (97) would be *bi-menína* and *ma-bulukutu*; without tone-bridge, the case II forms of their heads would be *ma-zína* and *tu-kaya*. When the heads of attributes occur as subject or object, they are in case III, with low tones throughout. Their attributes are in case II, as in the company of heads whose external function is predicative, but with no further tonal alternation except a shift of the high tone onto the prefix of nouns of tone classes 3 and 4 (here glossed as IIb):

- (98) a. *ma-zina ma bi-menina . . .*
ClassNumber-name:II ClassNumber ClassNumber-plant:IIb . . .
'the names of the plants . . .'
- b. *tu-kaya tu má-bulukutu tuyumini*
ClassNumber-leave:III ClassNumber ClassNumber-Lippia:IIb are=dry
'The leaves of the Lippia are dry'

Ntaandu thus represents the tonal equivalent of fused Suffixaufnahme a la Tsez and perhaps Darasa and Burji, with no (easily) segmentable markers for relationship-identification and relatedness-indication on the secondary (see Section 4.12). It is tonal case II that, inter alia, identifies secondaries, and it is the different tonal alternations associated with case II —tone-bridge and possibly high-advancement on the one hand and no further tone change or shift of high tone to the prefix on the other—that relate secondaries to primaries in tonal cases I and III respectively.

Taking into account both segmental and suprasegmental marking, the encoding of attributive constructions in Ntaandu combines patterns No. 17 (X Link-x Y, segmentally) and No. 13 (X-prim Y-sec-x, tonally). Insofar as the

overall pattern, X-prim Link-x Y-sec-x, contains Y-sec-x and this variable x represents case, the criteria for Suffixaufnahme are satisfied—except that case is expressed by tones rather than by suffixes.

It has not been determined so far whether further Bantu languages with tonal case marking, including in particular Ntaandu's central western relatives such as Hungu (or ki-Holo), (ki-)Mbundu, (ki-)Pende, (yi-)Yaka, (ci-)Cookwe, and other dialects of (ki-)Kongo, show similar tonal alternations of attributive cases (co-)conditioned by the case of the head. Cushitic and the rest of Paraniotic apparently have no analogues of either the Maasai or the Ntaandu tonal pattern at issue.

Case is sporadically distinguished by stress alternations, alone or in combination with additive marking. In the Highland East Cushitic language Kam-bata, for example, the relation of indirect object is encoded by retracting the main stress to the last syllable of nouns (Hudson 1976: 253). Stress-Aufnahme is not on record, however.

4.6.3. Case, then, lends itself to Aufnahme whether expressed by suffixes or prefixes or tones. With the scope of Aufnahme encompassing all major formal varieties of bound case marking, the traditional term is evidently too narrow. It has nonetheless been generally retained in the present volume, including the title, because Aufnahme of suffixes, however infrequent cross-linguistically, is still considerably more common than Aufnahme of prefixes or tones. Those with strong opinions about terminological precision should replace it everywhere by "case-and-other-inflection- Aufnahme."

4.7. Aufnahme of Bound or Free Markers

Grammatical markers of the external relation of primaries may be morphologically bound to stems, taking the form of affixes or of segmental or supra-segmental modifications, including tones; or they may be independent words such as adpositions, relational nouns, or serial verbs—often inclining to cliticize on their hosts, however. This distinction is a gradual one and possibly admits of intermediate species (such as phrase-bound affixes).⁵² Conceivably, the scope of Aufnahme might thus extend to any looser appendages of nominal that are functional analogues of case affixes.

However, relational markers that are not morphologically bound have occasionally been claimed not to be available at all for relatedness-indication; or, to put it the other way round, if categories figure in agreement within NPs, their expression is normally taken to be affixal rather than adpositional on this evidence alone. On this assumption, the external relation of NPs is free to be marked on both nouns and attributive adjectives in languages such as Latin where such marking, cumulating case with number and gender, is by affixation (*domu-ī rēgi-ō* house_{Masc}-DatSg kingly-DatSg Masc '(to) the royal house'); but it is perforce limited to a single marking per NP in languages such as English that employ adpositions (*to the royal to (the) house).

Contrary to this assumption, however, there are languages—Slavonic

and Baltic ones, including Old and later non-literary Russian, Old Czech, Old Serbian, and Lithuanian (Worth 1982), and also Hungarian (Tompá 1972: 180f.)—where relation-identifying elements that qualify as adpositions rather than affixes on all other counts are optionally (Slavonic, Baltic) or obligatorily (contemporary Hungarian) distributed over more than one NP constituent. In Old Russian, for example, prepositions may be repeated with attributive adjectives (99a/b) and appositive nouns (99c), but normally only when these are in postnominal position; in Hungarian, postpositions not governing an affixal case must (100a)—and some postpositions governing a non-nominative case marginally may (100b)—be repeated after a few demonstrative pronouns, which are the only NP constituents also to agree in case and number with nouns when these are overtly marked for these categories.⁵³

- (99) a. ko knjaz-ju k velik-omu
to duke,,,,-DatSg to grand-DatSgMasc
'to the grand(-)duke'
b. na sydn-o na posl-ov-o
to boat,,,,-AccSg to envoy-Adjct-AccSgNeut
'to the envoy's boat'
c. s knjaz-em s Ivan-om
with duke-InsSg with Ivan-InsSg
'with Duke Ivan'
- (100) a. e(-)fözlött a hajó fölött
this(-)above the ship above
'above this ship'
b. ez-en (??túl) a hid-on túl
this-Superessive (??beyond) the bridge-Superessive beyond
'beyond this bridge'

Adposition-Aufnahme must thus be reckoned with as a theoretical possibility.

In fact, in afterthoughts and similarly loose-knit constructions this very pattern enjoys worldwide popularity. Even English has it, with or without a pronominal copy of the primary, depending on the kind of attributive marker (preposition of vs. suffix or postposition s):

- (101) a. in the palace, in that of the duke
b. in the palace, in the duke's

Occurring in what are clearly not basic attributive constructions, such instances of Aufnahme, however, hardly qualify as prototypical.

Interestingly, in the languages where adpositions are repeated on attributes in less marginal constructions, relationship-identified nouns are not normally among the elements prompting such relatedness-indication. In Old and later non-literary Russian, where preposition-repetition has plausibly been claimed to signal a high degree of syntactic integration of the attribute or

appositum with its head (rather than special emphasis), and likewise in other relevant Slavonic and Baltic languages, attributive nouns are as a rule eligible only upon their conversion into possessive adjectives, thus failing another prototypicality criterion of *Aufnahme* (see Section 4.15).⁵⁴ Examples straightforwardly analogous to (99b), except with the attributive noun in the genitive rather than transformed into an adjective as in (102a), do not seem to be on record. What are found are a very few instances of preposition-repetition with straight genitives that precede their heads — rather than follow, as is the norm for this method of signaling joint membership in an NP; an example is (102b), where the inflection of the attributive noun and its accompanying possessive pronoun is moreover ambiguous (at least orthographically) between genitive and prepositive (Pre), the case governed by the preposition.

- (102) a. *na sydn-o na posl-a
 to boat,,, -AccSg to envoy-GenSg
 'to the envoy's boat'
- b. v tvo-ej brat'-i v votein-ax
 on your-GenSg brother-GenSg on seat-PrepI
 'on your brother's ancestral seats'

It is only on the strength of exceedingly rare and unusual examples such as (102b) that Old Russian could be credited with adposition-*Aufnahme*.

An earlier example of postposition-*Aufnahme* from Old Georgian, repeated as (103), is not fully convincing either, because *gan*, apart from retaining properties of a postposition (e.g., governing a case, viz. genitive), shows signs of increasing fusion; moreover, its copying is not perfect, with the dative taking its place on the secondary (see next section).

- (103) pir-isa-gan uymrto-ta-sa
 face-Gen-in infidel-OblPl-Dat
 'from the face of the infidels' (=7)

The elements subject to *Aufnahme* in Chukchi, Old Georgian, Bats, Hurrian, Urartian, Awngi, Yidiny, et al., exemplifying the prototype, are not so tightly fused with stems as the case inflections in, say, Latin or Russian. They are usually, and not inappropriately, analysed as suffixes rather than postpositions, although one has to bear in mind that in languages with predominantly agglutinative morphology the difference tends to be far less tangible than under flective-type circumstances. It is in this border area of rather weak morphological cohesion that *Aufnahme* appears to thrive.

4.8. *Formal or (Actual or Virtual) Categorial Copying*

The definitional requirement that the attribute be marked for the same case as the head may be construed as pertaining either to the mere form of the

marking (hence automatically to category as well) or to its category, with "category" in turn permitting either a concrete or a more abstract reading.

In the examples above from Old Georgian (84), Bats (85), Hurrian (86), Urartian (87), Awngi (88), Yidiny (89), Kayardild (93), Mara (94), and Nungali (95), the exponents of the primary's case inflection were copied onto the attribute without formal change. By contrast, in Chukchi (83, 90), and similarly in the Australian representatives of pattern No. 4, X Y-x, mentioned earlier (including Pitjantjatjara (51) and Alawa (53)), the copies were not quite true to the originals: they were instead the allomorphs of the primary's case that the phonological environment of the secondary demanded (e.g., locative *-k* vs. *-ək*, absolutive plural *-t* vs. *-at* in Chukchi, locative *-la* vs. *-ngka* in Pitjantjatjara). Presumably the inference is legitimate that whenever there are phonologically conditioned allomorphs, those appropriate for the host environment will be chosen. In Old Georgian et al., those appearing in the examples just happened to be phonologically appropriate in both primary and host environments. In accordance with the superiority of category over form, tone-Aufnahme does not consist in the mere copying of the primary's tone.

Making allowances for low-level phonological adjustments does not suffice to account for variation along this parameter: morphological conditioning may also be involved. In itself, this would not be unusual for attributive agreement; when there are different inflection classes of adjectives, for instance, it is the adjective's own inflection class that selects the allomorph of the categories in which it agrees with its head (cf. Latin *vir-i sapient-ēs* man_{PL}, *NomPl* wise-*NomPlMasc* 'wise men', not *vir-i sapient-i*). Similarly, in Latin examples of pattern No. 4, the exponent of case and number on the secondary is that of its own declension (accusative singular *-em* in (57), where the primary has accusative plural *-a*). However, the morphological alternations possible in Aufnahme patterns are less straightforward.

In Gugu-Yalanji of Queensland, Australia, the factors determining the allomorphs of case suffixes include phonological (trisyllabic vs. other word bases) and morphological ones (animate vs. inanimate word bases); whether the primary takes the animate, inanimate, or trisyllabic allomorph, the copy of this case on the secondary (regardless of its own animacy or inanimacy) is invariably the inanimate allomorph (Hershberger 1964):

- (104) Dicki-ndamun-du kaya-ngka
 Dick-Gen-Erg_{PL} dog-Erg_{Ani}
 'Dick's dog'

Although in Gugu-Yalanji the divergence between primary and secondary marking does not transcend the limits of allomorphy, there are other instances where the markings on primary and secondary arguably do not represent the same category.⁵⁵ First, in Old Georgian, the interrogative and indefinite pronoun *vin* is among the items that are exempt from overt ergative marking when used as transitive subject in clause types where other nominals would take ergative case; nonetheless, this pronoun's secondaries are in the ergative,

as with any other primaries overtly marked ergative (Boeder 1987: 42, with an alternative interpretation offered in the present volume):

- (105) vin-me . . . moca-pe-ta-gan-man
 who-Indef . . . disciple-OblP1-of-Erg
 'one of the disciples'

Other NPs have no particularly good reasons for not carrying an ergative suffix; when irregularly occurring in oblique plural form in transitive subject function, their secondaries nevertheless likewise have an ergative suffix *-man* (Boeder 1987: 48):

- (106) mitxres mydeltmo3yuar-ta da xuces-ta ma-t Huria-ta-man
 said=to=me high=priest-OblP1 and elder-OblP1 Art-OblP1 Jew-OblP1-Erg
 'The high priests and elders of the Jews said to me'

In a variation on this theme, also occurring in Old Georgian, a relational marker such as ablative *gan*, halfway between a postposition and a case suffix, is not itself resumed on secondaries but is here substituted for by the dative, a general local case but not in fact governed by the erstwhile postposition; see (103) above.⁵⁶ And in yet another variation, in Jiwarli (Mantharta group) and perhaps other Australian languages where transitive subjects and objects are each case-marked differently depending on the position the nominals hold on the animacy hierarchy, secondaries to such primaries take the subject or object cases that are required by their own animacy rather than by that of their primaries. Thus inanimate objects (such as 'camp') themselves remain unmarked in Jiwarli, while animate ones take the accusative suffix, but their secondaries in the dative case (suppletive in the 1st person pronoun) take an overt accusative suffix when animate, as alienable possessors usually are (Austin, this volume):

- (107) warri nganaju-nha ngurra panyi-ma
 not I=Dat-Acc camp (Acc/Abs) disturb-Imp
 'Don't disturb my camp!'

In order to subsume such patterns under the general heading of *Aufnahme*, as seems advisable, the notion of copying must be conceived of more abstractly. It is not only the **actual** relationship-identifying categories on primaries (or their phonologically or morphologically conditioned allomorphs) that may be used again on secondaries for purposes of relatedness-indication, but also **virtual** categories, occurring with alternative lexical realizations of primaries in the same external relationships. These may include animate, inanimate, or trisyllabic case allomorphs, as in Gugu-Yalanji; ergative or absolutive case or plural oblique for transitive subjects as in Old Georgian; genuine case or incipient **case/erstwhile** postposition for ablative nominals as in Old Georgian; or unmarked **absolutive/accusative** or marked accusative case for transitive **ob-**

jects as in Jiwarli. If there is a choice, a single alternative may be prescribed for all secondaries (inanimate allomorphs in Gugu-Yalanji, ergative in case of transitive subject primaries and dative for ablative primaries in Old Georgian); or secondaries may determine the choice in terms of their own semantics or morphological features (unmarked absolutive/accusative or marked accusative in the case of transitive object primaries in Jiwarli). If the choice is determined by the secondaries themselves, one may wonder—as Austin (in this volume) comes close to doing—whether there is any copying occurring in the first place; primary and secondary might instead be assigned their respective cases, matching only in the abstract, independently.

