WALS values evaluated

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Abstract

After a brief discussion of what The world atlas of language structures *can and cannot (easily) be used for, the critical emphasis is on value assignments for the 140 features mapped. In particular, in an attempt to replicate the value assignments for one language, well-described and much-analysed German, a non-negligible proportion of the values assigned is found to be problematic, in the sense of being arbitrary or uncertain in view of analytic alternatives, unappreciative of dialectal variation, unclear as to what has been coded, or factually erroneous. To give an impression of progress in areal linguistics over the last century,* WALS *is then compared with an earlier world atlas of language structures, that of Wilhelm Schmidt (1926): for the features mapped in both atlases, despite substantially improved factual knowledge about languages, there is considerable congruity of the areal distributions shown.*

Keywords: diachrony, dialect, German, linguistic area, linguistic atlas

1.   What *WALS* is and isn't, has and hasn't

1.1.   What professional users of *The world atlas of language structures* (*WALS*, as published by Oxford University Press or as now also available online at http://wals.info/) will primarily be interested in, generally speaking, is how differences and similarities between languages are distributed geographically and what such distributions as visualised on maps can possibly mean. Such general interests define the scholarly subcommunity of areal linguists; but they really ought to be shared by everybody whose business is linguistic diversity and unity.

A look at the maps in the Reference section on pp. 576–583 (not accessible in the online version),[1] which plot the *WALS* languages by genealogical affiliation rather than directly in terms of structural features as the main maps do, does reveal clear geographical patterns: members of genealogical groups tend to cluster in space. This is only to be expected, given the ways proto-speech communities, and with them proto-languages, typically diversify.

But then, rather than finding confirmation of the generalisation that neighbours are very likely to be (linguistic) kin and vice versa, what serious users of *WALS* will more particularly be interested in, presumably, is to see whether there are other patterns visible on geographical maps, spatial patterns which are narrower or preferably wider than these genealogical patterns or are cutting across them. These other patterns will be distributions of structural traits which are NOT owed to these traits so distributed being inherited from proto-languages and retained or uniformly refashioned as languages and their speakers have been moving about, but to borrowing (borrowing of actual forms as well as stimulus diffusion) when speech communities of different genealogical affiliations are, or have been, in contact.

1.2.   Ideally, one would also want to see how movements of languages, along with their speech (sub-)communities, and the spreading of structural traits across speech communities are to be located in TIME, absolute or at least relative: but the *WALS* maps, structural as well as genealogical, lack a diachronic dimension and only provide language and feature-value locations for some single point in time. The one notable exception is Map 81A, Order of Subject, Object, and Verb in "Ancient" Languages, by Matthew S. Dryer, on p. 331 (regrettably omitted from the online version).[2] This general temporal reference point for the "modern" maps is not exactly now, turn of second to third

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1. But I would often go back to the book anyhow, finding the online version a bit slow with certain kinds of request.
2. This "ancient" map is limiting itself to the Old World where languages spoken 4,500–1,000 years ago are attested rather than reconstructed, which essentially excludes Africa. It has "Ancient Scandinavian" alongside, to its west, "Old Norse". This is inbuilt diachrony, for these are different stages of the same language: Ancient Scandinavian is the term usually applied to dialectally undifferentiated Scandinavian (or North) Germanic up to the seventh century, and Old Norse usually means a subsequently differentiated variety of West Scandinavian best attested through Icelandic sagas from the twelfth and thirteenth centuries. The change from one to the other is not simply from SOV to SVO, which a comparison of the "modern" map with the "ancient" suggests is a general trend for the Old World area (with VSO also partly succumbing to SVO), but from V-final to V2 or even V1 and from OV to VO (see Faarlund 1994 for a thumbnail sketch). The other old Germanic language on the "ancient" map is Old English, classified as having "no dominant order" (Modern English then becoming "SVO"): most published experts would here go for "(dominantly) SOV", with an admixture of V2 (not as rigid as elsewhere in Germanic). A Near Eastern language on the "ancient" map is long-extinct Hurrian (with Urartian getting an icon of its own, though both, otherwise isolates, were closely related): it is here categorised as "SOV", although a predominance of Patient–

millennium CE, but the time just prior to European colonial expansion, when languages such as English, Spanish, Portuguese, Russian were still confined to these cosy little corners of theirs. (Alas, the happy world of thriving diversity suggested by *WALS* isn't contemporary reality.) More recent events massively altering the distribution of languages over the globe, thus, remain unaccounted for on *WALS* maps. What these maps do show is an interim result of earlier geographical redistributions of peoples and languages, with no chronological layering directly recognisable even for those periods of the not-too-distant past where such redistributions are reasonably well documented.

1.3.   Knowing what can be found in *WALS* generally (and what cannot), one can use *WALS* for several particular purposes.

Thus, one may plainly be interested to see at a glance or two what is rare and only occurs in circumscribed areas as opposed to what is common and occurs widely scattered. On the basis of *WALS* maps, one would then be asking oneself whether or not this is in line with what theories of structural complexity or markedness might be interpreted to predict about crosslinguistic distributions.

WALS can be consulted to find what typologists have always been interested in: co-variation among structural variables. But to find implications or other kinds of dependencies, you only need a database (judiciously organised) with lots of languages (judiciously sampled) and lots of variables (judiciously chosen) in it; mapping the languages and variables geographically doesn't help in this particular enterprise – unless the dependencies discovered are not really universal, but are only valid for subsets of languages in circumscribed areas, in which case they require the attention of the historical linguist (and perhaps the population historian) rather than of the typologist.

With the *WALS* database in hand or on screen (and here one is free to organise it by features or by languages) enriched by visualisations of areal distributions, the more particular challenges will be perceived to be these: (i) sorting out the areal patterns which are genealogical and those which are diffusional, and (ii) making historical sense of either patterns and of the relationships between them.

The author of the last map, No. 142 (Paralinguistic usages of clicks), David Gil, who is also one of *WALS*'s editors, expresses scepticism[3] whether – with

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Agent–Action when both nominal arguments are present has often been noted, at least for some of the surviving and interpretable texts (see Plank 1988, who also emphasises that Hurrian is profoundly ergative-aligned, making the equations Patient=Object and Agent=Subject somewhat problematic).

3. Whether rightly or wrongly, he is in good company:

The basic fallacy of the book [and this is not a review of *WALS* but of another book! – FP] is the notion that we can use statistics concerning the relative frequencies of typological features in different areas to reconstruct remote prehistory. It is rather the distribution

no diachronic linguistic information given, either about a particular phenom-
enon in point or more generally about the pertinacity and transience of kinds of
structural traits – any definite historical sense can be made of even the clearest
geographical pattern. On the other hand, there are precedents in dialect geog-
raphy for the successful diachronic reading of certain kinds of areal patterns
on synchronic maps. At any rate, in this respect *WALS* perhaps shouldn't be
overvalued: it might not really be an all-purpose tool to take on this second
challenge.

Which leaves the challenge of determining whether one can predict the value
of any feature from the values of the same feature (or also of others) in the ge-
ographical neighbourhood, given or not given information about the genealog-
ical affinity of neighbours – or, looking at it from another angle, of identifying
neighbourhoods, populated by kin and/or in-laws, which are conducive or inim-
ical to such predictions, knowing the kin and/or in-law status of the population.

1.4.   There is already a considerable body of research of this kind spawned
by *WALS*, some of which represented in this issue of *Linguistic Typology*, ac-
companied by some discussion of whether a good choice has been made by
the editors of *WALS* and their contributors concerning the LANGUAGES (or, for
those with more comprehensive ambitions: the minimally distinct linguistic
varieties) and genealogical groups covered. With 2,559 languages making an
appearance on one *WALS* map or another, and with 200 of them appearing on
many maps and 100 of these on just about all, it won't be a major complaint
that you are not getting value for money in terms of sheer numbers.

Sure, for those with strong opinions on genealogically representative sam-
pling, there may remain questions of whether some genealogical groups are
over- or underrepresented, and whether the assumed genealogical groupings –
at the levels of phylum, family, subfamily, genus[4] – are state of the art.

And some Sprachbund aficionados will look in vain for their own favourites,
because even with as many as 1,370 languages on a map – the maximum for
a single map, with the minimum at 120 – you don't get the required language
density for, say, the comparatively small-scale Balkan Sprachbund to stare you
in the face.

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of such typological features [. . .] that itself requires historical explanation. It can be
inherited within small or large families, the result of areal contact, or a quite recent
independent innovation. Thus, from the historical point of view, typological distributions
are *explananda*, not explanatory principles. (Greenberg 1993: 505)

4. Genera are intended as groups with an independent history of maximally 3,500 to 4,000 years,
   which is to make for an approximate equality of genera in terms of time depth – of time to
   internally diversify; see p. 584.

1.5.   Also, speaking of the Balkan Sprachbund, most of the requisite FEA-TURES just happen to be missing. Overall, however, a set of as many as 142 features mapped shouldn't cause complaint, especially if you expect to find them collected in a single tome. (Online, of course, there is no inherent limit to expansion . . .)

But, granting sufficient numbers, has a good CHOICE been made of features mapped in *WALS*? Naturally, there were practical limitations. First, only such features were candidates for which information could be obtained for a wide range of languages – minimally the 100 in the core sample, but preferably many more. Second, since this information had to be obtained at relatively short notice, the viable features that could be chosen from would normally have been ones that experts had already worked on on their own (and they would hardly have done so unless they found the feature interesting, for one reason or another); and, third, these experts then needed to have the time and inclination to prepare a *WALS*-style map or two before the appointed deadline. As a result, what we are getting is plainly a convenience sample of features.