4.9. *Relative Order of Multiple Marking*

The order adopted in our schematic representations of relevant marking patterns has relationship-identifying markers before relatedness-indicating ones; thus, Y-sec-x rather than Y-x-sec in No. 7. Although purely conventional, this relative order (or its mirror image x-sec-Y to account for prefixation) is in fact the only one attested: no languages are on record in which a relatedness-indicating case affix is closer to the stem of the secondary nominal than is a relationship-identifying case affix, whenever forms fulfilling these two functions are segmentable. Instances of a relationship-identifying case being suffixed and a relatedness-indicating one prefixed, as in Mara (94) and Nungali (95), do not invalidate this generalization.

When relatedness-indicating case and perhaps other inflectional marking is repeated in response to hierarchical syntactic structures, with secondaries accompanying nominals that are in turn secondaries, syntactic immediacy is mirrored by linear morphological precedence (cf. Dench and Evans 1988: 6f., Plank 1990), as in this example from Old Georgian:

- (108) sasxdomel-eb-i igi msqidel-ta-j ma-t tred-isa-ta-j
 stall-P1-Nom Art (Nom) seller-ObIP1-Nom Art-ObIP1 pigeon-Gen-ObIP1-Nom
 'the stalls of the sellers of pigeons'

Both secondaries here have their own relationship-identifying inflections first (-ta ObIP1, -isa Gen); the second secondary then has the case-number of its immediate primary (-ta ObIP1) before the case of the ultimate primary (-il-j Nom). Kayardild, already noted for its several layers of case marking, is the only known language sometimes violating this mirror-image correspondence between morphology and syntax; to get around the prohibition against an oblique case (formerly also known as purposive) being followed by any other case, the two may simply be reordered (Dench and Evans 1988: 41, and Evans in this volume):

- (109) ngada kurri-jarra dangka-na yalawu-n-kina yakuri-naa-ntha mijil-nguni-naa-
 nth / *mijil-nguni-nja-na

1Sg=Nom see-Past man-M.Abl catch-Nomin-M.Abl fish-M.Abl-Obl net-Ins-M.Abl-Obl / *net-Ins-Obl-M.Abl

'I saw the man catching fish with the net'

Notwithstanding virtually unexceptional regulations elsewhere, Kayardild proves the relative order of affixation to be a potential variable in Aufnahme patterns.

4.10. Double Marking Retained, Reduced, or Replaced

Sequences of relationship-identifying and relatedness-indicating case markers on secondaries, where in principle *permissible*,⁵⁷ may undergo reduction or replacement. Though limited to certain well-defined circumstances, such special surface treatment evidently detracts from the full flavor of otherwise exemplary Aufnahme.

Not altogether unexpectedly in view of the havoc known occasionally to be wrought by morphological haplology, when adjacent relationship-identifying and relatedness-indicating inflections are overtly identical, one of them may obligatorily get omitted — as in Jiwari and Old Georgian (Austin in this volume, Boeder 1987: 47 and in this volume, and Dench and Evans 1988: 36–39):

(110) thuthu-wu purrarti-yi(*-yi)
dog-Dat woman-Dat(*-Dat)
'(of/to) the woman's dog'

(111) kar-ta kalak-ta(*-ta)
gate-OblPl city-OblPl(*-OblPl)
'the gates of the cities'

Haplology being notoriously capricious, it is not surprising either that potential victims may also survive — as does double dative in Thalanyji (obligatorily, again see Austin) or double genitive in Old Georgian (optionally):

(112) kaparla-ku wartirra-ku-ku
dog-Dat woman-Dat-Dat
'the woman's dog'

(113) 3-isa kac-isa(-jsa)
son-Gen man-Gen(-Gen)
'of the son of man'

Apart from haplology, a further possible reason for relatedness-indicating case suffixes to be dropped in Suffixaufnahme languages is the proximity of particular relationship-identifying cases. Thus in Djapu of Arnhem Land, relatedness-indicating ergative, instrumental, causal, and local cases (the last only if the primary is non-human) are omitted after a relationship-identifying oblique case (Dench and Evans 1988: 41, Schweiger in this volume):

- (114) waanga-ngur yapa-'mirringu-wal(*-ngur) ngarra-kalangu-wal(*-ngur)
 camp-Loc sister-KinProp-Obl(*-Loc) 1Sg-OblStem-Obl(*-Loc)⁵⁸
 'at my sister's camp'

This may also be the fate of relationship-identifying cases. However, the example which Dench and Evans (1988: 40) provide from Kungarakany of Arnhem Land, where the dative is omitted from pronominal possessors when it would be followed by a case marking the primary's external relation, is one of suffix-accumulation rather than Suffixaufnahme, since the primary itself is not case-marked:

- (115) lok ngirrpa(*-kini)-wu
 place 1Sg(*-Dat)-Loc
 'to my place'

Finally, instead of being omitted, a relationship-identifying case may be replaced by another case in particular morphological environments. Thus, whenever a relatedness-indicating (or other) case other than oblique, such as the modal proprietive (M.Prop), would follow the locative in Kayardild, the associative, expressing temporary possession and thus semantically not altogether inappropriate, substitutes for the locative (Dench and Evans 1988: 38):

- (116) dangka-wu yubuyubu(*-ya →)-nurru-wuru
 man-M.Prop road(*-Loc →)-Ass-M.Prop
 'the man on the road'

There apparently are no straightforwardly analogous replacements of relatedness-indicating cases; all adaptations here involve virtual categorial copying in the above sense (Section 4.8).

It would seem that some languages, such as those of the Ancient Near East, are less prone than others — especially those of Australia — to any such superficial distortion of the prototypical Aufnahme pattern.

4.11. Direct or Mediated Connection of Double Marking

The relatedness-indicating marker of case, possibly plus number or other inflection, may be added to the relationship-identifying marker of the secondary either directly or after an additional "ligative" affix (also known as a "catalytic" or "linking" affix). In the examples of prototypical Suffixaufnahme above, such ligatives occurred only in Hurrian and Urtarian. However, Yidiny (89), Kayardild (93), and Thalanyji (112) are not representative for all of Australia; other languages of the continent, including Dyirbal (117), require ligatives as well.

- (117) ŋay-gu-ŋin-du yabu-ŋu-ŋin-du baggun guda-ggu
 1Sg-Gen-Lig-Erg mother-Gen-Lig-Erg ClassII=Erg dog,, -Erg
 'my mother's dog'

While such ligatives, on the face of it, appear to be mere buffers in those Australian languages that have them, in Hurrian and Urartian they also reflect number distinctions of the **primary**.⁵⁹ However, even ligatives that are now invariable (or whose allomorphs are phonologically conditioned, as in Dyirbal) may have had some kind of phoric or pronominal function in the past; at least this would provide a rationale for the use of such additional elements, as is argued by Aristar in this volume.

In languages that employ ligatives these generally seem to be obligatory rather than optional, although occasional omissions or limitations to certain case environments have been reported.

Regardless of the past or present functions of ligatives, their presence or absence is an obvious parameter of variation, but one that does not obviously affect the prototypicality of Suffixaufnahme. To generalize from two instances, Prefixaufnahme shuns ligatives.

4.12. Separation or Fusion of Double Marking

In the Aufnahme prototype the relationship-identifying marker (genitive) and the relatedness-indicating marker (copying the primary's case plus perhaps other inflections) on the secondary nominal are separate suffixes. In a less prototypical form of Aufnahme, though one that would still seem to merit this title, the two markers are systematically fused in a single suffix not amenable to further internal segmentation. The few pertinent languages hail from areas and families also boasting prototypical Suffixaufnahme.

Recall that in Awngi (88) the primary's plural suffix *-ká* was not actually repeated on the secondary but was co-expressed with the genitive, with *-k^w* contrasting with the genitive alternants *-w* and *-t*, which are used in association with masculine and feminine singular primaries. In two other Cushitic languages (see Hetzron in this volume and Hudson 1976) such genitive alternants also reflect—among other categories of the secondary (number and gender, the latter possibly polarity-reversed) and also of the primary (proper vs. common noun)—the case of their primaries, with accusative (or absolute, the citation form) and **nominative** (the form that also serves as the base for genitival suffixing) being the only cases available.

(118) Burji (Highland East Cushitic, Afroasiatic)

a. Samee-nta amaa

Samee_{proper}-Gen wife_{fem} (Acc)

b. Samee-cci [<nti] amaa-nko

Samee_{proper}-Gen wife_{fem}-Nom

'Samee's wife'

c. k'aari-nka hogome

children_{common}-Gen horse_{nom} (Acc)

d. k'aari-nku hogom-i

children_{nom}-Gen horse_{nom}-Nom

'the children's horse' (k'aar-i is actually nominative, contrasting with accusative and citation form *k'aaro* 'children')

(119) Darasa (Highland East Cushitic, Afroasiatic)

- a. **jisso-ka dulla**
 Jisso_{Proper}-Gen stick_{Masc} (Acc)
- b. **jisso-ki dull-i**
 Jisso_{Proper}-Gen stick_{Masc}-Nom
 'Jisso's stick'
- c. **warši-nka dulla**
 dog_{common}-Gen stick_{,,,} (Acc)
- d. **warši-nṭa isso**
 dog_{Common}-Gen teeth_{,,} (Acc)
 'the dog's stick/teeth'

Taking into account all categories involved in the conditioning of genitival alternations, the final vowel—a (accusative) vs. *i/u* (nominative)—indeed appears to be analysable as the only part of the genitive suffix to vary with the primary's case and not, or not much, to be influenced by any of the other conditioning factors. (In **Burji** the gender of nominative primaries is also an influence on this vowel.) Provided the final vowel is granted morphological independence from the rest of the secondary's ending, Darasa and **Burji** do not then deviate at all from the Suffixaufnahme prototype in this respect; what distinguishes their Suffixaufnahme from that of Awngi is that the case suffixes of the primary are not copied verbatim onto the secondary, notwithstanding partial formal similarities.

In the Caucasus, Bezhta and all other members of the Tsez group except Hunzib show similar genitive alternations, conditioned by the head noun being in a direct case such as nominative or in an oblique case such as dative, inessive, or genitive itself (see Kibrik and Boguslavskaja in this volume, also for similar patterns in Tsakhur and Khinalug of the Lezgian subgroup of Northeast Caucasian):

(120) Bezhta (Northeast Caucasian, Caucasian)

- a. **abo-s is**
 father-Gen^{Dct} brother (Nom)
 'father's brother'
- b. **abo-la is-t'i-l**
 father-Gen^{Obl} brother-Obl-Dat
 'to father's brother'
- c. **is-t'i-s biLo**
 brother-Obl-Gen^{Dct} house (Nom)
 '(the) brother's house'
- d. **is-t'i-la biLo-ʔ**
 brother-Obl-Gen^{Obl} house-In (Ess)
 'in (the) brother's house'

(The presence of a separate oblique marker depends on the declension class of a noun.) Trying to analyse the genitive suffixes into separate morphological segments, one specifically genitival and the other varying with the primary's

direct or oblique case, is certainly less promising in Bezhta and its relatives than in Darasa and **Burji**.⁶⁰

When relatedness-indication is systematically fused with relationship-identification on the secondary, the contrasts in case serving the former purpose do not seem to exceed the bare numerical minimum.

Some Australian languages demonstrate that relationship-identification and relatedness-indication may happen to be fused only occasionally rather than systematically, coexisting with the prototypical situation of two separate markers for the two functions. Thus in Kayardild, whose layers of segmentable case suffixes have already been exemplified, the expected sequence of a relationship-identifying (or other) locative *-kiya* and a relatedness-indicating (or other) oblique *-inja* is replaced by an unsegmentable suffix *-kurra* (Dench and Evans 1988: 42):

- (121) nguku-ntha wuruman-kurk
 water-M.Obl billycan-Loc=M.Obl
 'the water in the billycan'

Also in Australian, it was seen earlier (Section 4.10) that relationship-identifying cases may be substituted in the vicinity of particular **relatedness**-indicating cases. In a way, such cases substitutable for each other represent a type of marking of secondaries in which corresponding primaries are simultaneously indicated in terms of their external relations, with the separate cases added afterward fulfilling this same function. Thus an associative replacing a locative in Kayardild in particular morphological environments, as in (116), already provides information about the primary, viz. that it is not in an oblique case. Similarly in Djapu, oblique replaces genitive (also called dative) on secondaries when their primaries are in the ergative, instrumental, causative, or a local case rather than in the accusative or absolutive (Schweiger in this volume, after Morphy 1983).

4.13. Aufnahme by Case-inflected Nouns, Adpositions, or Anaphoric Words

4.13.1 Prototypically, case-inflected nouns or personal pronouns themselves act as carriers of relatedness-indicating case marking. Since the markers of secondariness may be either bound or free, just like the markers identifying the external relations of primaries, adpositions identifying nominals as secondaries might conceivably do the carrying as well.

They actually do this in most modern Indic languages, including Kashmiri from the Dardic branch (Payne in this volume). Thus in Punjabi (Tolstaya 1981: 58–60) attributes are identified by the inflected postposition *dā*, whose vocalic part is changeable and varies with the gender, number, and direct or oblique case (Dct vs. Obl) of the following head noun, like the ending of ordinary adjectives:

- (122) a. mohan d-ā ghoṛ-ā
 Mohan Postp-DctSgMasc horse_{Masc}-DctSg
 b. mohan d-e ghor-e nū
 Mohan Postp-OblSgMasc horse_{Masc}-OblSg to
 '(to) Mohan's horse'
 c. mohan d-e ghor-e
 Mohan Postp-DctPlMasc horse_{Masc}-DctPl
 d. mohan d-iā ghoṛ-iā nū
 Mohan Postp-OblPlMasc horse_{Masc}-OblPl to
 '(to) Mohan's horses'

The inflection of *dā* is affected by homonymy; in particular, direct and oblique are not distinguished with feminine primaries (di if singular, *diā* if plural). Attributive postpositions such as *dā* are the only ones to inflect in Indic, presumably owing to their descent from inflecting participles of verbs of existence, causation, or transaction (such as 'be', 'make', 'give').⁶¹

Since adpositions in general are not known to inflect profusely, it is not surprising that those inflecting in the modern Indic manner have few if any parallels elsewhere. A postposition also serves as the carrier of *Suffixaufnahme* in Erzya Mordva, a member of the Volgaic group of Finno-Ugric, at least according to Ernst Lewy (1920), as mentioned in the historical survey. If Lewy's data and analysis are to be trusted, *marā* 'with' would sometimes inflect for number, definiteness, and case, thus linking up with the primary of its postpositional phrase:

- (123) ki kantsindz'e w'edra-t-n'i-n' w'ed' mare-t-n'i-n'
 who carries bucket-PI-Def-Gen water with-PI-Def-Gen
 'Who carries the buckets with water?' (=21c)

Unlike in modern Indic, the carrier here is not a specialized attributive **postposition** but an instrumental one; and it is less obvious that secondaries with agreeing *marā* are always close-knit attributes of the primaries whose number, definiteness, and case are being copied onto the postposition. A possible analogue of Erzya Mordva *marā* occurs in faraway Yir Yoront, an Australian language of Cape York Peninsula, whose comitative-instrumental postposition *lon* sometimes, especially in more loose-knit or even afterthought constructions, appears to do what possessive and other case suffixes frequently do in Australian — carry case marking copied from primaries (Alpher 1976).⁶²

In the only textual example in Finck's *Haupttypen des Sprachbaus* where *Suffixaufnahme* was to be seen at work in Old Georgian, the carrier was not in fact a plain case-marked noun but one supplemented by ablative *gan*, a postposition about to turn into a suffix and to specialize as a marker of certain kinds of secondaries (e.g., partitives):

- (124) eṛt-ma bavšv-ṭa-gan-ma
 one-Erg child-OblPl-of-Erg
 'one of the children' (=2)

Genuinely non-bound relational markers are hardly more popular as carriers than as objects of *Aufnahme*, trailing bound markers in both capacities. In afterthought and similar rough-hewn pragmatic-fringe alternatives to regular attribution, however, *Aufnahme* by adpositions is no less unusual than *Aufnahme* of adpositions. English indeed exemplifies both, as shown in (101).

4.13.2. Case and perhaps other inflectional marking of primaries may also be repeated on case-marked secondaries almost inadvertently, owing to the presence of inflected words that provide anaphoric links to the primary and perform functions other than relationship-identification.

Case-marked articles, when repeated with attributes already case-marked for their own syntactic relation, are such words that happen to transfer to these attributes the case (and number and gender) of the head. There is thus some justification for Henri Bourgeois's feeling that Ancient Greek post-nominal genitives, as at (125), which copy the case-marked definite article of their head as do other attributes in this position, resemble in pattern those of Old Georgian.

- (125) hai thugatér-es hai tǝn polit-ǝn
 the=NomPlFem daughter_{Fem}-NomPl the=NomPlFem the=GenPlMasc
 citizen_{Masc}-GenPl
 'the daughters [the ones] of the citizens' (=16)

Neighboring Albanian, of no certain genetic affiliation within Indo-European, approaches the *Aufnahme* prototype even more closely insofar as its genitives, being obligatorily in post-head position, are **always** accompanied by an attributive marker resuming the case (and number, gender, and definiteness) of the head:⁶³

- (126) a. libr-i i nxenes-it
 book_{Masc}-NomSgDef Art=NomSgMascDef pupil_{Masc}-GenSgDef
 'the book of the pupil'
 b. nepermjet libr-it te nxenes-it
 with book_{Masc}-GenSgDef Art=GenSgMascDef pupil_{Masc}-GenSgDef
 'with the book of the pupil'
 c. ndonje çantë-*ǝ* e Flor-es
 some bag_{Fem}-NomSgIndef Art=NomSgFemIndef Flora-GenSgDef
 'some bag of Flora's'
 d. brenda ndonje çant-e te Flor-es
 inside some bag_{Fem}-AblSgIndef Art=AblSgFemIndef Flora-GenSgDef
 'inside some bag of Flora's'

In Albanian, definiteness of primaries is marked inflectionally, not by a definite article as in Greek. Also differing from Greek, the anaphoric element which (among other categories) repeats the primary's case on the secondary,

being not necessarily definite, is best characterized as a general attributive marker rather than as an "article" in the strict sense; nominal attributes only do without it when in the ablative, a case commonly employed if attribute and head are both indefinite (e.g. *thirrje-Ø* femije-sh cry-NomPlIndef child-AblPlIndef 'cries of children'). Most importantly, there is no alternative construction as in Greek where attribute and head appear to be syntactically better integrated, and where, owing to the non-repetition of the article, the primary's case is not re-expressed on the secondary constituent:

- (125') hai tōn polit-ōn thugatér-es
 the=NomPlFem the=GenPlMasc citizen_{Masc}-GenPl daughter_{Fem}-NomPl

While strictly grammaticalized Suffixaufnahme à la Albanian is certainly not widespread, and probably even *unique*,⁶⁴ such patterns with anaphoric words as carriers of Aufnahme are not unusual elsewhere in the looser pragmatic mode of syntax. German is one such language among many where an article or demonstrative harks back to the primary when a secondary is added as an afterthought, in constructions even more loose-knit and non-standard attributive than their Ancient Greek counterparts:

- (127) in d-em Buch-Ø, d-em(-jenig-en)d-es Schiiler-s
 in the-DatSgNeut book_{Neut}-DatSg, the-DatSg Neut(-one-DatSgNeut) the-
 GenSgMasc pupil_{Masc}-GenSg
 'in the book, that of the pupil'

4.14 Aufnahme by Nouns or Pronouns

With prototypical Suffixaufnahme the secondaries are (NPs consisting of) nouns or personal pronouns. From Schweiger's survey of Australian (in this volume) it seems that in some languages Aufnahme may in fact be limited to pronouns. Outside the core areas of Suffixaufnahme it is also pronouns rather than nouns that are sometimes found simultaneously to engage in relationship-identification and relatedness-indication in terms of case. Thus in German, the genitives of 1st and 2nd person plural personal pronouns (1st person *wir* Nom, *uns* Acc/Dat, *unser* Gen; 2nd person *ihr* Nom, *euch* Acc/Dat, *euer* Gen), and formerly also of the corresponding singulars as well as of 3rd person pronouns (e.g. 1st person *ich* Nom, *mich* Acc, *mir* Dat, *mein* Gen, with the genitive now *meiner* by analogy with plurals), are not further inflected when used on their own as objects at clause level (128a), but they agree in case, number, and gender with their heads when used adnominally (128b), thus exemplifying pattern No. 7.

- (128) a. sie gedachten uns-er
 they commemorated 1Pl-Gen (or *unser* 1Pl=Gen)
 'They commemorated us'

- b. sie gedachten uns-er-es Sieg-es
 they commemorated 1Pl-Gen-GenSgMasc victory,,, -GenSg
 'They commemorated our victory'

In Latin genitives of personal pronouns (singular 1st person *mei*, 2nd *tui*, 3rd reflexive *suī*, plural 1st nostrilnostrum, 2nd vestrilvestrum) and of the interrogative pronoun (*cūius*) show similar agreement when used adnominally.

The reverse, restriction of Aufnahme to nouns, has not been reported. The common adjectival leanings of possessive forms of personal pronouns may explain this apparent asymmetry, adjectives being better case-agreers than nouns. In Kartvelian Suffixaufnahme may have got started with adnominal possessive pronouns, extending to nouns only later (Boeder, this volume).

In Northeast Caucasian Khinalug demonstrative pronouns are the only kind of word to vary with the direct or oblique case (and class) of the head when part of an attributive NP (Kibrik, this volume).

4.15. Aufnahme by More or Less Nouny Attributes

Suffixaufnahme's claim to fame as an anomaly rests on case-agreeing attributes being (inflected) nouns rather than (derived) adjectives. From Bopp to Dixon, this very word-class categorization has admittedly been a bone of contention for virtually all languages ever credited with Aufnahme in more or less prototypical form. However, as noted earlier, the reasoning here has often been circular, with attributes being declared (denominal) adjectives solely on account of their agreeing in case.

Indeed, it is in attributive function that nouns (or NPs) are most likely to shade into adjectives (or adjective phrases), presupposing that they are distinguished otherwise. While the function of referent-modification is the fundamental *raison d'être* for adjectives as a separate part of speech, words whose primary function is to establish reference to persons and things serve as referent-modifiers only secondarily, and perhaps only upon being suitably adapted. When words that are basically referent-establishing are being put to referent-modifying uses, it may well prove expedient for them to retain or reacquire some of their original properties: participation in oppositions of number, definiteness, and specificity; availability for cross-reference; control of agreement; or recursive modifiability by attributes and other constructional possibilities of nouns. Depending on the extent of this retention or reacquisition, attributes may non-circularly be characterized as more or less nouny.

If we assume the transition from **nounhood** to **adjectivehood** in attributive function to be potentially gradual rather than categorical, Aufnahme itself becomes **gradable** in this respect, with fully nominal attributes that unusually agree in case as one extreme of a continuum and fully non-nominal or **no-longer-nominal** adjectives showing run-of-the-mill case agreement as the other.

Arguably, as will be seen later in this volume, attributes marked for

relationship-identification and relatedness-indication in the prototypical *Aufnahme* languages are indeed unobjectionably nominal by language-particular standards, even if at times (for example, in Australian) the distinction between nouns and adjectives may be a purely, and even precariously, syntactic one and not lexically predetermined. As to less prototypical instances of *Aufnahme*, attributive nouns have been claimed to be "adjectivalized" in Albanian (Faensen 1975) and Indic, although this does not mean that words in attributive function that agree in case (with the agreement marking carried by articles or postpositions—Section 4.13) cease in any way to be nouns. (In Indic it is the agreeing postpositions, deriving from participles, that were once adjectival.)

However, there are languages where *Aufnahme*-like patterns do come about as a result of attributes mixing nominal qualities with adjectival ones. "Possessive adjectives," having variously been posited as a source of, or a development from, genitives in ancient Indo-European languages,⁶⁵ are a case in point, insofar as they are not always entirely true to their name (or my glossing). They are nouniest in Romany, Slavonic, the ancient Anatolian group, and probably Tocharian, and are not entirely non-nouny in Latin and elsewhere in Italic, in Aeolic and Homeric Greek, and probably in Classical Armenian.

First, to illustrate slight nouniness from Latin, such adjectives may be referential like the nouns underlying them, rather than being purely referent-modifying like ordinary adjectives. This is obvious in the case of proper names (e.g. *Turpīl-i-a uxor* Turpilius-Adjct-NomSgFem wife, (NomSg) 'Turpilius's wife', not 'Turpilian wife'); but common nouns too retain their referentiality more faithfully than might be inferred from English adjectival translations (*domus rēgius* at (65) meaning 'house of the king' as well as, less referentially, 'royal house'). Accordingly, anaphoric pronouns are occasionally used to cross-refer to these underlying nouns—an impossibility in, for example, German, or in English without attributive agreement (hence exemplifying pattern No. 1 rather than No. 7): "the royal house . . . wholhe [i.e. the king]."⁶⁶ Second, possessive adjectives sometimes combine with genitives in bipartite names and in apposition (129a). Third, they admit possessive pronouns—whose gender, however, is not governed by the noun underlying the possessive adjective but rather by the noun heading it (129b) (Neumann 1982: 161).