However, rather than lamenting the exclusion of one's own favourite features (which it will now be possible to map and submit for the online version) or questioning the wisdom of certain inclusions, some thought should in future be given to what it could mean to be a good sample of features for purposes of geographical mapping. Without principles of selection, any sample drawn from the vast number of elementary structural parameters for crosslinguistic variation would seem bound to be a motley group. (The more so when the lexicon is counted in, which is getting ten maps in *WALS*, or eleven if the clicks of Map 142, by David Gil, are considered lexical items, as they ought to.) What could such principles be like that would distinguish a good, representative FEATURE sample from an arbitrary one dictated by convenience? Presumably, such principles would guarantee that such features have an equal chance to be in a sample (i) which are (known to be) amenable and which are (known to be) recalcitrant to borrowing, (ii) which are (known to be) long-lasting and which are (known to be) fast-changing in internal linguistic development, and (iii) which are (known to be) implicationally linked with other features and which are (known to be) independent. But do we have the advance knowledge that would be required to apply such principles in selecting features for mapping? Or is the only really viable solution, if you want to get going, first, to just go ahead and map whatever features you can get a mapper for (the *WALS* practice); second, on the basis of the maps themselves, to distinguish features which show a (non-genealogical) areal distribution or a (possibly also areal) genealogical distribution (taking care not to conflate the two); third, to see what reliable inferences about the diachronic pertinacity or transience of feature values can be made from geographical distributions (possibly few or none); fourth, where suggested by the map evidence, to relativise

assumptions about implications between features from universals to areal generalisations?

1.6.   There was a rather severe kind of limitation imposed on what was to be mapped in *WALS*: variation had to be reducible to being a matter of a very limited range of mutually exclusive "values" of individual "features", that is, parameters of crosslinguistic variation, concrete or abstract, elementary or composite. Thus, only such features were chosen which could be defined without a great number of values: sometimes they only have two values, rarely more than five, never more than nine, and are therefore conveniently distinguished on maps through shapes and colours of the icon for the language concerned.

Sometimes, however, such value economy is only achieved through lumping: a text chapter would distinguish a higher number of values than you'll find on the corresponding map, with values reduced to value groups; more often it is already the text chapters themselves that lump (e.g., "small", "moderately small", "average", "moderately large", "large consonant inventories", Map 1, by Ian Maddieson; "simple", "moderately complex", "complex syllable structure", Map 12, by Ian Maddieson; "no cases", "2", "3", "4", "5", "6–7", "8–9", "10 or more cases", Map 49, by Oliver A. Iggesen). Such lumpings may be permissible or even useful if the value groups are inherently natural, but not if they are arbitrarily imposed. Users might have different views of natural value groupings, or they might want to try out alternative groupings to see what areal distributions and typological correlations they would be getting; alas, this is impossible because *WALS* does not provide the actual values for each language, but only the value group memberships assumed by map authors themselves.

Further, at least on the maps, *WALS* features appear to be simple insofar as they do not have any hierarchical infrastructure, whereas the accompanying text chapters sometimes hint at the potential usefulness of distinguishing superordinate and subordinate levels of values.

Sometimes features are presented as having categorially opposite values on maps; but the accompanying text chapters concede that the overall distinction is gradual insofar as the map feature is really a higher-level distinction defined in terms of a number of lower-level features whose own values may vary independently of one another and thus define a continuum of distinctions. The distinction between AND and WITH noun-phrase conjunction is an example (Map 63, by Leon Stassen): it is through several subtle morphosyntactic distinctions (to do with agreement, relational marking, and positional patterns) that an asymmetric, comitative WITH conjunction gradually blends into a fully symmetric, coordinative AND conjunction, synchronically as well as diachronically. Again, since no information is provided about the elementary distinctions on which the more abstract distinction is resting, *WALS* users have no

way of trying out for themselves how cut-off points other than that assumed by the map's author would distribute areally and would link up with other typological variables. Some features mapped are intentionally and explicitly composite insofar as they combine several other features mapped in *WALS* (e.g., Consonant–vowel ratio, Map 3, by Ian Maddieson; Locus of marking: Whole-language typology, Map 25, by Johanna Nichols & Balthasar Bickel; Prefixing vs. suffixing inflectional morphology, Map 26, by Matthew S. Dryer); here the composite pictures can be reconstructed from their component parts. For Map 12, Syllable structure (by Ian Maddieson), the (lumped) values "simple" ((C)V), "moderately complex" (CVC, CCV, CCVC, with the second C in a sequence a liquid or glide), "complex" (everything else) are composite too, combining onset and coda positions; phonologists with an interest in syllable weight will forever regret that there is no way to disentangle the two. The component parts themselves are sometimes (as in those which yield Map 26) not real elementary distinctions, but "exemplars" allegedly best bringing out the contours of a typological contrast.

Sometimes value distinctions referred to in the text are simply omitted on the maps. A blatant example is Map 13 (by Ian Maddieson) which distinguishes "no tones", "simple tone systems" ("essentially only a two-way basic contrast", with the hedges "essentially" and "basic" unexplained and the cut-off point, two vs. more than two, unmotivated), and "complex tone systems". The distinction between level and contour tones is mentioned, but not mapped nor coded in the language files. From *WALS*, a relevant universal (contour tones imply level tones) or even the weaker generalisation of the author (when there are up to three tones, then they are usually level, while contour tones tend to be confined to larger systems) cannot be verified.

As such, the *WALS* feature-values, then, aren't always as valuable as one might have hoped for.

1.7.   The features chosen for mapping in *WALS* are on the concrete rather than the abstract side: typically, they have to do with form classes, distribution classes, and structural relationships defined over surface representations of forms and constructions. As a notable exception, the feature Fixed Stress Location (Map 14, by Rob Goedemans & Harry van der Hulst) deals with abstract representations, insofar as it may require the discounting of concretely present syllables (in peripheral positions) as abstractly absent ("extrametrical"). Presumably the idea was to minimise the theory-dependence of the *WALS* results and in particular the analysis-dependence of value assignments: theoretical approaches tend to differ in their assumptions about abstract rather than about concrete representations, don't they; and analytical decisions tend to be more straightforward and less controversial, don't they, when they concern surface patterns rather than less tangible abstract patterns.

2. *WALS* replicated, for one language

2.1.   Disregarding all possible questions one might have about the relationship between genealogy and diffusion, about relative time, and about the languages sample and the features sample, and all possible qualms about what is in *WALS* and what isn't but perhaps could/should have been, *WALS* will be judged IN ITS OWN TERMS to be as valuable as are the value assignments for the features chosen for each particular language chosen.

As last checked on 25 August 2008, 36 value assignment errors have been posted on the *WALS* online site, at http://www.eva.mpg.de/lingua/research/errata.php and at http://blog.wals.info/errata/. They mostly concern less well-known languages, the best described ones being Swedish (on Map 38 *recte*: indefinite word same as 'one'), Basque (on Map 33 *recte*: plural clitic), and Breton (on Map 88 *recte*: noun–demonstrative).[5]

To see whether *WALS* is factually as reliable as it seems on this evidence of only 36 reported mistakes so far – out of overall more than 58,000 datapoints! – I have tried to replicate, in a constructive spirit, the value assignments for one of the better-known and better-described languages from the *WALS* core sample, German (meaning High German, as distinct from Low German).[6] I am not a native speaker of STANDARD German (it has been said that "Standard German" isn't really a natural language insofar as it lacks native speakers; but this is perhaps an exaggeration), but of a southern variety of German, Middle Bavarian (at 49°N 12°E; ca. 340 metres above sea level; average annual temperature a mere 8.8°C/47.8°F; average annual rainfall 636 mm, which sometimes comes down as snow, with December–February averages regularly below freezing point).[7] I am not really a Germanist or a German dialectologist by profession, either, and may therefore be missing out on potentially relevant specialist information. Still, as a linguist with a background in Germanic and with some familarity with the scholarly literature on German I feel confident that I am able to follow the coding instructions for structural features like those in *WALS* for a language I speak well. Of the 140 features (two *WALS* features are exclusively about sign languages), I only note those where I find the value assignments in *WALS* potentially problematic – that is, factually wrong, arbitrary or uncertain owing to analytic alternatives, too hard to

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5. Other errata reported online are a couple of language identification errors, several changes in the scheme of genealogical classification, one feature description error/omission, a couple of typos, and a few mistakes in references.

6. As can be seen in the Debate section in *Linguistic Typology* 10(1) 2006, reproducibility is increasingly acknowledged as a methodological requirement among typologists.

7. Temperature and precipitation are relevant information for map No. 129, by Cecil H. Brown, dealing with the lexical distinction or non-distinction of 'hand' and 'arm' and suggesting a correlation with the kinds of clothing worn in different climes.

understand to replicate (a subjective judgement), or unappreciative of dialectal variation.

Bringing in dialectal variation might seem like being gratuitously inconsistent in replicating, with the original value assignments intended for another variety, the "standard" language. However, the real point of recognising dialectal variation for present purposes is that an atlas like *WALS* is in essence about links between geographic locations (habitats of speech communities and subcommunities) and linguistic feature values. So, for any particular location mapped, registering some feature values and ignoring others, whichever dialect or language they belong to, would seem to undermine the basic areal-structural programme.

WALS itself (2005: xi) does not acknowledge an expert consultant for German, unlike for 85 other languages. With a number of people on the *WALS* team at Leipzig as well as several *WALS* authors, including two of the editors, accomplished speakers (native or native-like, if you will), such consultancy would indeed seem to be superfluous. More worrying is the kind of published sources for the value assignments for German which are credited online at http://wals.info/languoid/lect/wals_code_ger: with perhaps two or three exceptions, there must be grave doubts whether these are references that experts would recommend for obtaining in-depth analytic information on German.