- (129) a. ex Anni-ān-ā Milbn-is dom-ō
 from Annius-Adjct-AblSgFem Milo-GenSg house_{Fem}-AblSg
 'from the house of Annius Milo'
 b. me-am esse er-il-em concubin-am censui
 1SgPoss-AccSgFem be master,,,,-Adjct-AccSg concubine_{Fem}-AccSg
 believe=1SgPerf
 'I believed her to be the concubine of my master'

In examples adduced earlier from Finck's grammar of German Romany (1903), attributes in *-kār-/gar-*, a suffix cognate with some Indic inflected

postpositions, were seen to have several properties of basic adjectives apart from that of agreeing in case, number, and gender: no further modification by agreeing adjective; no article of their own; and compatibility with an article that definitizes and agrees with the head. But they also retain the nominal property of inherently distinguishing number, as opposed to merely agreeing in number, by virtue of being formed from singular or plural oblique stems, at least in the company of singular heads:

- (130) a. i tšāw-és-kər-i dai
 the=DctSgFem boy_{Masc}-OblSg-Adjct-DctSgFem mother,,, (NomSg)
 'the boy's mother' (=5a)
- b. i tšāw-én-gər-i dai
 the=DctSgFem boy-OblPl-Adjct-DctSgFem mother,,, (NomSg)
 'the boys'/children's mother' (=7)

In the Kelderash dialect of Romany as described in Gjerdman and Ljungberg (1963), such attributes—not dissimilar to those with inflected postpositions in Indic (see further Payne's chapter)—are even nounier, and hence approach prototypical Suffixaufnahme even more closely. They refuse ordinarily agreeing adjectival modifiers and instead compound with invariable forms of these, as do their counterparts in German Romany (6) and other varieties of European Romany; but unlike these, they take definite and indefinite articles as well as possessive pronouns, which—unlike in Latin (129b)—agree with them, or rather with the nouns underlying them, in case, number, and gender, allowing for certain neutralizations especially in oblique forms:

- (131) a. le / ɛkh-é rakl-6s-k-i phej
 DefArt=OblSgMasc / IndefArt-OblSg boy_{Masc}-OblSg-Adjct-NomSgFem
 sister,,, (NomSg)
 'the/a boy's sister'
- b. amar-6 / l-és-k-e dad-6s-k-i doš
 1PlPoss-OblSg / 3-OblSg-Adjct-OblSg father_{Masc}-OblSg-Adjct-NomSgFem
 fault,, (NomSg)
 'our/his father's fault'

Note that the case (oblique) and gender (masculine) of the articles and possessives are those of the attributes, not of the heads, which are nominative feminine. The 3rd person possessives are themselves transparently formed attributes, and they inflect like any noun in the oblique case and with suffix -kl-g (without, however, recursively relating to heads other than the immediate one).

Unlike Romany and like Latin, Ancient Greek, or Tocharian, Slavonic languages have a choice between patterns No. 1, with a genitive or (in Bulgarian, Macedonian, and also in German-influenced Sorbian) a preposition as an attributive marker, and No. 7, with the attribute a case-number-gender-agreeing possessive adjective. Such possessive adjectives are fairly nouny and

more so in some languages than in others.⁶⁷ As observed by Mel'čuk (see Section 2.7.1 above), those of Slovak (24) are noun-like rather than adjective-like in that possessive pronouns accompanying them may be in the genitive instead of agreeing with the ultimate head as the attributes themselves do. According to the pan-Slavonic survey of Corbett (1987, and this volume), Slovak is also among the league leaders—along with Upper and Lower Sorbian, Old Church Slavonic, Macedonian, and Old Russian—in regard to the ability of possessive adjectives to control the agreement of elements accompanying them—not exactly something one expects of adjectives *either*.⁶⁸ Thus possessive pronouns and adjectives may agree in gender with the noun underlying the possessive adjective rather than with the ultimate head; being in the genitive, instead of case-agreeing with the ultimate head, they also give the appearance of being governed by this same underlying noun:

- (132) náš-ho dobr-ého sused-ov-a záhrada
 1PIPoss-GenSgMasc good-GenSgMasc neighbor,,, -Adjct-NomSgFem
 garden,,, (NomSg)
 'the garden of our good neighbor'

Only Upper Sorbian goes further in unrestrictedly subjecting all kinds of potentially agreeing elements—personal pronouns, reflexive pronouns (in action nominalizations), relative pronouns, possessive pronouns, adjectives, and participles—to the control of the noun underlying the possessive adjective. Indeed, the very ability of possessive adjectives to be modified by genuine adjectives (132) and relative clauses ((133a), from Upper Sorbian) in some Slavonic languages, and the availability of their underlying nouns for cross-reference by anaphoric pronouns everywhere in Slavonic ((133b), again from Upper Sorbian), point to a predominance of nominal over adjectival qualities.

- (133) a. slyšetaj Wićaz-ow-y hlós, kotr-yž je zastupil
 hear=3Du Wićaz_{Masc}-Adjct-Nom/AccSgMasc voice_{Masc} (Nom/AccSg), who-
 NomSgMasc is gone=in
 '(the two of them) hear Wićaz's voice, who has gone in'
 b. slyšetaj Wićaz-ow-y hlós. Wón . . .
 'The two of them hear Wićaz's voice. He . . .'

Unlike in Romany and Tocharian⁶⁹ and as in Latin and Ancient Greek, possessive adjectives in Slavonic do not overtly inflect for inherent number. But in fact even this ingredient of nouniness is present, owing to the complementary distribution of possessive adjectives and the competing construction with genitives with respect to inherent number. In Upper Sorbian and virtually everywhere else in Slavonic, possessive adjectives are limited to singular referents of their underlying nouns (for which reason attributes and other elements agreeing with them in gender are invariably singular), and genitives must be resorted to when inherent plural reference is intended:

- (134) a. *naš-ich muž-ow-e prawo
 1PIPoss-GenPl husband-Adjct-NomSgNeutright,,, (NomSg)
 b. prawo naš-ich muž-ow
 right_{Neut} (NomSg) 1PIPoss-GenPl husband-GenPl
 'the right of our husbands'

The same complementary distribution often obtains with respect to specificity, with the reference of nouns underlying possessive adjectives normally being **specific**;⁷⁰ hence their incompatibility with pronouns such as 'some'. Possessive adjectives are also highly referential owing to their limitation to humans or at least animates. Yet another symptom of nouniness in possessive adjectives is their ability to follow a noun in the genitive or nominative in bipartite names ((135), from Upper Sorbian) and, more rarely and hardly ever in modern Slavonic languages, to be conjoined with nouns ((136), from Old Church Slavonic).

- (135) a. Handrij-a Bahr-ow-y list
 Handrij-GenSg Bahr-Adjct-NomSgMascletter,,, (NomSg)
 'Handrij Bahr's letter'
 b. Thomas Mann-ow-y roman
 Thomas (NomSg) Mann-Adjct-NomSgMascnovel,,, (NomSg)
 'Thomas Mann's novel'
- (136) gradica mar-in-a i mariit-y
 village,, (NomSg) Mary-Adjct-NomSgFem and Martha-GenSg
 'the village of Mary and Martha'

Significantly, other kinds of denominal adjectives usually do not show comparable nouny behavior in Slavonic.

In the ancient Anatolian group possessive adjectives, known as *adiectiva genetivalia* or *genetivi adiectivales*, mostly coexist with genitives (Hittite lacks the former, Cuneiform Luwian probably the latter), and are in fact not always easily distinguished from them—some authors use the presence or absence of agreement as their sole criterion. Their nouniness shows first in their ability to be accompanied by demonstrative or possessive pronouns (with identical stem in the 3rd person), as in these examples from Cuneiform Luwian (137) and Lycian A (138):⁷¹

- (137) za-šši-n DUMU-ann-ašši-n anni-n waralli-n
 this-Adjct-AccSg child-Adjct-AccSg mother-AccSg own-AccSg
 'the own mother of this child'
- (138) hrppi esedei new-i χñn-ahi ehbi-ehi
 for progeny-DatSg grandmother-Adjct=DatSg this/3SgPoss-Adjct=DatSg
 'for the progeny of his grandmother'

Second, adjectival genitives/genitival adjectives can in turn take attributes of the same kind ((139), from Lycian B):

- (139) *ēn-esi-ke ted-esi-ke xug-asi xñtawaza*
 mother-Adjct-and father-Adjct-and grandfather-Adjct dominion (NomSg)
 'the dominion of the grandfather on the maternal and the paternal side'

Third, they are sometimes able to distinguish inherent number, rather than merely agreeing in number. When accompanied by demonstratives in Lycian, these distinguish a singular and a plural stem: thus singular *ehbi* (<**ebe-hi*) as in (138) contrasts with plural *eb(e)-tte-hi*, which latter, when used in (138), would pluralize the noun underlying the possessive adjective ('for the progeny of **these/their** grandmothers'). Moreover, when the inherent number of the attribute is singular, the possessive adjective is the preferred form, while the genitive appears to be specializing in plural reference. In Cuneiform Luwian possessive adjectives appear to have innovated an agglutinative plural ending for the ablative-instrumental, *-nzati*, contrasting with original *-(a)ti*, which is number-neutral in nouns and exclusively singular in possessive adjectives; this enables attributes of heads in the ablative-instrumental to distinguish inherent number. Fourth, at least in Hieroglyphic Luwian—as in Latin, Ancient Greek, and Slavonic—apposita to possessive adjectives may be nouns in the genitive:

- (140) *Muwatallis-si-s tarwana-sa nimuwaiz-as*
 Muwatallis-Adjct-NomSg judge-GenSg son-NomSg
 'son of Muwatallis, the judge (?)'

Returning to a species of possessive adjectives that was touched on in the preceding section, agreeing possessives based on genitives of personal pronouns (as in German (128) or Latin) are overwhelmingly adjectival by comparison, with inherent number distinction and referentiality being virtually their only nominal qualities. (In fact, some of the basic genitives themselves are historically adjectives, formed with suffixes such as Germanic *-ero* and -in or Latin *-tero*.)

Close analogues of the possessive adjectives of Indo-European that approach Suffixaufnahme owing to their nouniness appear to be rare outside this family. To be sure, genitives in all kinds of languages have variously been claimed to be "really" adjectives or at least to be diachronically relatable to adjectives, and denominal adjectives frequently retain nominal properties such as inherent number distinction. What is usually lacking for the marking to be Suffixaufnahme-like, however, is agreement in case between such more or less nouny attributes and their heads. Where adjectives do agree in case with their heads, as in various branches of Uralic, denominal ones do not seem to be especially nouny. In Mari (or Cheremis), of the Volgaic branch of Finno-Ugric not known for profuse adjective agreement, possessive adjectives in -an, meaning 'having N' rather than 'belongingtpertaining to N', were

sometimes found to agree with accusative heads, but they partook of precious few of the nominal qualities exhibited by genitives in $-(ə)n$, which suffix is assumed to derive from the adjectival one (Kangasmaa-Minn 1969). In Hurrian, nouns with various adjectivalizing suffixes undergo Suffixaufnahme-type case and number agreement in the same manner, although less frequently, as nouns in the genitive; on the evidence collected by Wilhelm (this volume) they seem less nouny than, say, possessive adjectives in Upper Sorbian.

What does exist outside Indo-European are nouns that are case-marked in addition to carrying a morphological marker incompletely converting them to adjectives, as in Romany. Again, the languages where the attributive relationship is thus identified in a manner both nominal and adjectival frequently lack case agreement. According to Schiefner (1856), in Bats attributes whose genitive or ablative is (or was) optionally followed by an adjectivalizing suffix $-čə$ do (or did) agree in case with their heads—see (12b) above; but on the evidence available it cannot be determined whether attributes are less nouny with $-čə$ than without it. In Hurrian it is the essive case that can similarly be combined with adjectivalizing suffixes before Suffixaufnahme, not recognizably reducing the attribute's nouniness (Wilhelm, this volume).

Nouns or pronouns with morphological marking, possibly on top of case inflection, that incompletely converts them to adjectives are not the only kind of attributes that are less than maximally nouny. Morphological marking that identifies words as attributes may be equally applicable to both nouns and adjectives, with independent criteria justifying this basic word-class distinction as well as its continuing relevance—somewhat diminished, though, by the identical attributive marking. Northeast Caucasian Tsakhur has such indiscriminating attributive markers (rather than a genuine genitive, *pace* Mel'čuk, Section 2.7.1 above); because their choice is influenced, among other factors, by the case of the head, this is an instance of fused relationship-identification and relatedness-indication, differing from common Tsez practice (120) only in the applicability of such dual marking to nouny as well as adjectival attributes (see Kibrik in this volume).

If marking that otherwise resembles Suffixaufnahme can extend to attributes with nominal as well as adjectival qualities, the difference between Suffixaufnahme and ordinary adjective agreement can hardly be categorical, notwithstanding certain discrepancies.

4.16. *Secondaries Inflected or Derived*

In prototypical Suffixaufnahme the relational identification of secondaries is supposed to be inflectional. Almost automatically, case—genitive or otherwise—is considered an inflectional category of nouns rather than a derivational one; and the usual criteria for the division of these two species of morphology—such as productivity, formal and semantic regularity, paradigmatic infrastructure, word-class constancy, position of exponents relative to each other, and syntactic relevance—indeed by and large justify this adjudication for genitival and other case forms of nouns and pronouns hosting

Aufnahme. Their only major nonconformity is distributional: they admit of further inflection in terms of the same category or categories, viz. case and perhaps number or class.

All the same, it is possible for the syntactic relationship of secondariness to be identified derivationally, or not-so-inflectionally, on the plausible assumption that the difference between the two types of morphology is gradual.

Cases themselves are sometimes observed or hypothesized to have developed from derivational categories of **nouns**—e.g., nominatives or ergatives from agentive nouns, locatives from nouns of location, comitatives from nouns denoting accompanying persons or things, or genitives from nouns denoting possessions or possessors or some kind of pertinence—or else to have ended their life cycle as derivations. Concerning instances of secondary nominals claimed, rightly or wrongly, to be capable of hosting *Suffixaufnahme*, derivational qualities or at least origins have been ascribed to genitives in Indo-European (Villar, this volume) and to comitatives in Evenki (Section 4.17 below).

If word forms differ in word class from their bases, as when nouns are converted to adjectives or at any rate to less nouny words, this detracts from their inflectional standing. Nonetheless, depending on other criteria, such formations—as well as nominalizations or participles with verbal bases—may yet share enough properties with ones preserving word class not to be categorically separated from them. In actual fact, those denominal nouny adjectives agreeing in case with their heads that were surveyed in the preceding section all share about as much with typical inflectional formations as with typical derivational formations of the languages concerned. They tend to vary in productivity and sometimes are subject to arbitrary morphological constraints (in Slavonic, for instance, to nouns of particular genders), thus siding with derivation. Productivity may also be limited semantically, in particular in terms of animacy; but such constraints are also known to curb the genitive and most other inflections.