2.2.   *German values*

Features/Maps 1–3: Consonant inventories; Vowel quality inventories; Consonant/vowel ratio (by Ian Maddieson)
Comment: The consonant phoneme counts for Standard German vary between 17 and 25 (items of contention are the affricates, the velar nasal, /ʒ/, /ʤ/, /h/, the glottal stop). The *WALS* value is "average" (22 ± 3); phonemic minimalists would prefer "moderately small" (15–18) – assuming the inventory maps are about something like phonemes.[8] There are maximally 12 vowel qualities (including diphthongs as well as schwa), and minimally still enough to get German into the "large" class (7–14) where *WALS* has it. (Dialects differ considerably in vowel and diphthong inventories; but all varieties would seem to qualify for "large".) The *WALS* C/V value for German is "low" (2.0 or lower). If you are a phonemic maximalist for consonants and a minimalist for vowels (and, e.g., count diphthongs as biphonemic), your value here would be "moderately low" (above 2.0, below 2.75), if not "average" (above 2.75, below 4.5).

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8. The sources credited are phonetic descriptions of German. No genuinely phonological references, in whatever structuralist or other framework recognising some sort of a difference between phonology and phonetics, seem to have been consulted for any of the "phonological" chapters in *WALS* other than the four prosodic ones.

Feature/Map 4: Voicing in plosives and fricatives (by Ian Maddieson)
WALS value for German: "in both plosives and fricatives"
Comment: Owing to final devoicing, voicing contrasts in Standard German are limited to syllable onsets; but such positional limitations are ignored for *WALS* purposes. In Upper High German dialects, in particular Bavarian, only velar plosives /k, g/ and labial fricatives /f, v/ contrast in onset position, while there is no corresponding voicing contrast in labials and alveolars, nor does voice contrast in velar+liquid clusters /gl, gr/; but such patterns which are not only not across-the-board, but indeed only involve a minority of the relevant consonants, would also suffice for a positive value. In *WALS*, "voicing in both plosives and fricatives" in actual fact means "voicing in at least one pair of plosives/fricatives corresponding in place of articulation, not necessarily in all such pairs". Fair enough, but phonologists would perhaps have appreciated finer-grained feature values.

Feature/Map 6: Uvular consonants (by Ian Maddieson)
WALS value for German: "none"
Comment: Could equally be "uvular continuants only", in view of the substantial number of speakers who don't have alveolar [r], but uvular [ʀ] or [ʁ, χ] as the only realisation of /r/. This is in fact mentioned in the chapter text, but has not found its way onto the map.

Feature/Map 9: The velar nasal (by Gregory D. S. Anderson)
WALS value for German: "velar nasal, but not initially"
Comment: It is one of the notorious controversies in German phonology whether the velar nasal is underlying or derived. With no generally accepted solution, and with perhaps the more numerous arguments on the side of an analysis without an underlying velar contrast for nasals, the *WALS* value assignment is, inevitably in this situation, arbitrary. It would, however, seem in line with other segmental valuations in *WALS*, which are generally based on "surface contrasts".

Feature/Map 10: Vowel nasalization (by John Hajek)
WALS value for German: "contrast absent"
Comment: Beyond question for Standard German. However, Upper High German dialects (Alemannic, Bavarian) are often described as having contrastive nasalisation for subsets of their vowels or diphthongs. The nasal consonant which has triggered it diachronically may synchronically be gone for good, justifying the contrastiveness assumption. Or there may be surface contrasts between oral and nasal vowels preceding a nasal consonant, with the nasal vowel only appearing where a non-nasal right after it has been elided (e.g., Bavarian [ʃtum] 'dumb' vs. [ʃtũm] 'living room' /ʃtubn/).

Feature/Map 11: Front rounded vowels (by Ian Maddieson)
WALS value for German: "high and mid"
Comment: Beyond question for Standard German. Again, Upper High German dialects (Alemannic outside Switzerland, Bavarian) are notorious for massive unrounding, of both high and mid rounded vowels. Sometimes rounding has been re-introduced secondarily (e.g., through liquid vocalisation); but sometimes the value for dialects plainly would have to be "none".

Feature/Map 13: Tone (by Ian Maddieson)
WALS value for German: "no tones"
Comment: Beyond question for Standard German; but where High shades off into Low German (and the High/Low boundary is a complex matter), tones are heard. The Rhine-Franconian dialects have pitch-accent contrasts (traditionally known as "Stoßton" and "Schleifton"). So do neighbouring Limburgian varieties of Low Franconian in the Dutch-Belgian-German border area, linked with pitch-accent Norwegian[9] and Latvian on Map 13 by a contiguous area of tonal or related prosodic contrasts (three-way quantity contrast in Low German, stød in Danish, pitch accent in Swedish, three-way quantity or tonal contrast in Estonian, tonal contrasts in Lithuanian and Livonian) – an areal pattern too small-scale in global perspective to be visible on Map 13.[10]

Feature/Map 16: Weight factors in weight-sensitive stress systems (by Rob Goedemans & Harry van der Hulst)
WALS value for German: "coda consonant: (only) closed syllables are heavy for stress"
Comment: As mentioned in the chapter text, it is not clear whether vowel length really does not matter for determining syllable weight as relevant for word stress (there are other patterns where there is no question that long (or tense) vowel is equivalent to short (or lax) vowel plus consonant); and then it depends on one's analysis whether vowels have a quantity or a tense/lax constrast. The features to do with word stress and word rhythm (Maps 14–17) are among the most abstract ones in *WALS*, and much here depends on one's theory and analysis. Still, with the possible exception of the weight factors, it seems reasonable to code German as "no fixed stress (but weight-sensitive)", "right-oriented: antepenultimate syllable is involved", "trochaic: left-hand syllable in the foot is strong".

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9. Not all varieties of Norwegian are tonal, though. Nor all of Swedish either, but Swedish isn't mapped.
10. For recent research see Gussenhoven (2004: Chapters 11 and 12) and the output of two European Science Foundation enterprises, the EUROTYP programme and the network *Tone and Intonation in Europe*, e.g., van der Hulst 1999 and Riad & Gussenhoven 2007.

Feature/Map 19: Presence of uncommon consonants (by Ian Maddieson)
WALS value for German: "none"
Comment: In terms of the four classes of consonants considered "unusual" –
clicks, labial-velars, pharyngeals, TH sounds, plus combinations of them – this
is the correct value. Naturally, other classes of consonants might also have been
considered candidates for unusualness. For example, if affricates – and in par-
ticular the full set, with affricates for all major places of articulation including
velar and labial – had been included in this survey, German and in particular
Swiss German would have come out as possessors of something consonantal
very uncommon indeed.

Feature/Map 20: Fusion of selected inflectional formatives (by Balthasar Bickel
& Johanna Nichols)
WALS value for German: "exclusively concatenative"
Comment: The "selected" inflectional formatives are ones of case and tense-
aspect-mood. Picking the "exemplars" for these categories in accordance with
the procedure specified by the authors (for it is only exemplars that are being
looked at by them, not all formatives of all terms of these categories), one can-
not but agree that case on nouns is concatenative ("linear" and "phonologically
bound"). Equally obviously, past tense is only concatenative for a subset of
verbs ("weak" verbs, often morphologically derived), but is "nonlinear", and
in particular is of the "ablaut" type, for "strong" verbs, which are all mor-
phologically basic and usually high-frequency. Unless one would arbitrarily
want to exclude such exemplars, the overall value for this feature, accordingly,
would have to be "ablaut/concatenative". Given that one of the authors of this
chapter is a native speaker (no other German source is given for Features 20–
25), this coding divergence can hardly be due to ignorance; but it is difficult to
understand all the same.

　　Also, it does not seem very felicitous to characterise the "ablaut" kind of
exponence (a.k.a. introflective or non-concatenative) as a case of phonological
fusion, rather than as "synthesis" or morphological combining (the topic of
Map 22 by the same authors).

Feature/Map 23: Locus of marking in the clause (by Johanna Nichols & Bal-
thasar Bickel)
WALS value for German: "dependent-marking"
Comment: What is mapped here, for languages which treat subjects and objects
differently (in German only subjects are agreed-with by finite verbs, which
is head-marking), are only Ps, or direct, primary objects, and in particularly
nouns in this relation where pronouns and nouns are treated differently. Again,
the procedure applied here is to pick out "exemplars", defined as being the
"majority or open or default pattern". Now, there is only a small minority of

German nouns which are distinctively case-marked in the P relation, namely weak masculines (*Löwe-n*, as opposed to nominative *Löwe*); most noun declensions conflate nominative and accusative in the singular, and all do in the plural. (Pronoun and adjective declensions are doing a bit better in this respect; but the specific instruction in the chapter text is to take nouns.) Doesn't this mean German ought to be coded as "P has no marking"? Or in fact as "P is head-marked", owing to P being distinguished from A through the absence of verb-agreement?

Feature/Map 24: Locus of marking in possessive noun phrases (by Johanna Nichols & Balthasar Bickel)
WALS value for German: "dependent-marking"
Comment: In colloquial German, perhaps with some areal limitations, it is common to "double-mark" the possessor – through dative case plus cross-referential possessive pronoun (*meinem Bruder sein Haus* 'my brother [DAT] his house') – rather than use a genitive or prepositional kind of dependent-marking. Presumably, the authors took the latter kinds of possessive marking as their "exemplars"; but it is hard to see why. Why are the exemplars chosen "typologically more revealing" and "less universally-driven"? According to the authors, supposedly greater "typological clarity" is being bought here (and elsewhere) "at the price of a more schematic description of each individual language's morphosyntax": Isn't this perhaps too high a price to pay? And isn't "schematic" something of a euphemism for "wrong"?