Further exemplification of Aufnahme by less than fully inflectional hosts comes from "having" and "lacking" forms widespread in Australian. Although sometimes labeled cases, they would seem to be somewhat less inflectional, and perhaps also less nouny than genitives, without being paragons of derivation (cf. Dixon 1976: Topic A).

4.17. Aufnahme by Genitives and/or Other Relational Markers

Secondaries practicing Aufnahme are prototypically in the genitive, the case whose prototypical function is to encode nominal attributes, especially those denoting possessors. More or less equivalent are general oblique cases covering, among other functions, that of the genitive (as in Old Georgian in the plural); datives used for clause-level relations and—in lieu of a separate genitive—also for nominal attributes (frequent in Australia); "having" and "lacking" forms coexisting with genitives/datives (also common in Australia); special possessive inflections with aspirations to casehood (as in Chukchi); or

specifically attributive adpositions (as in modern Indic) and "associative" links (as in Maasai).

Although the receptiveness to Aufnahme is often limited to genitives and their equivalents, it may be more lavish. When an attributive relationship is partitive rather than possessive, and a case other than genitive — such as a special partitive or an ablative — is used for such secondaries, this case allegedly also permits Suffixaufnahme in Old Georgian (2=124) and Bats (12b). Australian languages are even more permissive, sometimes subjecting all adnominal cases to Suffixaufnahme, especially local cases including locative, ablative, allative, and perlative (listed by Dench and Evans 1988: 8f.); in fact, as pointed out earlier apropos of examples such as (141) from Panyjima, it is not always self-evident that such non-genitival secondaries are even adnominal.

- (141) *ngunha watharri-ku nyurna-yu warrapa-la-ku*
 that look=for-Pres snake-Acc grass-Loc-Acc
 'He is looking for the snake in the grass' (=34)

In Indic, at least in Kashmiri, a purposive-benefactive postposition shows the same agreement behavior as the genitival one.

Another logical possibility would be for the hosts of Aufnahme not to include genitives or their equivalents. Odd though this limitation may seem, it cannot be ruled out offhand. Two relevant candidates are Erzya Mordva and Yir Yoront, in both of which the only carrier appears to be a comitative-instrumental postposition (*mara* and *lon* respectively); however, neither has been thoroughly vetted.

In Evenki, from the Tungusic branch of Altaic and scattered over north-east Siberia, the comitative is expressed by a suffix rather than a postposition, and there is no doubt whatsoever that nouns in the comitative accept Suffixaufnahme,⁷² albeit perhaps not always obligatorily, to judge by (142c), provided by Nedjalkov (1994):

- (142) a. *bu iche-re-v kiran-ma munnukān-nun-me*
 we see-NonFut-1Pl eagle-Acc hare-Com-Acc
 'We saw an eagle with a hare'
 b. *bu iche-re-v atirkan-me ge-l-nun beje-l-nun*
 we see-NonFut-1Pl old=woman-Acc other-Pl-Com man-Pl-Com
 'We saw a/the old woman with other people'
 c. *sulaki-ja irgichi-nun bira-la ģene-re*
 fox-IndefAcc wolf-Com river-All go-NonFut=3Pl
 'The fox and the wolf went to the river'⁷³

In closely related Even (or Lamut) Suffixaufnahme is impossible with the comitative (suffix -*nun*), but a putative instrumental-comitative in -*ci* has been mentioned (by Benzing 1955a) as possibly permitting it. In Evenki this instrumental-comitative in -*chi* hosts Suffixaufnahme too, as does the suffix -*taj* or -*toj*, presumably a loan from Mongolian and equivalent to the

comitative case (in Mongolian itself its original function was to derive adjectives from nouns; see Bouda 1950), as well as the equative suffix *-gachin*:

- (143) a. *ɲinaki-chi-l-va beje-l-ve iche-m*
 dog-Ins-Pl-Acc man-Pl-Acc see-NonFut=1Sg
 'I saw men with dogs'
 b. *irgiči ullə-l-wə giramna-taj-l-wa ʒewuwki*
 wolf flesh=piece-Pl-Acc bone-Com-Pl-Acc devour=3Sg
 'The wolf devours the pieces of flesh with the bones'
 c. *lupchurin-ma ella-gachin-ma homoti-va iche-m*
 black-Acc coal-Comp-Acc bear-Acc see-NonFut=1Sg
 'I saw a bear as black as coal'

There appear to be no further instances of this kind elsewhere in Tungusic or indeed Altaic, which otherwise indulges in such double case marking as ensues from combining local cases or from case-inflecting independent genitival NPs (as surveyed in Poppe 1977).

Whether comitative(-instrumental) and perhaps comparative (if this is in fact a case) have to be acknowledged as the only cases to accept Suffixaufnahme in Evenki and possibly Even depends on the interpretation of forms with the suffix *-ɲil/-ni* expressing alienable possession and functionally corresponding to genitives. Of course, it also depends on whether the comitatives really are cases rather than adjectival derivatives; arguably they are (pace Kilby 1983: 46, who holds that being followed by another case suffix is "something which is not possible for typical case endings"), even though some comitative-instrumental suffixes, such as *-ci* and *-taj*, also appear to derive denominal adjectives meaning 'having X' rather than 'with X'.

As is seen in (144a) from Evenki, the suffix *-ɲil/-ni* identifies secondaries in an instance of the rare marking pattern No. 9, X-y Y-sec-x, with the primary's suffix reflecting the secondary's person-number and with the secondary in addition taking up the primary's case and perhaps number; a more common alternative, (144b), does without any marking on the secondary, thus exemplifying pattern No. 5, X-y Y.

- (144) a. *etirken-gi-ve oro-r-vo-n baka-m*
 old=man-Poss-Acc reindeer-Pl-Acc-3SgPoss find-NonFut=1Sg
 'I found the old man's reindeer'
 b. *etirken oro-r-vo-n baka-m*
 (ditto)

If *-ɲil/-ni* are case markers of nouns, comitative(-instrumental) and perhaps comparative are not alone in showing Suffixaufnahme, for this is then what we see in examples such as (144a). In *-ɲil/-ni* are derivational, turning nouns into adjectives (and adjectives are slightly more delimitable from nouns, especially in terms of their derivational potential, in Tungusic than elsewhere in Altaic), we have adjective agreement here, as exhibited by Evenki and Even to an

extent unusual for Tungusic; and the scope of Suffixaufnahme remains peculiarly circumscribed. Effectively, *-ŋi/-ni* is a little bit of both, not unlike possessive forms in Chukchi (as described by Koptjevskaja-Tamm in this volume) though overall perhaps slightly less nouny. Apparently words with possessive *-ŋi/-ni* can take adjectival modifiers, as do nouns carrying any bona fide case marker including comitative *-nun*;⁷⁴ and they presumably inflect for inherent number in a noun-like manner. On the other hand, *-ŋi/-ni* is less productive than typical cases, being limited to a subset of human nouns; and above all, unlike all accredited cases including comitative *-nun/-nun* (see (142b)), it is not itself spread by agreement to modifiers of the words carrying it. Considering that Manchu and perhaps Solon are the only Tungusic languages to have an uncontroversial genitive, with the absolute form of nouns often serving as attribute elsewhere (as in (144b)), the use of possessive words that are not straightforward genitival nouns in Evenki and Even would not in fact be out of character. Evenki's lack of a full-blown genitive, then, somewhat mitigates the unusualness of its limitation of Suffixaufnahme to the comitative-instrumental domain.⁷⁵

Another moot question about Evenki and Even is whether secondaries in the comitative are adnominal, as the hosts of prototypical Suffixaufnahme are supposed to be. Comitatives in general are prone to vacillating between adnominal and clause-level status, not unlike secondaries in various local cases hosting Suffixaufnahme in Australia. They may also shade into coordinate conjunctions, on occasion producing what is the illusion of Suffixaufnahme rather than the real thing, as in Huallaga Quechua (Weber 1989: 218,227, 348–350):

- (145) Hwan-ta-wan Pablu-ta rika-shka-:
 Juan-Acc-Com Pablo-Acc see-Perf-1
 'I saw Pablo and/with Juan'

As is suggested by the relative order of the two case suffixes—it will be remembered from Section 4.9 that, as a rule with no known exception, relationship-identifying case precedes relatedness-indicating case—the accusative is not copied from the direct object (Pablu) onto its comitative secondary, but is assigned to Hwan in its own right, as forming a perhaps somewhat subordinate conjunct of Pablu, linked to it by the comitative case.

Such coordinative suffixes or enclitics as *-g(V)li* in Even (as in Kocca Miko-gli 'Kostja with/and Miko') and probably *-ta* in Evenki, used as alternatives to the more frequent comitative case(s), likewise combine with case suffixes, but, unlike in Quechua, they precede these (Benzing 1955b: 64):

- (146) buju-r-gali-w mazim, oro-gali-w mazim
 wild=reindeer-P1-Com-Acc I=will=kill, tame=reindeer-P1-Com-Acc
 I=will=kill
 'I am going to kill wild as well as/along with tame reindeer'

Despite its being in the relative order to object-marking accusative that is typical of Suffixaufnahme, this comitative-like element *-g(V)li*, at least in such uses, is more appropriately interpreted as a bound conjunction, here occurring on both conjuncts. Actually, comitative *-nun* itself has at least one feature that would be consistent with its being a bound conjunction: as seen in (142c), two singulars joined by it trigger plural agreement on verbs.

4.18. *Aufnahme in Attributive or Looser Relationships*

In a way, referring to the nominals involved in the coding patterns distinguished here as "primary" and "secondary" was a fudge. However, apart from being convenient, it was also useful to fudge on the thorny issue of the syntactic relationship between these nominals because there is some potential for variation here. And quite probably, *Aufnahme* syntax itself is less uniform on this count than was tacitly assumed in the past.

In spelling out the prototype of Suffixaufnahme above (Section 4.1), the relationship of secondariness was narrowed down to one of attribution. Now, the notion of attribution is less than self-explanatory; it is commonly applied so broadly as to cover dependents that are adnominal modifiers as well as those that are adnominal complements (governed by nouns that are inherently relational), and sometimes it even subsumes the less tight relationship of apposition or parts of it.⁷⁶ Arguably, in some of the relevant languages, if perhaps not the majority, secondaries practicing *Aufnahme* indeed pass for standard attributes of either the modifier or the complement type.

As those who read on will also be able to ascertain, however, strong arguments can be made against secondaries being tight attributes in other languages, especially those in which Suffixaufnahme otherwise comes closest to attaining full prototypicality. Continuing the Finckian and more recent traditions, it is in particular in Australian languages and also in Old Georgian that secondaries are deemed to be more loosely related to, and less strictly dependent on, the primaries whose relational marking they assume. The nature of these more or less loose, and adjoining rather than subordinating, relationships is mostly characterized as appositive, either reflecting the overall cast of the ("flat" rather than hierarchical) syntax of the languages concerned, or coming about through special "flattening" processes such as extraposition. Since apposition is generally more conducive to agreement than is attribution (Moravcsik 1988: 96), it should not come as a surprise that such loose-knit syntax is fertile soil for *Aufnahme*.⁷⁷ What the loose secondaries involved in *Aufnahme* patterns share with run-of-the-mill apposita of languages whose syntax is not notable for its flatness is that they are linked to their primaries through relatedness-indication by means of case (Y-x, as represented schematically in our taxonomy of patterns). But there is still something that distinguishes them, and this is a necessary ingredient of variations on our present theme: only the former are additionally marked for their own relationship (Y-sec).⁷⁸

Coordination shares with apposition enough occasionally to have been subsumed under one rubric, that of "sociation," a type of relationship op-

posed to tight dependency. Thus, when conjuncts of coordinate constructions are marked for the relationship of being "sociated" with another conjunct and also show the same case marking as their coordinate partner, they seem on the face of it to instantiate the pattern X Y-sec-x, just as doubly marked apposita do. Coordinate constructions would not need to have a comitative tinge as in Quechua (145), then, to come under the heading of Aufnahme; plain unambiguous coordination, as in Latin (147), would meet the same specifications.

- (147) *senātu-m populu-m+que dēcēpit*
 senate-AccSg people-AccSg+and deceive=3SgIndPerf
 '(S)he deceived the senate and the people'

However, extending the notion of Aufnahme in this direction would seem to be going too far. Functionally, the conjunction bound to its nominal (enclitic *-que* in Latin) is indeed comparable to the genitive or other case identifying the secondary. The marking of that conjunct for case (accusative in (147)), even if its "inner" position were to be disregarded, is hardly on a par with that in genuine Aufnahme, though: its rationale is again relationship-identification, not relatedness-indication. The second conjunct is not put in the same case as the first in order to indicate its being related to it, but because it jointly holds the same external relation. The members of coordinate constructions are presumably assigned case in parallel, each in its own right rather than with reference to the other.

There is yet another and more pertinent way to stretch the pliable notion of secondariness: sometimes nominals linked by semantic bonds of reference ('the dog [barked] that of the man') or predication ('the man [killed the dog] being with a knife') seem not to form syntactic co-constituents at all, showing even less cohesion than in the flat mode of appositive syntax. Presumably, "secondary" is here best explicated as secondary (or co-) predicate, a notion shading off into those of predicative, attributive, and adverbial relationship~. No matter how loose-knit their syntax, secondary predicates ought to be recognized as variations on our theme, if rather free ones, as long as they are marked for both their own relationship (Y-sec) and relatedness-indication (Y-x)—which they rarely are, however, outside Australia and perhaps the homes of the Evenki and the Erzya Mordva in Siberia and on the banks of the Volga.