Feature/Map 25: Locus of marking: Whole-language typology (by Johanna Nichols & Balthasar Bickel)
WALS value for German: "consistently dependent-marking"
Comment: Naturally, since this is a composite features, doubts about the value assignments for the component features, as mapped in Maps 23 and 24, will carry over.

Feature/Map 30: Number of genders (by Greville G. Corbett)
WALS value for German: "three"
Comment: The chapter text emphasises that care must be taken in analysing gender systems, which may seem deceptively simple. Sometimes, it is not only care, but all kinds of theoretical decisions about morphological systems (for instance, about whether and how to distinguish inflection proper from stem formation, and which structural levels such as root, stem, word to recognise as relevant) which influence the outcome of such analyses, all done carefully. For skewed inflectional systems where two inflectional categories interact and one of these categories has all its distinctions neutralised in the company of one term of the other category (the marked opposition member), two kinds of

analysis can be entertained. Gender and number in German is a case in point: either one assumes hierarchical paradigm structures, with gender and number as separate categories and with the three gender distinctions that are made in the singular all completely neutralised in the (marked) plural; or one assumes flat paradigms, with only a single category, call it "gender" or whatever you please, which shows a four-way distinction – MASCULINE, NEUTER, FEMININE, PLURAL (with many overt morphological similarities between the last two). Assuming that PLURAL is structurally on a par with MASCULINE, NEUTER, FEMININE may be a less familiar analysis than the time-honoured one of three genders and two numbers but one without gender (no source is given for German in this chapter and the two others on gender); but it is not to be rejected *a priori* (and is in fact forced on you, on grounds of economy, by certain theoretical frameworks such as Distributed Morphology).[11] Concluding that German has three or four genders is, thus, more analysis- and theory-dependent than might have been thought.

Feature/Map 31: Sex-based and non-sex-based gender systems (by Greville G. Corbett)
WALS values for German: "sex-based"; "semantic and formal assignment"
Comment: The idea here is to classify gender systems as "sex-based" or "non-sex-based" (i.e., essentially animacy-based) on the strength of "core members" of the respective classes (three or only two in the case of sex-basedness). The author is better aware than anybody of the wide range of further factors, semantic and formal, that may be involved in gender classification. For German, numerous such factors other than sex have sometimes been invoked as motivating gender assignments which have, to other analysts, seemed arbitrary; and such controversial discussions are destined to continue. (Map 32, Systems of gender assignment, accordingly recognises non-semantic factors as playing a role for gender assignments, too.) What isn't so obvious is on what grounds sex is assumed as the DOMINANT distinctive parameter in gender systems, rather than as one among several.

Feature/Map 34: Occurrence of nominal plurality (by Martin Haspelmath)
WALS value for German: "plural in all nouns, always obligatory"
Comment: In some sense, especially comparatively speaking, this is the most obvious value assignment. On the other hand, there are certain patterns of inflectional syncretisms which suggest that number DISTINCTION (which is perhaps to be distinguished from "number MARKING" as used for this map) is

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11. Traditional structuralist reasoning, paying special attention to the distinction between stem formation and inflection proper, has also sometimes led to analysing the plural as a gender: Antonsen 1973.

less at a premium for less animate nouns than for those higher up on the animacy hierarchy: e.g., weak masculines like *Balken* 'beam', low in animacy, have extended the formative *-n* to all singular cases (formerly *Balke* NOM.SG – *Balken* PL) and thus no longer distinguish plural from singular by their own inflection (their determiners still do), while weak masculines like *Knabe* 'boy' or *Löwe* 'lion' have resisted this paradigmatic levelling and thus continue to distinguish a plural (*Knaben*, *Löwen*). Also, nouns from some declensions do not use plural inflection obligatorily when accompanied by a numeral (*drei Mann/Glas/Schritt* 'three man/glass/step'), unlike their counterparts in English. Though perhaps narrowly circumscribed and confined to particular declension classes, structurally entrenched rather than a matter of using or not using an available form,[12] these are patterns of plural morphology in German which make the categorisation "plural in all nouns, always obligatory" seem a bit too categorical.

Feature/Map 36: The associative plural (by Michael Daniel & Edith Moravcsik)
WALS value for German: "unique periphrastic associative plural" (map), "special non-bound associative plural marker" (chapter text)
Comment: On neither characterisation does anything come to mind immediately (mine, at any rate: no reference is given for German in this chapter, which was presumably based on a questionnaire survey). Depending on whether or not you accept *die Moravcsiks* as an associative plural – in my interpretation everybody included in the set referred to by this NP actually has to be called *Moravcsik*, and *die Edith Moravcsiks* to refer to Edith Moravcsik and hers is out (for me), so this seems like a plain additive plural – Standard German should be coded as "associative plural marker also used for additive plurals" or as "associative plural absent". Dialects are a different matter: some, including Swiss German varieties, saliently have a "special bound associative marker" for proper names (family, or family plus given) and occupation-based titles, identical to the genitive and therefore not really qualifying as "unique/dedicated", although the syntax is special (cf. such "elliptical genitives" as *s Metzger Huuser-s* [DEF.GEN.SG.MASC butcher Huuser-GEN.SG.MASC] 'Butcher Hauser and his family' in Züüritüütsch, Weber 1964: 111, 210).

I have since learnt from Edith Moravcsik (personal communication) that their German associative was of the kind *Anne und die* 'Anne and those'. Perhaps this did not come to my mind because it is not obviously a grammaticalised construction. It could be argued, however (and has been, by Edith Moravcsik in subsequent correspondence), that this construction, though resembling ordinary coordination, is not fully compositional insofar as the de-

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12. See Plank 1987a on these two manifestations of "optionality" and their typical morphological milieus.

monstrative does not have any broad anaphoric or deictic reference here, but specifically designates the focal NP's group. Perhaps, then, one might analyse this "special" associative construction as in fact elliptical in the manner of the Swiss elliptical genitives: 'X and those (who are like/associated with X)'. Alternatively, one might invoke a general condition on coordinative constructions, requiring that conjuncts, also having to be of the same kind structurally, have something to do with one another; and here the implied relationship would be that of association. Regardless of whether this is "special" or ordinary syntax and semantics/pragmatics, we are dealing with something which, unlike cardinal associatives as defined for *WALS* purposes, is not specifically nominal in German: *und die* should be seen alongside *und so* 'and such', with the coordinative particle followed by a demonstrative pronoun and adverb respectively, as instantiations of a more general, verbal and adjectival as well as nominal category or construction of "de-particularisation", expressing the meaning 'and others of the same kind in question, not here enumerated exhaustively'.[13]

Feature/Map 37: Definite articles (by Matthew S. Dryer)
WALS value for German: "definite word distinct from demonstrative"
Comment: Well, but not as distinct as *the* is from *this* and *that* in English. As discussed for Feature/Map 41, Distance contrasts in demonstratives (by Holger Diessel), *d-er/d-as/d-ie* MASC/NEUT/FEM is a (distance-neutral) demonstrative when prosodically strong and a definite article otherwise. With the prosodic strength difference perhaps less than categorical, one might well say that Standard German has a "demonstrative word used as a marker of definiteness". (I was unable to check what the authority for this chapter, a basic pedagogical grammar, has to say on this.) Further, in Alemannic (including Swiss German) and Bavarian some gender/number/case forms (not all!) of the definite article are obligatorily lacking a vowel (reminiscent of Yorkshire English *th*): /d/ (assimilating to a following consonant: *b-Frau* 'DEF-woman', *(d-)Dür* 'DEF-door') instead of Standard *die*, /s/ instead of Standard *das*. These vowelless forms are arguably affixes rather than clitics (with even the Scandinavian Germanic definite articles categorised as affixes on Map 37, rather than as clitic words, as the majority of published experts would have it); and the appropriate value for these dialects thriving in the South would thus have to be both, "demonstrative word used as definite article" and "definite affix on noun". To complicate matters further, these relevant Southern dialects (like varieties of Westphalian, and like neighbouring languages such as Frisian and Sorbian) tend to have two definite articles, one for pragmatic (or discourse) and another for semantic defi-

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13. On the several manifestations of such a macro-categorial category crosslinguistically see Plank 2007.

niteness (general givenness): the former are segmentally and prosodically more substantial and morphologically freer than the latter.

Feature/Map 38: Indefinite articles (by Matthew S. Dryer)
WALS value for German: "indefinite word same as the numeral 'one'"
Comment: True for Standard German; but dialects have come to segmentally and inflectionally differentiate the indefinite article from the numeral: e.g., Bavarian /ɐ/ (without nasalisation) NOM.SG.MASC/NEUT/FEM, /ɐ-rɐ/ DAT.SG.FEM of indefinite article, /ɔɐ/ (perhaps with nasalisation) NOM.SG.MASC/NEUT/FEM, /ɔɐ-nɐ/ DAT.SG.FEM of 'one' (with the indefinite pronoun remaining more similar to the numeral).