4.19. Aufnahme in Alternative Constructions

4.19.1. The tightness or looseness of the syntactic relationships between primaries and secondaries is arguably a parameter that distinguishes languages in *toto*. Evidently it is also one on which particular alternative constructions within one and the same language may vary. If there are such contrasts, it is typically the basic, most thoroughly grammaticalized constructions that are attributive, with the secondary a dependent in close-knit construction with

the primary, while alternative renderings of the same states of affairs tend to be organized more loosely. Primary and secondary, basically destined to be neighbors, may be split up by intervening material, or they may be fractured to give the secondary more **prominence**;⁸⁰ the secondary may be extraposed from its basic (typically pre-primary) position, or it may be added in parenthesis or as an afterthought that occurred to the speaker subsequent to the planning and execution of the core of the sentence; forgoing compactness, the secondary may be joined to its primary in a (relative) clause of its own, not very well integrated with the clause containing the primary. It is in such **non-basic** constructions that the Aufnahme pattern flourishes, far beyond the range of languages that employ it in their basic constructions.

Relevant examples have already been adduced offhand from English (101) and German (127), although here Aufnahme was not prototypical in further respects, insofar as the loosely-added secondary took up a relational marker of the primary that was a word rather than an affix (in the palace, in the duke's), or required an anaphoric pronoun as the carrier of Aufnahme (in *dem* Buch, *dem* des *Schülers*).

Prototypical in these respects, though in addition marking the primary for relatedness-indication, was Huallaga Quechua (74), where secondaries practice Aufnahme only when separated from primaries that they normally precede, thus conforming to pattern No. 9, X-y Y-sec-x, rather than No. 8, X-y Y-sec (Weber 1989).

- (148) a. **Hwan-pa hipash-nin-ta kuya-:**
 Juan-Gen daughter-3Poss-Acc love-1
 b. **hipash-nin-ta kuya-: Hwan-pa-ta**
 daughter-3Poss-Acc love-1 Juan-Gen-Acc
 'I love Juan's daughter'

In Hungarian, where basic constructions conform to pattern No. 5 (X-y Y) or No. 8 (X-y Y-sec), a secondary in a relationship that is distinctively not one of tight attribution acquires two additional markers—one to identify its relationship as a secondary (-é, whose inflectional or derivational nature is controversial), and the other a relatedness-indicating case—while the primary sheds its relatedness-indicating possessive suffix, thus producing pattern No. 7, X Y-sec-x (Tompá 1972: 186):

- (149) a. **Peter iskolá-já-ban**
 Peter school-3SgPoss-Inessive
 b. **Pkter-nek az iskolá-já-ban**
 Peter-Dat the school-3SgPoss-Inessive
 'at Peter's school'
 c. **még nem voltam az iskolá-ban, Péter-é-ben**
 still not I= have=been the school-Inessive, Peter-é-Inessive
 'I have still not been at the school, at that of Peter'

In Bilin, the secondary normally precedes or follows the primary, agrees with it in gender and number, and is in the genitive, with the case of the entire NP appended to its last word; unlike its Central Cushitic relative Awngi (88), which shows this pattern (i.e. No. 7, X Y-sec-x) as a rule, Bilin permits Aufnahme of case only upon extraposition of the secondary, with the primary, now a phrase of its own, also carrying the appropriate case (Palmer 1958):

- (150) a. ti'idad adar-i-y^w-ed
 order (MascSg) lord-Gen-MascSg-Dat
 b. ti'idad-ed . . . adar-i-y^w-ed
 order-Dat (MascSg) . . . lord-Gen-MascSg-Dat
 'by the order of the lord'

Early on in Iranian, plain genitival or adjectival attributes were once expressed alternatively and more circumstantially by relative clauses, and relative pronouns, destined to become *ezafe* markers invariable for case and often appended to primaries (X-prim Y), could be in the same case as their primaries through attraction rather than taking the case appropriate to their function within the relative clause; thus for a while, before the genitive was abandoned for good, secondaries in the genitive were accompanied, in non-basic constructions about to turn basic, by words of pronominal origin varying in case with that of the primary, according to pattern No. 7, here exemplified from Old Persian (Fairbanks 1979: 40f.):⁸¹

- (151) a. k̄āra hya man3
 army (NomSg) which (NomSg) me=GenSg
 b. kara-m tya-m man3
 army-AccSg which-AccSg me=GenSg
 'my army' (subject/object)

Evidently, the less tight the syntactic connection, the greater the need for extra overt relatedness-indication (plus perhaps anaphoric association). Since looser alternatives to straight attribution that are elaborated on so as to yield Aufnahme patterns are so widespread,⁸² one wonders whether they, or at any rate the least-regimented ones, can have much typological significance—other than that of providing sources from which the real thing may one day evolve, once such non-basic constructions manage to install themselves as basic. Such grammaticalization being gradual, there are bound to be borderline instances of pragmatic extravaganzas vying for syntactic recognition.

Thus the claim of Old Georgian and its Kartvel relatives 'to Suffix-aufnahme notoriety carries less than full conviction, insofar as the pattern is confined to constructions that arguably involve extraposition of secondaries, although these are not vastly more peripheral than their alternatives that lack both extraposition and Suffixaufnahme (see Boeder, this volume). The standing of Aufnahme is no more than fair-to-middling in Ancient Greek either, where only postnominal attributes repeat the case-marked article of the pri-

mary (125), but shifting them into this position hardly makes a great difference on the pragmatics-grammar cline. All the same, the constructions occasioning Aufnahme presumably are more intrinsic to the core grammar of Ancient Greek and Old Georgian than they are in, say, English, German, Quechua, Hungarian, Bilin, or Old Persian.

4.19.2. Secondaries may be deprived of an overt primary on condition that the linguistic or extralinguistic context permits its recovery, and they as a rule inherit all relational marking from this absentee primary. The primary marking is then added directly to that of the secondary, or it goes onto a pro-form that supports the orphaned secondary. English illustrates both options, as was alluded to above (101):

- (152) a. I have been in the duke's palace but not in the king's
 b. I have been in the palace of the duke but not in that of the king

If relationships are identified by case suffixes, orphaned secondaries look exactly like those produced by prototypical Suffixaufnahme—except that their "outer" case does not indicate relatedness to a primary, for there is none present. The Basque example (153), repeating (27), corresponds to that with the English genitive (152a), while in Turkish (154) there is an extra suffixal pro-form,⁸³ as with English of (152b) and reminiscent of ligatives (Section 4.11).

- (153) gizon-aren-ari
 man-Gen1-Dat
 'to the man's'
- (154) adam-ın-ki-ne
 man-Gen-Pro-Dat
 'to that of the man'

Hypostasis formations of these kinds are no rare sights, and they have figured repeatedly in the historical narrative of Section 2. All languages where Y-sec(-Pro)-x appears in more or less prototypical Aufnahme patterns seem to have orphaned secondaries of the same form. But such orphaned secondaries also grace numerous languages with no trace of Aufnahme in their nuclear or even extended families—such as Basque, Turkish, Quechua, Limbu (Tibeto-Burman), or Brahui (Dravidian). Clearly, the implication here is only one-way.

A look back at Hungarian suggests, however, that the distinction between orphaned and loose secondaries is not one that is perforce categorical. In (155), the primary 'school' in the first clause licenses its omission in the second, and the orphaned secondary inherits its inessive case.

- (155) még nem voltam Ferenc iskolá-já-ban, ám voltam Péter-é-ben
 still not I=have=been Ferenc school-3SgPoss-Inessive, but I=have=been
 Peter-C-Inessive
 'I have still not been at Ferenc's school, but I have been at Peter's'

But does not (149c) lend itself to this orphaned-secondary interpretation too? The difference is only that the primary that licenses the omission on this reading is here syntactically less distant ('I have still not been at the school, at Peter's [school]'), and can in fact be construed alternatively as an actual primary governing a loosely appended secondary.⁸⁴ Thus, given the right circumstances, orphaned secondaries are capable of doing a passable impersonation of *Aufnahme*, and perhaps have the potential for more.

4.19.3. Instead of having basic and non-basic status, alternative constructions may simply be free variants, as they frequently are when primary and secondary come in both linear orders; or they may differ in being utilized for different purposes, such as to express alienable and inalienable possession. Such alternatives too may resort to different marking patterns. There indeed appear to be general tendencies for marking to be more extensive when secondaries follow primaries than when they precede them, and when possession is alienable than when it is inalienable.

If *Aufnahme*, which involves double marking, and simple relationship-identification on secondaries are in competition, the former ought to be resorted to when abundance is called for. Ancient Greek (125) and Old Georgian confirm this expectation, insofar as they limit *Aufnahme* to postnominal secondaries (assuming, not uncontroversially, that both orders are grammatically about equivalent). Alienability, on the other hand, is no major influence, if any, on the selection of *Aufnahme*. There are Suffixaufnahme languages in Australia where inalienable possession does require less marking effort than alienable; but what secondaries that denote owners of body-parts and other inalienables do without is their relationship-identifying genitive, rather than Suffixaufnahme (Dixon 1980: 293,300).

4.20. *Aufnahme* Obligatory or Optional

4.20.1. A last parameter of *Aufnahme* concerns its obligatoriness. Theoretically, it could turn out that in the appropriate languages it **must** occur in whatever construction it **can** occur. In actual fact, this is not what it always does. It is thus a less than pervasive trait of many languages that in principle have it.

There are first of all phonological or morphological environments, dealt with previously (Section 4.10), which may happen to efface or suppress overt *Aufnahme* marking.

Second, *Aufnahme* may be used judiciously, as a kind of emergency measure reserved for situations where there could otherwise be ambiguities as to which primary belongs with which secondary. Dyirbal is one language thus economizing on this relatedness-indicating technique (Dixon 1972: 106).

Third, *Aufnahme* is reluctant to repeat itself in recursive attribution.⁸⁵ In this Old Georgian example of double attribution *Aufnahme* proceeds all the

way down to the most deeply embedded secondary, which registers the cases (plus number) of two levels of primaries in mirror-image order:

- (156) *sasxdomel-eb-i igi msqidel-ta-j ma-t řred-isa-ta-j*
 stall-P1-Nom the (Nom) seller-OblP1-Nom the-OblP1 pigeon-Gen-OblP1-Nom
 'the stalls of the sellers of pigeons' (=108)

However, such relentless consistency is the exception rather than the rule, in Old Georgian and elsewhere. Reducing formal and perhaps processing complexity, intermediate-level secondaries may skip Aufnahme entirely (as in (157) and (158), from Old Georgian and Hurrian respectively), and/or lowest-level secondaries may content themselves with harking back only to immediate primaries (158) or only to top-level primaries ((159), Dyirbal).

- (157) *klite-n-i sasupevel-isa ca-ta-řsa-n-i*
 key-P1-Nom kingdom-Gen heaven-OblP1-Gen-P1-Nom
 '(the) keys of the kingdom of (the) heavens' (=9)
- (158) *řēn(a)-iffu-ŷe-nē-vā-d-an ařt(i)-i-ve niġār(i)-īda*
 brother-1SgPoss-Gen-ArtSg-Gen-1SgAbsPro-Connective wife-3SgPoss-Gen
 dowry-3SgPoss-Dir
 'to the dowry of the wife of my brother'
- (159) *řay-gu-řin-du yabu-řu-ř řin-gu bařun guda-ggu*
 1Sg-Gen-Lig-Erg mother-Gen-Lig-ErgClassII (Erg) dog-Erg
 'my mother's dog'

4.20.2. The strength of the Aufnahme impetus may also be gauged by the propensity of such marking to spread to dependents of secondaries whose status is that of modifiers. The ultimate in Aufnahme in this respect is found in Hurrian, Tsez and its close relatives, Awngi, and sometimes in Australian languages where all words, or all inflectable words, that make up the secondary individually link with the primary. In Old Georgian, on the other hand, attributive adjectives categorically resist Aufnahme marking even though they otherwise agree in case with their heads.

5. Outlook

This has been a bird's-eye view of Aufnahme and kindred patterns. The detail and depth that was inevitably missing from this perspective will be amply provided in the following close-ups, with Parts II-VII of this volume zooming in on individual language families given to Aufnahme — Hurro-Urartian, Caucasian (Kartvel and Northeast), Indo-European, Chukchi-Kamchatkan, Cushitic, and Australian. For Aufnahme or Aufnahme-of-sorts as is seen in the Anatolian branch of Indo-European, the Tungus group of Altaic, the Volgaic-

Finnic subgroup of Uralic (perhaps), the Eastern Nilotic subgroup of Nilo-Saharan, and the Central Bantu subgroup of Niger-Kordofanian, the panoramic view will have to do.

The geographical distribution of this custom tends to run in areas as well as in families. As a look at the map in the Appendix to this Introduction shows, there are five Aufnahme heartlands: Anatolia, the Caucasus, and the Transcaucasus; Aryan India; Eastern Siberia; Ethiopia; and Australia. From the Aufnahme point of view, more marginal habitats, geographically and structurally, are Central and Southeastern Europe and West- and East-Central Africa. The Americas in particular are free from Aufnahme, and have therefore been omitted from the map.

Evidently the principle of Aufnahme can be inherited as well as borrowed. Nonetheless, its occurrence in focal areas so distant from each other as Eurasia, Africa, and in particular Australia, not linked by family ties, militates against its incidence being accounted for entirely by genetic affiliation and diffusion. What such shared possessions can be due to otherwise is chance or typology.

In combination, the chapters of Parts II-VII provide a basis — incomparably more solid than that of Franz Nikolaus Finck et al. (and the speculative school of typology is no thing of the past)—for inductive generalizations about the history and the typology of Aufnahme. The search for an evolutionary scenario for Aufnahme and for its structural correlates is accordingly the focus of Parts VIII and IX of this volume.