Feature/Map 41: Distance contrasts in demonstratives (by Holger Diessel)
WALS value for German: "no distance contrasts"
Comment: The author says (correctly I believe, though no reference for German is given: but then, the author is a native speaker himself and an authority on demonstratives) that *dieser* and *der* are both distance-neutral, and mentions distal *jener* as obsolete. Going by contemporary reference grammars, *jener* still exists, though presumably limited to formal, written registers. The possibility of adding proximal and distal adverbial demonstratives (such as *hier* und *da/dort* in German) to distance-neutral demonstratives does not suffice to earn a language the value "two-way contrast". (Ironically, the claim is made here that, unlike adnominal demonstratives, such adverbial demonstratives or deictic particles seem to be distance-contrastive everywhere: in Bavarian they aren't, with /dɔ/, Standard German *da*, generalised to proximal.) Otherwise, adnominal demonstrative distinctions tend to be renovated in dialects, often (especially in the South) through roping in forms based on *selb-* 'self' as distal demonstratives.

Feature/Map 43: Third-person pronouns and demonstratives (by D. N. S. Bhat)
WALS value for German: "related by gender markers"
Comment: Sure, if you are keen to drive morphological analysis really far (the source for this chapter, a reference grammar that is solid, but rather dated, doesn't), you may wish to segment the 3rd person pronouns into a 3rd person pro part and a case, number, and gender (singular only) part: Ø-*er* NOM.SG.MASC, like definite/demonstrative *d-er*; Ø-*es* NOM.SG.NEUT, similar to definite/demonstrative *d-as*; *s-ie* NOM.SG.MASC or NOM.PL, like definite/demonstrative *d-ie*, not to mention other case forms. There remains the difficulty of accounting for the stem contrast in personal pronouns between Ø-MASC/NEUT.SG and *s*-FEM.SG/PL, not shared with demonstratives. And there remains the fact that what is supposedly shared between personal and demonstrative pronouns about gender is

essentially shared with all nominal words agreeing in gender. In this light the value assignment should be "unrelated".[14]

Feature/Map 45: Politeness distinctions in pronouns (by Johannes Helmbrecht)
WALS value for German: "2nd person pronouns encode a binary politeness distinction" (chapter text), "binary politeness distinction" (map)
Comment: No question that there IS a binary politeness distinction in pronouns (though not always with *Sie* as the "polite" form: *ihr* is also found dialectally). Multiple distinction through also using 3rd person *er/sie* for further social differentiation is a thing of the past. Presently, the question is whether polite *Sie* (and *ihr*) are 2nd person, as the chapter text requires for this coding. *Sie* (and *ihr*) can no doubt be used as a form of formal address for singular and plural addressees (so is *we* in *How do we feel today?* for empathetic address); but in terms of the grammatical system much is to be said for *Sie* to be 3rd person plural (and for *ihr* to be 2nd person plural). The easy solution: replace "2nd person pronouns" by "pronouns of address" in the chapter text, and let others worry about grammatical analysis. (No source is given here anyhow: the more substantial grammars are uncertain on this point.)

Feature/Map 49: Number of cases (by Oliver A. Iggesen)
WALS value for German: "4 cases (on nouns)"
Comment: Fair enough (and in line with the source which the native-speaker author credits), though sometimes a fifth, zero-marked "prepositional" case has been suggested for nouns,[15] on the strength of prepositions which govern the genitive or dative combining with zero-marked bare nouns (from declensions with a distinct genitive): *wegen Umbau/*Umbau-s* 'because of reconstruction-PREP/*GEN*', *wegen d-es schlecht-en Wetter-s, wegen d-em schlecht-en Wetter-Ø* 'because of the-GEN/DAT bad-GEN/DAT weather-GEN/DAT'. Also, the genitive has often been said to be moribund. (The marker after possessors which precede their heads, as in *Mutter=s Liebling* 'mother's darling', also occurring with feminines which never have -*s* in GEN.SG, has variously, and convincingly, been suggested to be an enclitic rather than a case suffix.) Especially in dialects, the case paradigm tends to be further reduced, with the genitive abandoned and often with nominative and accusative coinciding, earning them the value "2 cases".
It would have been instructive to see which particular cases are found in the paradigms of various sizes. Would a two-case system with a basic case and

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14. Neighbouring English, incidentally, is classified as "related for all demonstratives": this seems to be a plain coding error, for what do *he*, *she*, *it*, *they* share with *this*, *that*, and perhaps *yon*, other than being 3rd person and mostly definite?
15. Originally, I believe, in Keseling 1968.

a dative (as in German dialects) or with a basic case and a possessive (as in English, on the – wrong or problematic – assumption that the *'s* genitive is a case) be unusual? Alas, you can't tell from *WALS*, here limiting itself to mere numerical information.

Feature/Map 50: Asymmetrical case marking (by Oliver A. Iggesen)
WALS value for German: "syncretism in relevant NP types"
Comment: As the author says, "the difference between case asymmetry and case syncretism depends crucially on the definition of inflectional paradigm. Case asymmetry implies the nonexistence of certain case categories in some subset of the nominals, while syncretism presupposes the existence of the same categorial distinctions in all NP types." This seems straightforward enough on the side of syncretism (so, no qualms here with the coding of German). But would coders agree on what is not syncretism, but "additive-quantitatively", "subtractive-quantitatively", and "qualitatively asymmetrical case marking"? Is this not a matter which crucially depends on higher-level analytic policies?[16] If you hold, as a matter of principle, that the rules of syntax, including those of case assignment, have to be global, invariably applying to all nominals, while the morphological rules of exponent selection may be very local, specific to particular subsets of nominals, then would you ever countenance anything other than syncretism?

Feature/Map 54: Distributive numerals (by David Gil)
This is the only *WALS* map which maps several regional varieties of German, owing to value differences within and beyond German whose areal pattern the author finds significant. Standard German and the several varieties of Swiss German investigated mark distributive numerals "by a preceding word" (*je*), just like Timişoara German and Łódź Yiddish do (which, however, use different preceding words, the quantifier *jeder* 'each' and the preposition *zu* 'to' respectively). Several colloquial varieties of German and Austrian German get the value "no distributive numerals", like Standard Dutch, English, and French do. For English, the chapter text argues that *three suitcases each/apiece* does not qualify as a construction with distributive numerals, because numeral and distributive marker do not form a continuous constituent. Now, those varieties of German denied distributive numerals express distributivity like Timişoara German does, with the quantifier *jeder*, and owing to quantifier floating *jeder* obligatorily ends up adjacent to the numeral, which itself introduces the NP: *Der Hans und der Willi (*jeder) tragen jeder drei Koffer* 'the Hans and the Willi (*each) carry each three suitcases'. Thus, distributive word and quantifier are

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16. As insightfully discussed by one of the *WALS* editors, Comrie (1991).

continuous; it is a bit more subtle to determine whether they form a constituent. But if they pass constituency tests in Timişoara, then why not (now or in near future) in Berlin, Mansfeld, Leipzig, Hannover, Dortmund, Köln, Regensburg, and Graz?

Feature/Map 56: Conjunctions and universal quantifiers (by David Gil)
German is not coded, but that is an easy one: "formally different" (conjunction *und*, universal quantifiers *all-*, *jed-*). Surprisingly, next-of-kin and not-too-far-away neighbour English gets the value "formally similar, not involving interrogative expressions", but this is owing to the "conjunctive operator" *also*, containing quantifier *all* (at least diachronically – well...).

Feature/Map 60: Genitives, adjectives, and relative clauses (by David Gil)
German is not coded, but that seems easy: "highly differentiated". Well, taking into account attributive clauses – which after all is what relative clauses are, too – some similarity between these and attributive adjectives emerges (*ein von Hans gekaufter Apfel* 'a by Hans bought apple' ≈ *ein roter Apfel* 'a red apple'): both are prenominal and postdeterminer, both agree in case, number, gender; perhaps only "moderately differentiated", therefore?

Feature/Map 61: Adjectives without nouns (by David Gil)
German is not coded, but that is another easy one: "(attributive) adjective may occur without noun, and without (extra) marking", cf. English *I want the red one* – German *Ich will den rot-en*, with the adjective agreeing in case, number, gender with the elided noun.

Feature/Map 63: Noun phrase conjunction (by Leon Stassen)
German is not coded, but that is easy, too: like just about the entire rest of Eurasia, "AND-language: 'and' different from 'with' ".

Feature/Map 69: Position of tense-aspect affixes (by Matthew S. Dryer)
WALS value for German: "tense-aspect suffixes"
Comment: Given that a salient subset of verbs – strong verbs, all being morphologically basic – marks tense and aspect (with "perfective" participles involved in perfect periphrasis) through ablaut, it is perhaps rash to declare suffixation, used for the past tense of weak verbs and for perfective participles of all verbs, the "primary" strategy. Also, with the additive markers of perfective participles actually circumfixes (*ge-...-et/-en*), further "pre" marking is involved here. Value perhaps rather: "combination of strategies with none primary".

Features/Maps 81, 83, 84: Order of subject, object, and verb; Order of object and verb (by Matthew S. Dryer); Order of object, oblique, and verb (by Matthew S. Dryer, with Orin D. Gensler)
WALS values for German for all three features: "no dominant order"
Comment: Languages with "flexible" order can nonetheless have a "dominant" order (a matter of frequency of usage or pragmatic neutrality); Russian, for example, is coded as (dominantly) "SVO", with English as (inflexibly) "SVO", undistinguished on the map. Clearly, in German S dominantly comes before O (except with a small class of experiential verbs where the O tends to be 1st person singular). There is not a bit of flexibility about where the German verb is (and the pedagogical grammar that is credited as the source for German wouldn't err on this): the finite verb is in second position in declarative clauses without complementiser, in final position when there is a complementiser, and in initial position in polar interrogative and in exclamative clauses (as well as, rarely mentioned in reference grammars, in declarative sentences introducing a joke). Alas, there is no coding category for this state of affairs – an evergreen in the theoretical literature of all persuasions: V2 imposed on dominantly SOV. The author explains in the chapter text for Map 81, apropos of German and Dutch: "In general, if the word order varies according to whether there is an auxiliary verb [because this results in both orders being common], the language is shown on the map as lacking a dominant order." Naturally, the resulting 171 "no dominant order" languages are a really mixed bag. It will disappoint friends of V2 that the bag does not include Sorbian (SOV), Romansh (SVO), and Kashmiri (SVO[17]).

To partly restore order, Map 82, Order of subject and verb (also by Matthew S. Dryer), codes German as "SV" rather than as "no dominant order".

Map 83, Order of object and verb, again goes for "no dominant order" on the same reasoning as in Chapter 81, grouping German with 89 other languages with truly flexible order on the one hand and with a number of African languages showing an alternation between strict orders SOV and SAuxOV (Kisi, Nuer, Dinka, Dongo) on the other. Since these subgroups are not distinguishable on the map nor through supplementary information, it is impossible to check for differential typological correlations: V2 and Aux2 would seem to be a promising structural resemblance, also pointing to the possible diachronic origin of Germanic V2 as Clitic-Second generalised.

Map 84, Order of object, oblique, and verb, again has "no dominant order", for the same reason, not because Object and Oblique themselves would lack dominant ordering: German has Object dominantly before Oblique.

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17. Which, if not V2, should be SOV.

Feature/Map 86: Order of genitive and noun (by Matthew S. Dryer)
WALS value for German: "Noun–Genitive"
Comment: "Genitive" is intended as a cover term for possessor adnominal dependents regardless of the kind of construction and marking employed. For this purpose German uses inflectional genitives (*der Liebling der Mutter* 'the darling the mother [GEN, only visible on the determiner]', an enclitic postposition =*s* (*Mutter=s Liebling* 'mother's darling'[18]), the preposition *von* (*der Liebling von der Mutter* 'the darling of the mother', or the dative for the possessor in combination with a cross-referential possessive pronoun accompanying the possession (*der Mutter ihr Liebling* 'the mother [DAT, only visible on the determiner] her darling'). Genitival possessors dominantly follow their head nouns; possessors with =*s* occur equally freely in pre-N and post-N position; prepositionally marked possessors dominantly follow their head nouns; dative possessors always precede their head nouns plus possessive pronoun. Now, what is overall the dominant order of "genitives" for such a language? Naturally, the answer is not to be expected from the pedagogical grammar of German given as the source for the *WALS* coding.

Feature/Map 95: Relationship between the order of object and verb [Map 83] and the order of adposition and noun phrase [Map 85] (by Matthew S. Dryer)
WALS value for German: "language not falling into one of the preceding four types"
Comment: German is prepositional (Map 85), but owing to its being classified as "no dominant order" on Map 83, it cannot be classified for this composite feature as "OV and prepositional" (worldwide a small minority according to Map 95) or, less plausibly, as "VO and prepositional" (the clear majority type).

Feature/Map 96: Relationship between the order of object and verb [Map 83] and the Order of relative clause and noun [Map 90] (by Matthew S. Dryer)
WALS value for German: "language not falling into one of the preceding four types"
Comment: Ditto.

Feature/Map 97: Relationship between the order of object and verb [Map 83] and the order of adjective and noun [Map 87] (Matthew S. Dryer)
WALS value for German: "language not falling into one of the preceding four types"
Comment: Ditto.

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18. With =*s* sometimes still (mis-)analysed as a case suffix.

Features/Maps 98–100: Alignment of case marking of full noun phrases; Alignment of case marking of pronouns (by Bernard Comrie); Alignment of verbal person marking (by Anna Siewierska)

WALS values for German: "nominative–accusative (standard)"

Comment: Nominative–accusative as well as ergative–absolutive alignments imply that all instances of S, the intransitive core argument, are encoded in the same way, while in active–inactive alignment more agent-like and more patient-like instances of S are encoded differently, namely in the same way as A and as P respectively (to quote from the chapter text, p. 398). A problem for clear-cut classification which is specifically mentioned by Comrie concerns ergative-aligned languages with a subset of intransitive verbs whose Ss are coded not like P (absolutive case, and corresponding verb agreement), but like A (ergative case and corresponding agreement): the solution suggested is to code such languages as ergative-aligned unless the misaligning set of intransitive verbs is "substantial", in which case a language is coded as "active–inactive". Now, German does have a set of intransitive predicates – verbs as well as adjectives with the S an experiencer – whose Ss are not coded like the A of transitive verbs (nominative case, agreed with by the finite verb), but like transitive P (accusative or also dative case, not agreed with by the finite verb, which takes default 3SG form). In the contemporary language, just about all of these impersonal verbs (a.k.a. subjectless) in fact permit an alternative encoding (and construction) with the S as A-like (1b, 2b, 3b):

(1) a. *uns   hunger-t*
         we.ACC   hunger-3SG
         'we are hungry'
     b. *wir   hunger-n*
         we.NOM   hunger-1PL
         'we hunger' (perhaps intentionally)

(2) a. *ihnen   ist   schlecht*
         them.DAT be.3SG   bad
         'they feel sick'
     b. *sie   sind   schlecht*
         them.NOM be.3PL   bad
         'they are bad' (it's their disposition)

(3) a. *mich   ekel-t   (vor dir)*
         me.ACC   disgust-3SG   (of   you)
         'you disgust me' (and I can't help it)
     b. *ich   ekl-e   mich   (vor dir)*
         me.NOM   disgust-1SG   REFL.1SG.ACC   (of   you)
         'I find you disgusting' (may be my fault)

There tend to be semantic contrasts, sometimes clear and sometimes rather subtle, insofar as A-like Ss of such predicates (1a, 2a, 3a) are also semantically more A-like (active), while P-like Ss (1b, 2b, 3b) are also semantically more P-like (inactive). Taking into account such predicates, the alignment pattern of German, thus, is active–inactive – or "fluid-S", more than "split-S", as alignments have been called where intransitive predicates give a choice (Dixon 1994: 70–83). The question, on the *WALS* policy, then, is whether this set of predicates is "substantial" enough to merit this classification. Is about two dozen enough? (Also, before rashly changing the value, note that not ALL intransitive predicates of experience permit an impersonal construction.) In a diachronic perspective, membership in the impersonal set would be clearly seen to have been dwindling over the last millennium (Behaghel 1924: 120–139).

Feature/Map 103: Third-person zero of verbal person marking (by Anna Siewierska)
WALS value for German: "no zero realization"
Comment: 3rd (as well as 1st) person singular of all strong verbs, intransitive as well as transitive, is regularly expressed through zero in indicative mood of the past tense, and for a set of verbs – the "preterite-presents", which are formally past, but semantically present and which saliently include the modals – also in the present. (The pedagogical grammar given as source won't have missed this.) Value therefore: "zero realization of some 3rd person singular S forms".[19] But perhaps I'm coding too straightforwardly on the principle of "What you don't hear isn't there". Perhaps what is being coded in *WALS* is "zero" in the sense of "absence of (morphologically) something", rather than also in the sense of "(morphological) presence of (phonologically) nothing"; but this can be a very subtle distinction to make in practice, and also depends on one's morphological theory. Rabid anti-zeroists might even analyse German 3SG indicative strong past as morphologically nothing.

Feature/Map 105: Ditransitive constructions: The verb 'give' (by Martin Haspelmath)
WALS value for German: "indirect object construction"
Comment: Spot on for German. Still, a word of warning: 'Give' may be the most FREQUENT ditransitive verb in all languages, as the chapter text defends the choice of verbal exemplar, but it is not necessarily the most TYPICAL. See Borg & Comrie 1984, demonstrating "object diffuseness" for this particular verb (as well as for 'show', 'teach', 'loan', also frequent) in Maltese, which is in *WALS* (partly mis-)classified as "indirect object construction". Still, if Plank

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19. Going by the chapter text, Amele, here used to illustrate occasional zero, is miscoded on the map as "no zero realization".

1987b is right, then among the several semantic classes of ditransitive verbs potentially licensing some kinds of deviation from cardinal indirect-object constructions, verbs of giving/taking (transfer of material goods) are less likely licensers than verbs of telling/showing/asking (information transfer), which in turn are less likely licensers than verbs of teaching/examining. German conforms to this implicatonal hierarchy, with the deviant-indirect cut-off point between giving/taking and telling/showing/asking – but to visualise this pattern, *WALS* maps for further ditransitive verbs would be required.

Feature/Map 108: Antipassive constructions (by Maria Polinsky)
WALS value for German: "no antipassive"
Comment: An error, presumably occasioned by the clearer visibility of antipassive constructions in the milieu of ergative alignment. With many two-place predicates, transitive constructions can be detransitivised, with the direct object either downgraded to oblique (*Der Junge trug die Last* 'the youth carried the burden' – *Der Junge trug an einer Last* 'the youth suffered under a burden') or wholly omitted (*Der Junge trank das Bier* 'the youth drank the beer' – *Der Junge trank* 'the youth was in the process of drinking; the youth was a drinker'). The status of the subject – transitive or intransitive – is harder to establish after such object-centred alternations than with ergative alignment. There is no dedicated formal marking of the verb for antipassivisation in German; but verbal prefixes can be implicated (e.g., *Der Junge* er-*schoss den Jäger* 'the youth shot the hunter dead' – *Der Junge schoss auf den Jäger* 'the youth shot at the hunter'). The chapter text mentions such alternations for English (also classified as "no antipassive"), calling them "conative"; in light of the definitions given, it is difficult to see how they are supposed to differ from genuine antipassives. My value, therefore, would be "productive" or minimally "partially productive".