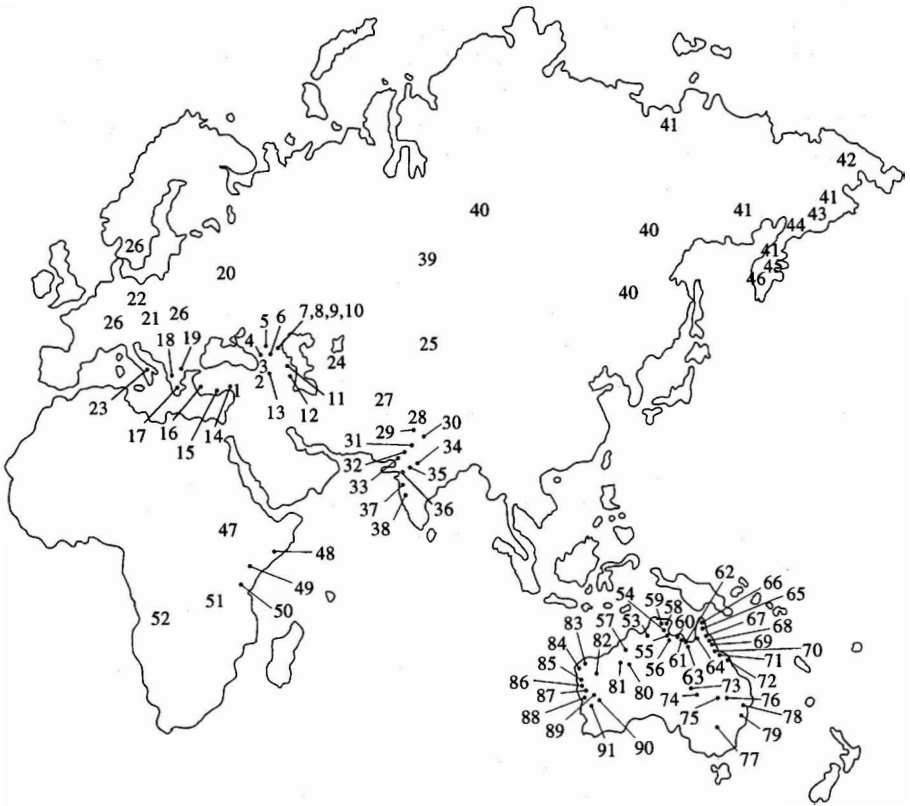
One of the wider issues that the findings here bear on is that of the development of attributive agreement in general. What the evidence from Aufnahme confirms is the analogy to verb agreement, which as a rule comes about through the grammaticalization of more loosely-knit constructions tied together by cross-reference ('the king, he weeps'). Arguably of the same kind are the sources from which Aufnahme tends to spring, with repeated relationship-identification as the sole or an additional bond ('into the palace, [into] the king's [one]').⁸⁶ If the origins of agreeing attributes other than genitival ones can plausibly be traced, they are often similar ('into the palace, [into] the magnificent [one]'), irrespective of their precise diachronic relationship to genitives.

Another general issue is the viability of holistic typology. Previously, Aufnahme has featured very largely in such grand schemes where a novel group-inflecting type was being distinguished, however equivocally, from the old agglutinative one. In light of the much fuller evidence here assembled, we can begin to reexamine the question of whether Aufnahme languages are sufficiently similar to one another, and sufficiently different from languages without Aufnahme, to merit a type of their own. As set out in Moravcsik's summary, Aufnahme does indeed figure in a variety of correlations. Nonetheless, some of its more salient *implicata* are shared by languages tending toward agglutination but lacking Aufnahme. These include the agglutinative character of relationship-identification; the ability of secondary nominals to occur without a pronominal head ('Y's[one]') and to inflect for further cases; the blurred distinction between nouns and adjectives; flat syntax; and perhaps

ergativity or other non-accusativity. Taking the holistic credentials of the agglutinative type for granted, what this suggests is that *Aufnahme* does not define a type separate from it, but at best a subtype of it, and one that seems hard to predict from other structural traits. It is perhaps only from a diachronic perspective that it is foreseeable, representing a possible stage in the grammaticalization of loose syntax and morphology.

But then, languages are not systems “où **tout** se tient.” For better or worse, chance plays the occasional trick on typological necessity.

Appendix



Approximate Distribution of Aufnahme Languages

Only those languages are considered where Aufnahme is grammaticalized in its more or less prototypical forms, as outlined in Section 4; languages with not-so-prototypical (yet grammaticalized) Aufnahme are identified by an asterisk. With this general limitation, coverage is intended to be exhaustive, except that from Australian only such languages are included as are mentioned in this volume as having Aufnahme. Question marks after language names indicate unconfirmed attestations. Language names are those used in this volume.

KEY**Ancient Near East**

- 1 Hurrian
- 2 Urartian

Caucasian

- 3 (Old) Georgian
- 4 Svan
- 5 Mingrelian
- 6 Bats?
- 7 Tsez
- 8 Khvarsh
- 9 Hinugh
- 10 Bezhta
- 11 Tsakhur*
- 12 Khinalug*

Indo-European

- 13 Classical Armenian*
- 14 Cuneiform/Hieroglyphic Luwian*
- 15 Lycian A/B*
- 16 Lydian*
- 17 Ancient Greek*
- 18 Albanian*
- 19 Macedonian*
- 20 (Old) Russian*
- 21 Slovak*
- 22 Upper/Lower Sorbian*
- 23 Latin*
- 24 Old Iranian*
- 25 Tocharian A/B*
- 26 Romany (Kelderash, Vlakh, Slovak-Hungarian, and Lowari dialects)
- 27 Parya
- 28 Kashmiri
- 29 Western Pahari
- 30 Central Pahari
- 31 Punjabi
- 32 Lahnda
- 33 Sindhi
- 34 Hindi
- 35 Rajasthan
- 36 Gujarati
- 37 Marathi
- 38 Konkani

Uralic

- 39 Erzya Mordva*?

Altaic

- 40 Evenki
- 41 Even

Chukchi-Kamchatkan

- 42 Chukchi
- 43 Kerek?
- 44 Koryak?

- 45 Alutor?
- 46 Itelmen?

Afroasiatic

- 47 Awngi
- 48 Oromo*
- 49 Burji
- 50 Darasa

Nilo-Saharan

- 51 Maasai

Niger-Kordofanian

- 52 Ntaandu (and other Kikongo dialects or languages?)

Australian

- 53 Nungali
- 54 Nunggubuyu?
- 55 Mara
- 56 Alawa?
- 57 Gooniyandi*
- 58 Djapu
- 59 Djinang/Djinba
- 60 Lardil
- 61 Yangkaal
- 62 Kayardild
- 63 Yukulta
- 64 Yir Yoront*
- 65 Anguthimri
- 66 Uradhi
- 67 Guugu Yimidhirr
- 68 Gugu-Yalanji
- 69 Djabugay
- 70 Yidiny
- 71 Dyirbal
- 72 Wargamay
- 73 Kalkatungu
- 74 Pitta-Pitta
- 75 Margany
- 76 Gunya
- 77 Ngiyambaa
- 78 Waalubal
- 79 Gumbaynggir
- 80 Warlpiri
- 81 Walmatjari
- 82 Panyjima
- 83 Ngarluma
- 84 Martuthunira
- 85 Thalanyji
- 86 Payungu
- 87 Purduna
- 88 Tharrkari
- 89 Jiwarli
- 90 Thiin
- 91 Warriyangka

Notes

1. Bopp's chief source was Marie Felicité Brosset's *Eléments de la langue géorgienne* (1837), also pointing to supposed Indo-European affinities. The orthography of examples in this chapter is normally that of their sources; for Old Georgian, however, I have preferred the transliteration used in Boeder's contribution to this volume.

2. This was also central to the typologizing of Heinrich Winkler (1848–1930), an academically peripheral figure (but this was the fate of typologists), whose *Zur sprachgeschichte* (1887) and other writings left their mark on Finck and other key players in the story of Suffixaufnahme.

3. For general appreciations of Finck see Lewy (1953a), Wahrig-Burfeind (1986), and Plank (1994). The state of typology around the turn of the twentieth century is surveyed in Plank (1991a).

4. Like Umlaut, Ablaut, or Aktionsart, the term "Suffixaufnahme" is best left untranslated. Its closest equivalent in English, "suffix resumption," has the disadvantage of suggesting, more strongly than is the case in German, that what is being reused has been used previously. Being more neutral as to precedence, "suffix assumption" would be more appropriate, but it has a drawback that inversely corresponds to that of "metaphony" and "apophony."

5. The link between the two was never quite severed, however, since in the *Haupttypen* tradition typological affinity tended to be used as a criterion for genetic affiliation.

6. What is connected by the equal sign in glosses is not segmented or segmentable in the example.

7. See Boeder (1989 and in this volume) for more on Georgian from this perspective.

8. This last issue had been the subject of a long article of Finck's (1907), dealing in great detail also with Georgian and anticipating certain modern approaches to relational typology (cf. Plank 1979: 11).

9. Other varieties of Romany used to permit such inherent singular and agreeing plural forms, and Kochanowski (1963: xii) was proud of them, pointing out that they exceeded the possessive adjectives of Russian, which failed to distinguish inherent number, in expressive power.

10. For a brief appreciation of Bork see Weidner's (1963) obituary (brought to my attention by Manfred Mayrhofer).

11. Here analysed as in Wegner's contribution to this volume. Bork himself provided neither morphological analysis nor translation.

12. Franz Anton Schiefner's *Versuch über die Thusch-Sprache oder khistische Mundart in Thuschetien* (1856: 68). Schiefner had been alerted to this pattern by Bopp (1848).

13. The suffixes resumed in Elamite are actually ones of person and number.

14. I use the terms "flective" and "flexion" (rather than "inflecting" and "inflection") when this type of morphology is to be distinguished from the "agglutinative" one.

15. Bourgeois's expertise in agglutination is not immediately obvious from his contributions to the *Revue de linguistique et de philologie cornparbe* (1909–14, with the journal folding in 1916) and to the *Bulletin* of the *Société royale belge de géographie* (1909–10) or from other publications of his that I was able to trace (ably aided by Johan van der Auwera). Basque, South Estonian, Nynorsk, Yiddish, Neo-Slavic, Ar-

menian, Hebrew, Konkani **Marathi**, Romany (here taking Finck 1903 as his model), and African languages (in ten pages) were not foreign to his roaming pen.

16. I am grateful to Nigel Vincent for bringing Vogt (1932) to my attention.

17. Appearances were deceptive, it would appear (cf. Rix 1985 and personal communication, Cristofani 1991). It is indeed possible for proper (and other) nouns in Etruscan to take two genitive endings, with the second in fact being that of an optional enclitic demonstrative or article; in examples of the kind Vogt had in mind, this second genitive is not due to agreement, however, but occurs in name constructions including grandparental ancestry:

- (a) **aule velimna larð-al-isa**
Aulus Velimna Larð-Gen-Dem (Nom)
'Aulus Velimna, the one [sc. son] of Larð'
- (b) **arnð velimna aulus-s clan larð-al-is-la**
Arnð Velimna Aule-Gen son Larð-Gen-Dem-Gen
'Arnð Velimna, the son of Aulus, of the one [sc. son] of Larð'

In examples such as (c) and (d) there are plain genitives where Suffixaufnahme would add a dative or genitive (governed by the verb 'dedicate' in (d)):

- (c) **aule-si meteli-S ve[l-us] vesi-al clen-Si**
Aulus-Dat Metellius-Gen Vel-Gen Vesi-Gen son-Dat
'for Aulus [of] Metellius, the son of Vel and Vesi'
- (d) **itun turuce venel atelina tin-as cliniia-ra-s**
this dedicated Venel Atelinas Tin-Gen son-P1-Gen
'Venel Atelinas dedicated this to Tin's sons'

18. Ferdinand Bork, incidentally, is cited by Vogt (1932: 81) only in order to pour scorn on him for basing his "Caucasian" family on unverifiable traits such as stress patterns, comparing languages in this respect that were millennia apart.

19. Contemporary with Vogt's invocation of an Ancient Near Eastern substratum, Grande's (1931) recognition of a marginal pattern in post-Biblical Hebrew that reminded him of Suffixaufnahme in Old Georgian, and that he explained as reflecting a common Japhetic ancestry, at best merits a footnote in the history of Suffixaufnahme. (I owe this reference to Winfried Boeder.) Grande claimed to have encountered three instances of **status constructus** constructions in Mishnaic Hebrew, all relatively fixed expressions ('people of the country, plebs', 'house of meeting, synagogue', 'house of learning, school'), where the attribute could be in the singular or in the plural (with final suffix *-ōth*) depending on the number of the head. The difference from Old Georgian, where Suffixaufnahme (apart from being productive) also involved case, with that of the head being added to that of the attribute, seemed negligible to Grande: unlike number, case simply was not available any more as an inflectional category of nouns in post-Biblical Hebrew.

20. **Finck's Haupttypen** were sympathetically received also by Heinrich Winkler, whose own typological scheme, as partly outlined above, had however been elaborated earlier.

21. This collection is assembled from various of Lewy's writings (e.g. 1928, 1951, 1953b, 1953c).

22. Lewy's own later pronouncements on this point of Mordva tended to be ex-

tremely cautious; cf. Lewy (1942: 8245). Bouda (1950: 19f.) merely appears to reiterate Lewy's original claim, although an explicit attribution is missing.

23. This is curious, since Lewy knew and even reviewed Bork's writings; also, it was from Bork that Lewy (1951: 822) claimed to have borrowed the useful term "bracketing" (*Klammer*). Apparently he was either unaware of Bork's brief notices on Suffixaufnahme, where adjectivalization had been highlighted at the expense of bracketing, or he distrusted Bork's reliability.