Feature/Map 109: Applicative constructions (by Maria Polinsky)
WALS value for German: "no applicative construction"
Comment: Equally wrong. Right value: "benefactive and other; both bases". Both intransitive and transitive verbs productively extend their argument frame by adding all sorts of semantic roles. Such applicativation is overtly marked on the verb through a prefix, most typically *be-*: e.g., *Niemand antwortete (auf die Frage)* 'nobody responded (to the question) ' – *Niemand* be-*antwortete die Frage* 'nobody answered the question (ACC)'; *Die Jungs wohnen in einem Zelt* 'the youths live in a tent' – *Die Jungs* be-*wohnen ein Zelt* 'the youths inhabit a tent (ACC)'; *Der Junge warf einen Stein (nach einem Mädchen)* 'the youth threw a stone (ACC) (after a girl)' – *Der Junge* be-*warf das Mädchen mit Steinen* 'the youth pelted the girl (ACC) with stones'. The literature on this subject is voluminous; no source is given for German in this chapter.

Feature/Map 110: Periphrastic causative constructions (by Jae Jung Song)
WALS value for German: "sequential but not purposive"
Comment: I'm not sure I understand what is at issue in classifying a language as having "sequential but not purposive", "purposive but not sequential", "both sequential and purposive" periphrastic causative constructions. "Sequential" would seem inapplicable to German, simply because the sequence of periphrastic causation verbs such as *lassen* 'let' or *machen* 'make' and the infinitival caused-event clause differs depending on whether the causation verb is final or in second position. And with causation verbs (such as *jemanden dazu bringen zu* 'to bring someone to') which require *zu* rather than bare infinitives for the caused verb, this complementiser has a purposive use, too, and is identical (or homonymous) with a purposive-allative preposition.

Feature/Map 111: Nonperiphrastic causative constructions (by Jae Jung Song)
WALS value for German: "morphological but no compound"
Comment: Does contemporary German have productive derivational causative verb-formation? Well, there is zero-derivation, if intransitive is really basic and transitive derived in cases such as *kochen* 'cook'; also, there are two handfuls of causatives where the derivational morphology is not very transparent (like *sitzen* 'sit' – *setzen* 'set'). If anything, it should be "compound type", because apparently clause-union constructions with *lassen* 'let' are categorised as nonperiphrastic.

Feature/Map 112: Negative morphemes (by Matthew S. Dryer)
WALS value for German: "negative particle"
Comment: It is presumably the PRIMARY expression of clausal negation which is being coded here. Arguably, *nicht* is primary relative to all kinds of affixal negatives and to lexical negation (i.e., predicates inherently negative, such as *fehlen* 'to lack' or *tot* 'dead' or *ohne* 'without': I didn't count them).[20] On the other hand, clausal negation when arguments are indefinite is by *k-* (*Ein Hund bellte* 'a dog was barking' – *K-ein Hund bellte* 'no dog was barking') – which isn't a particle, but presumably a prefix or a bound stem.

Feature/Map 116: Polar questions (by Matthew S. Dryer)
WALS value for German: "interrogative word order"
Comment: Valid. "Question particle" would only be applicable, according to the chapter text, if such markers are used for neutral as opposed to leading questions. Now, in conversational Southern German, Bavarian as well as Alemannic, final particles such as *gell?* (diachronically derived from *gelt-en* 'be valid'),

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20. Like German, English is "negative particle" rather than "negative affix", a classification that is evidently unimpressed by the arguments of Zwicky & Pullum's (1983) that *-n't* is really a suffix.

oder? 'or', or *ha?* or *hm?* (no etymologies, but they do have corresponding positive answering expressions which are segmentally similar but different intonationally as one would expect, *aha* and *mhm*) are heard in abundance, sometimes, especially in Swiss German, generalised to declaratives when the speaker wants to hold the floor. Which makes me wonder whether these polar questions are really all intended as leading. Accepting question particles as a strategy for these varieties of German would imply that Feature 92, Position of polar question particles (also by Matthew S. Dryer), get the value "final".

Features/Maps 117–121, on predicative and on comparative constructions, all by Leon Stassen, omit German. They are all unproblematic and the values for German are the same as those for its neighbour and next-of-kin, the author's native Dutch.

Features/Maps 125–128: Purpose clauses; 'When' clauses; reason clauses; utterance complement clauses (by Sonia Cristofaro)
WALS value for German: "balanced/deranked", "balanced/deranked", "balanced", uncoded, respectively
Comment: "Balancing" and "deranking" is a matter of whether dependent predicates/clauses are structurally like or unlike independent predicates/clauses; more conventional terms, not unproblematic either, are "finite" and "nonfinite". One problem here is ascribing opposite values to entire languages rather than to individual "exemplars" of complement- or adverbial-taking main predicates (as does, for example, the preceding Feature/Map 124, 'Want' complement clauses, by Martin Haspelmath). Under the circumstances, with no limitation to particular predicates asked for, my inclination would be to classify German as mixed, i.e., "balanced/deranked", on all four counts, with 'when' clauses, reason clauses, and utterance complement clauses perhaps more tending towards "balancing".

Feature/Map 133: Number of basic colour categories (by Paul Kay & Luisa Maffi)
WALS value for German: "more than 10 categories" (chapter text), "11 categories" (map)
Comment: German is among the several languages where a term for 'turquoise' (*türkis*) has been suggested as being basic in some Berlin-Kay-ish sense (in terms of cognitive salience, if not on the more strictly linguistic criteria). Such a basic term is not envisaged in the Berlin-Kay scheme, original or revised, and would take German beyond their upper limit of 11.

2.3.   To sum up, the result of my replication of feature value assignments for one language, with dialectal diversity included, is that a non-negligible proportion of the value assignments for German are in one or another sense prob-

lematic: for over a quarter, perhaps almost a third of the features mapped, the values assigned are erroneous, arbitrary, or uncertain in view of analytic alternatives, or would have been different if one or the other variety of the language summarily located at 52°N 10°E had been chosen for coding. It is encouraging that in many of these cases the problematic value assignments are not far off in terms of value distances, but only just.

It remains to be seen whether German is uniquely problematic. (And perhaps others knowing the language and having worked on it should be asked to review the values for this language, too, to see how far I have erred in one direction or the other.) If it is not, and if there are similar margins of error or uncertainty or dialectal disregard for other languages – that is, if about 30 % of all 58,000+ datapoints are problematic – this could seriously compromise conclusions one might wish to draw about areal distributions of values of features mapped in *WALS*. I therefore recommend for future online versions of *WALS* that the value assignments be reviewed by experts for particular languages.

Perhaps it would be facetious to express the hope that this exercise would also serve to lay to rest the suspicion, often entertained, that the less well-known and well-described a language, the more straightforward its analysis – and that we can therefore expect equally numerous corrections and question marks for languages in *WALS* without long and intense descriptive and analytic traditions.

It is a very serious difficulty that when typologists are seeking generalisations about linguistic diversity and unity they are comparing languages of very unequal analytical exposure and penetration. In typology as elsewhere in life, ignorance breeds (false) certainty and knowledge sows doubt. Both occupational hazards need facing. Accepting that in this line of research some margin of factual error and analytic uncertainty is currently inevitable and the structural off-limits zone is still vast, one obvious priority is to see to it that both the scope and the depth of our knowledge about the less well-known and well-described languages are extended. At the same time, there is no real excuse for ignoring in crosslinguistic research the amount of uncertainty about "right" analyses that has come with wider and deeper knowledge of the better-described languages.

3.   *WALS* compared

3.1.   *WALS* is not the first world atlas of language structures: as briefly acknowledged in the introduction (2005: 2), though in none of the maps, *WALS* had a predecessor in the atlas accompanying Wilhelm Schmidt's *Die Sprach-familien und Sprachenkreise der Erde* of 1926.[21] It doesn't seem to be online;

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21. There were many contemporary obituaries of Wilhelm Schmidt (1868–1954) in linguistic,

but perhaps you can get hold of a copy in your library. It is profitably compared to its modern reincarnation.

Apart from the more common areal and partly genealogical maps (these seven: I. Die Sprachen von Europa und Asien; II. Sprachenkarte von Afrika; III. Die austrische Sprachfamilie in Australien, Indonesien, Ozeanien; IV. Karte der Eingeborenensprachen von Australien; V. Sprachenkarte von Nord und Mittelamerika; VI. Die Sprachen von Südamerika; VII. Übersichtskarte der Sprachen des Erdkreises) and one ethnological map (VIII. Die ethnologischen Kulturkreise),[22] this lithographed atlas contains five maps for a range of phonological,[23] morphological, syntactic, and lexical (numeral bases) features:

IX.   Die Verbreitung des Anlautes
   – Anlaut mit einfachen Lauten
   – Anlaut mit Muta cum Liquida (oder Nasal)
   – Anlaut mit mehreren anderen Konsonanten

X.   Die Verbreitung des Auslautes[24]
   – rein vokalischer Auslaut
   – Vokale und Sonora (l, m, n, r)
   – Vokale, Sonore und einfache Konsonanten
   – Vokale, Sonore, einfache Konsonanten und Liquida (Nasal) cum Muta
   – Vokale, Sonore, einfache Konsonanten und mehrkonsonantig (besonders s + Kons. und Kons. + s)

XI.   Die Verbreitung des Dual und des Trial, von Inklusiv und Exklusiv
   – Dual beim Pronomen personale
   – auch Trial beim Pronomen personale
   – auch Vierzahl beim Pronomen personale

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ethnological, and theological publications. For biographical and bibliographical detail see Brandewie 1990 and Rivinius 2000. Father Schmidt was a member of the Societas Verbi Divini (SVD), a Catholic missionary order, and the founder of the Anthropos Institute and founder-editor of the journal *Anthropos* (http://www.anthropos-journal.de/); his own writings were prodigious.