24. According to Wagner, this pleonastic method was also practiced in the juxtaposing type—for him exemplified by Irish, Berber, Coptic, and Aramaic rather than Subya—only with the governing noun preceding the dependent.

25. Curiously, by courtesy of Nils Holmer, as if unaware of Finck's and Lewy's exertions. In Holmer's own areal-typological scheme, "inflected genitives," though only mentioned for Georgian, a representative presumably of the "Palaeo-Eurasian Suffix (or agglutinative) Type" (perhaps with traits also of the "Palaeo-Eurasian-American Prefix Type"), were bound to lack typological significance, since Holmer generally considered genitive forms to be derived adjectives rather than inflected nouns (1966: 77f.).

26. Dixon's position in his grammar of Dyirbal (1972: 179–184) had been that case-agreeing possessive phrases are reduced relative clauses, to be dealt with in syntax and inflectional morphology.

27. Presumably noun-class membership, for languages that have classes, might have been mentioned as a feature distinguishing nouns from adjectives.

28. Strangely, Blake (1987: 31) has it the other way around when he states that, on the evidence of their agreeing in case, nominals such as that in the allative in (32) are in an adnominal relation in Warlpiri. His argument later is that there are no adnominal relations in such languages except, perhaps, appositional ones.

29. This list has been compiled from Skalička (1979), with certain modifications as in Plank (1988, 1991b).

30. Further work on Suffixaufnahme, mostly too recent to be appropriately covered in a historical survey, includes Andrews (1991), Aristar (1991), Blake (1991), Libert (1988), Luraghi (1990), Plank (1990, 1992a), and Young (1988: 162–166).

31. The present taxonomy differs from that of Nichols (1986), or the similar one of Milewski (1950), in being based on the functions of marking rather than merely on its location on heads (primaries) or dependents (secondaries). The patterns recognized are accordingly much more numerous, and it remains to be seen whether lumping on the basis of functions or locations is typologically more significant. Suffixaufnahme, like all case marking, is dependent-marking; it is only touched on peripherally by Nichols (1986: 105) as being at odds with the "almost universal" limitation of nouns to take only a single case affix. There are yet other classifications of marking patterns, such as those of Fairbanks (1979), based on the grammatical status of attributive markers (rigid order or separate formative, bound or free, inflectional or derivational), and Ultan (1978), based essentially on the morphological categories involved.

32. Evidence suggesting that ambiguity between subject and object is tolerable while that between attribute and head is not is surveyed in Plank (1980). The ambiguity potential seems generally smaller with inalienable than with alienable possession, since nominals denoting such typically inalienable possessions as body parts or kinfolk are themselves inherently relational and are therefore less dependent on relationship-establishing marking.

33. There may be more specific constraints at work here, such as the incompatibility of primary function-marking with any kind of relatedness-indication, unless the

secondary function is also marked—which would account for the non-attestation of Nos. 10–12.

34. See further Section 4.19 below.

35. Israeli Hebrew data courtesy of David Gil.

36. The kind of double case marking that is found in Shoshoni, one of the very few Uto-Aztecan languages to have a genitive (Langacker 1977: 85, 90), is a variation on the Latin rather than the Sumerian theme:

kuⁿcun-|a-ⁿ ka^hni
cow-Acc-Gen house
'the cows' house'

Secondary status is here simply marked twice, by accusative, a common Uto-Aztecan possessor case, in combination with genitive.

37. When they assert that "the genitive noun agrees in case and number with the possessed noun," Foster and Hofling (1987: 485) thus either misdescribe attributive marking in Kanuri or abuse the notion of agreement. Hutchison's (1980) reanalysis of the supposed accusative suffix *-qa* (or *-gâ*) as an "associative" postposition marking subordinate constituents when dislocated or topicalized does not affect the present point, which concerns the phrase-final placement of relationship-identifying 'markers, whatever their precise syntactic and pragmatic roles.

38. A comprehensive recent treatment is Jacquinod (1989).

39. For details and instructive discussion see Hahn (1953)—another reference I owe to Nigel Vincent.

40. In this volume Schweiger, Aristar, and Moravcsik are those most prone to succumb to it, though not inadvertently.

41. On Evenki, also exemplifying No. 9, see below, Section 4.17.

42. In Chukchi it is only the relatedness-indicating case that may be cumulated with number, the relationship-identifying suffix itself being purely possessive.

43. Still, while languages innocent of genuine cases (such as Swahili) naturally can in no way emulate, say, Old Georgian in its use of cases for purposes other than relationship-identification, languages with cases have a choice of whether or not to use them for relatedness-indication as well.

44. In principle, cumulatively expressed categories can be manipulated independently, as was shown earlier when exemplifying pattern No. 4. In examples such as (54) from Classical Armenian, partly repeated here, *bazmowt'-eamb zawr-awk'-n* Hay-oc' **crowd-InsSg force-InsPl-Def** 'with the crowd of the forces', only the case of the primary (instrumental) but not its number (singular) is repeated on the secondary, whose own number (plural) carries the day.

45. Since productive case marking tends not to co-occur with overt, Bantu-style gender/class marking on nominals, it is not so surprising that inflection-Aufnahme involving gender/class as well as case and number is unattested.

46. Hungarian's case "prefixes" on pronouns, corresponding to case suffixes on nouns (compare *benn-em Inessive-1SgPoss* 'in me' with *kert-em-ben garden-1SgPoss-Inessive* 'in my garden') might also be analysed as stems, however.

47. The initial segmental alternations of nouns in languages such as Welsh (Celtic), Kabyle (Berber), or Nivkh (or Gilyak, a Paleosiberian isolate) should probably not be recognized as genuine case prefixation.

48. The prefix exemplified here is further segmentable, and it is only its first part that is copied onto the attribute.

49. Pronominal possessors may also take the dative, in which instance they do not seem to require the case-and-class prefix of the primary; cf. nu-g *ulud nuŋ-gu* NomIII-camp,, you-Dat 'your camp'.

50. Sometimes, as in the Kalenjin group (Paranilotic) and in Somali (Cushitic), tonal contrasts are accompanied synchronically by segmental ones or even by sporadic affixation. Diachronically, such segmental contrasts may have been the sources of current suprasegmental ones; the "floating tones" in Bantoid and Kwa are synchronically relatable to additive segmental marking of attributive or "associative" constructions. See Bennett (1974) for a brief overview of tonal case, not however touching on the present issue.

51. The pronominal copy is sometimes analysed as a prefix of the secondary, with the segmental marking then conforming to pattern No. 4. There is a striking likeness to Aufnahme here with respect to the presence of two adjacent markers for the same category on a secondary — one its own, and the other passed on from the primary.

52. See Plank (1992b) for a survey of the two dozen or so elementary distinctions underlying the higher-level one between case affixes and adpositions.

53. Postpositions may be spelled as one word with (non-case-marked) demonstratives, though not with nouns, which perhaps reflects incipient suffixalization. In overly literary, archaic style postpositions are omissible after demonstratives. Thanks to Edith Moravcsik for setting my Hungarian account in order.

54. Attributes consisting of a proper name and an onomastic adjective may be split up, with the proper name transformed into a possessive adjective preceding the head and agreeing with it in the case governed by the preposition; the onomastic adjective with which the preposition is repeated is put in the genitive, as befits an attribute, rather than in the case governed by the preposition:

s Ivan-ov-ym sel-om s Xorobr-ogo
with Ivan,,, -Adjet-InsSg village-InsSg with Brave-GenSgMasc
'with the village of Ivan the Brave'

Again, it is an adjective rather than a noun with which the preposition is repeated in such complex marking patterns.

55. In a way, they are thus "outer case" analogues to the "inner case substitutions" of Dench and Evans (1988: 38f.), mentioned in Section 4.10.

56. The correspondence between absolutive on primary and dative, etc., on secondary in the Oromo pattern, intermediate between suffix-accumulation and Suffixaufnahme (89b), is a formally similar kind of divergence.

57. This condition serves to distinguish such adaptations from patterns with case attraction as found in Classical Armenian (54), where double case marking is impermissible.

58. KinProp is a special kinship proprietive, and OblStem is a special oblique case.

59. They are still ligatives, though, rather than relatedness-indicators in their own right, since they are only present when a non-zero case marker is copied from the primary onto the secondary.

60. For present purposes it is immaterial whether the alternants of such fused relationship-identifying and relatedness-indicating markers represent separate cases or allomorphs of a single genitive case (cf. Mel'čuk 1986: 80f. n. 12).

61. Espousing a Bopp/Dixon sort of theory, the early orientalist Duncan Forbes declared the combination of noun and inflected postposition, rather than the post-

position alone, to be a possessive adjective in Hindustani (1855: 96). See Payne's chapter for counterarguments.

62. What complicates matters here is that *lon* may not only carry case for relatedness-indication but may also be case-marked as the last inflectable member of its phrase (e.g. *pam tûm lôn-o* man firewood-with-Erg).

63. Examples after Buchholz and Fiedler (1987). The significance of genitives further inflectable, *inter alia*, for case was apparently first recognized in the grammar of Ilia Dilo Sheperi (1927: 50ff.); see Faensen (1975).

64. Attributive "articles" are an areal feature of Balkan languages, but at least those preceding nominal attributes do not agree in case with heads elsewhere.

65. Classic references here are Wackernagel (1908) and Watkins (1967); a more recent conspectus is Bader (1992). In this volume, the arguments are reviewed and added to by Villar.

66. Presumably it is in deonymic adjectives that bases are most likely to remain available for cross-reference. Thus, in German, the suffix *-sch* is limited to proper names and titles, and adjectives in *-sch* are in fact nounier than those in *-isch* and similar suffixes, on this and a few other counts; cf. *Die Kant-schenkant-ischen Ideen machten ihn berühmt* 'The Kant-ian ideas made him famous', where the anaphoric pronoun can only be coreferential with Kant when suffixed with *-sch*.

67. Among the qualities they share, or used to share, with genuine adjectives is the ability to undergo preposition-Aufnahme; see Section 4.7 (99b).

68. At the bottom of the table are Polish, Russian, Belorussian, Ukrainian, Bulgarian, and Slovene.

69. Relevant examples have been adduced by Zimmer (1982:11983).

70. Some Slavonic languages appear to use different suffixes to differentiate specificity, such as *-ov-* (specific) vs. *-ovsk-* (generic) in Slovene (Stefanini 1969: 296).

71. All relevant evidence is culled from Mittelberger (1966), Stefanini (1969), and Neumann (1982).

72. This discovery is due to Nicholas Poppe (1927), and the parallel to Finckian Suffixaufnahme was first drawn by Karl Bouda (1950). See further Benzing (1955a: 88f.), Konstantinova (1964: 69f.), Kilby (1983: 46), and Nedjalkov (1994).

73. The "indefinite accusative," sometimes called partitive, can apparently also serve as (intransitive) subject marker.

74. I lack information on whether such adjectives remain uninflected (to add one to (144a), *aja etirken-gi-ve oro-r-vo-n kind old=man-Poss-Acc reindeer-Pl-Acc-3SgPoss*), or agree with the possessive word in number, or additionally agree with the possessive's head in case and number (*aja-l-va etirken-gi-ve oro-r-vo-n kind-Pl-Acc old=man-Poss-Acc reindeer-Pl-Acc-3SgPoss*, creating potential ambiguity as to the adjective's allegiance).

75. Etymologically the Evenki comitative suffix *-nun* contains instrumental **-n*, and instrumental, adessive-inessive, and genitive probably have not always been distinguished in Altaic (Poppe 1977: 60). A demonstrative pronoun **n-*, cross-referencing the head according to pattern No. 4 above, has been suggested as the ultimate source of the Altaic genitive by Menges (1960: ch. 1) and others.

76. Needless to add, the traditional notion of apposition too covers a *ragbag* of constructions, varying greatly in tightness and dependency.

77. Nichols (1986: 107–109) suggests that syntagmatic connections are appositive within head-marked constructions and more tightly (bilaterally) bonded within dependent-marked constructions. Her second correlation does not square with the affinity

of Aufnahme — which involves double dependent-marking, with relationship-identification and relatedness-indication pertaining both to the secondary — to apposition.

78. Actually, while specifically appositional relationship-identification is not unheard of (in German, for instance, there are circumstances where apposita appear in the dative), it presumably does not normally combine with relatedness-indication.

79. Touching also on Australian-style case agreement, the spectrum of co-predicative relationships is surveyed by Miiller-Bardey (1990), who follows Plank (1985) in deriving formal properties of co-predication from its function, viz. that of rendering multi-propositional structures more compact, with simple clauses consisting of a verbal core and one or more nominals serving as the model. Having a single verbal core may entail having complex relational marking on nominals.

80. See McGregor (1989) specifically on phrase-fracturing.

81. For Australian languages with Suffixaufnahme it has been argued that genitive suffixes likewise derive from verbal relative-clause markers — diachronically but perhaps also synchronically; see Dixon (1969) and Eades (1977). Lehmann (1984: 187) finds regular case agreement between relative clauses and their primaries, apart from Australian, in (Greenlandic) Eskimo, Uto-Aztec, and Hurrian.

82. Or also simpler patterns without relationship-identification on the secondary, as in Mono (62).

83. It is an unusual suffix in that it does not normally undergo vowel-harmony.

84. See Boeder (this volume) for similar ambiguities in Kartvel.

85. This was the main topic of Plank (1990).

86. However, the Aufnahme pattern may also result from possessive adjectives acquiring nominal properties, as they appear to have done to some extent in Slavonic.

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