22. *WALS* has an ethnological map, too: Map 130A (p. 527, not online) on Cultural categories of languages with identity of 'finger' and 'hand' (by Cecil H. Brown), with the values "hunter-gatherers", "farmer-foragers", and "full-fledged farmers". Though partly co-extensive, Schmidt's *Kulturkreise* are more controversial. A further ethnological map, mapping the distribution of matriarchy, is integrated with Schmidt's structural Map XIV. The *WALS Online* maps can now be projected onto Google Earth surfaces; to compete with Schmidt's atlas on this ground, it would need linking up with some respectable ethnological atlas such as Murdock 1981 and its online offshoots.

23. At least Schmidt professes to map phonological rather than phonetic systems; but 80 years later we are still plagued by uncertainty about the divide between phonology and phonetics.

24. Combined in one map with onset consonantism, with the resulting colouring and shading distinctions not always easy to see at a glance.

– Dual beim Nomen
– auch Trial beim Nomen
– auch Vierzahl beim Nomen
– Dual beim Pronomen personale und beim Nomen
– auch Trial [likewise differentiated by pronouns and nouns]
– auch Vierzahl [likewise differentiated by pronouns and nouns]
– Inklusiv und Exklusiv bei der 1. Person Plural des Pronomen personale

XII.   Die Verbreitung der Wortklassifikationen
– Einteilung in Belebte und Unbelebte
– Einteilung in Personen und Sachen
– Einteilung in Männlich und Weiblich beim Personalpronomen
– Einteilung in Männlich und Weiblich beim Substantiv
– Einteilung in Männlich und Weiblich beim Substantiv und Personalpronomen
– Einteilung in grammatisches Geschlecht, Masculin und Feminin
– Einteilung in grammatisches Geschlecht, Masculin, Feminin und Neutrum

XIII.   Die Verbreitung der Zahlsysteme
– systemloses Zählen
– Systemlos und Paarsystem gemischt
– Paarsystem
– Vierersystem
– Sechsersystem
– Quinares Vigesimalsystem
– Reines Vigesimalsystem
– Quadragesimalsystem
– Quinares Dezimalsystem
– Reines Dezimalsystem

XIV.   Die Verbreitung der verschiedenen Stellungen des Genitivs beim Nomen, des Possessiv und des Pronominalsubjektes beim Verbum und ihre Beziehung zur Verbreitung des Mutterrechtes
– Volle Genitivvoranstellung (beim Nomen und beim Possessiv)
– Volle Genitivnachstellung (beim Nomen und beim Possessiv)
– Gebrochene Genitivstellung: Nachstellung beim Nomen, Voranstellung beim Possessiv
– Gebrochene Genitivstellung: Voranstellung beim Nomen, Nachstellung beim Possessiv
– Nachstellung des Pronominalsubjektes beim Verbum
  – bei Nachstellung des Genitivs
  – bei voller Voranstellung des Genitivs

– Verbreitung des Mutterrechtes
  – Spuren des Mutterrechtes
  – volles Mutterrecht

Some of these maps are composite, mapping several related, though logically independent, features at once; overall some 25 features are being mapped. And for several further features – such as the "abnormal" (i.e., front rounded) vowels *ü* and *ö* on pp. 275–281 – the distributions are given in such detail in the text of the book that the Reverend K. Streit, Schmidt's cartographer, could easily have drawn further maps, had the publishers okayed them.[25]

Unlike *WALS*, Schmidt had a historical story to tell to account for the feature value distributions on his maps (1926: 497–540): the tale – to which contemporary reviewers would apply epithets such as "romantic", "preposterous", "ignorant of the simple methods of science" – of the three *Ursprachenkreise* (linked by intermediates, though geographically widely dispersed; all with structural similarities supposedly indicative of old age), the three "primary" *Sprachenkreise* (structurally more elaborate, of more recent shaping), and the "secondary" and "tertiary" *Sprachenkreise* (derivative of older structures, or mixtures and re-mixtures), with *Sprachenkreise* remarkably closely coinciding with *Kulturkreise*. Genealogical groupings as, by then, established through the conventional comparative method were curiously faded out of this evolutionary-classificatory scheme, with the *Kulturkreis* theory crucially banking on diffusion of culture traits from the several centres.

Now, I have above reproduced the headings of Schmidt's maps to show that his features are essentially a subset of the *WALS* features, with some features (dual, trial) only in Schmidt or more richly differentiated value-wise.

The number of languages or structurally homogeneous small families explicitly named in the typology part of Schmidt's book (II. Teil: Die Sprachenkreise und ihr Verhältnis zu den Kulturkreisen, pp. 269–540) is around 1,000.[26] Most of these languages are only mentioned once, for one particular structural feature of theirs; some are mentioned two, three, or four times; very few get five or more structural mentions. (Little or in fact no attention is given to Schmidt's native German.) In the areal and partly genealogical survey (I. Teil: Die Sprach[en]familien der Erde und die Geschichte ihrer Erforschung) a further 2,000+ languages are mentioned, with copious references. By comparison,

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25. One reviewer, C. C. Uhlenbeck, urged Schmidt to broaden his base and to also examine and map the distributions of verbal moods (with the non-indicatives reflexes of "emotional repression in grammatical form", as Uhlenbeck saw it [?!]), ergative or active vs. nominative or inactive case marking, and the different kinds of possession (1927: 229–230). *WALS* would comply.

26. Including Taensa, an American Indian language later revealed as a fake. I have last seen Taensa in a word-order sample in the 1980s; but it is assuredly not on a *WALS* map.

it will be remembered that *WALS* mentions and maps 2,559 languages. Almost inevitably, most of the Schmidt languages are also *WALS* languages.

WALS and the Schmidt atlas cannot easily be compared in terms of data-points, because Schmidt's maps are like the unique *WALS* map No. 141, Writing systems (by Bernard Comrie), colouring and shading entire geographical areas rather than dotting maps with separate icons for each language. If one were to redo the Schmidt atlas *WALS*-style on the basis of language-particular information provided in the text, the datapoints would probably number less than 1,500, comparing unfavourably with *WALS*'s more than 58,000. But then, Schmidt did his atlas single-handedly, only assisted by his cartographer Streit. And 80 years were to elapse before *WALS* was done, decades witnessing an explosion of crosslinguistic descriptive coverage.

Owing to the overlap in features and languages, *WALS* can still be seen as a kind of replication of Schmidt 1926. And it is intriguing to see what 80 years have taught us about the areal distribution of structural similarities and differences between languages. I have only done spot checks for value assignments, and for many languages noticed disagreements between the Schmidt and the *WALS* values, especially for "phonological" features.[27] It is remarkable that all the same, looked at somewhat impressionistically, Schmidt's areas tend to be roughly co-extensive with areas defined through the shapes and colours of *WALS* icons.

Comparing Schmidt's composite map No. IX (onset and coda complexity) with the equally composite *WALS* map No. 12 (syllable structure), the high-complexity areas in Eurasia and North America largely coincide, as do the moderate-complexity and simplicity areas in Africa, South and South East Asia, Oceania and Australia, South America, and non-West Coast parts of North America. Owing to Schmidt's differentiation between onset and coda consonantism, his maps are more informative about what contributes to syllabic complexity.

Comparing the inclusive/exclusive coding on Schmidt's composite map No. XI with *WALS* map No. 39, Schmidt's red areas exactly match Cysouw's red

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27. Numerous errors of fact or interpretation were noted for "their" languages by contemporary reviewers such as Uhlenbeck 1927 and Lewy 1928. Bloomfield's chief complaint was of a more general kind, namely, that in setting up (diffusion-based) *Sprachenkreise* Schmidt had ignored "what Indo-European has taught us about the variety of linguistic structure (even within a single stock) and of its mutability in the course of time" (1927: 130). Not finding fault with specific data either, Kroeber on the other hand expected "illumination of problems of fundamental importance; for instance, whether structural speech traits can spread by 'infection' or 'diffusion' to unrelated languages; if so, what determines the spread" (1928: 694); though balking at the supposed congruence of the matrilineate and genitive areas, he seems not to have felt entirely disappointed.

and pink zones, with only East Asia (minus Siberia) a bit redder, that is, more continuously inclusive, on the Schmidt map.

Comparing Schmidt's gender map No. XII with *WALS* maps Nos. 30 (number of genders) and 31 (gender sex- or animacy-based), three-gender areas are recognisable on both in Europe and South Asia as well as, smaller-scale, in South Africa and North and South America (with Schmidt missing out on North Australia and West Africa); ditto for two-gender areas in the northern half of Africa, parts of South Asia, and central South America. While both Schmidt's and Corbett's Africa and (with more sex than non-sex) Australia are mixed sex- and non-sex-based, divided up about co-extensively, Schmidt tends to have more animacy-based areas in the Americas and in North and North East Europe than Corbett has.

Comparing Schmidt's map No. XIII and *WALS* map No. 131, both devoted to numeral systems, they agree in mapping decimal bases as predominant over large parts of the globe. The exceptions as clearly visible on Comrie's *WALS* map are: north-westerly Africa (hybrid vigesimal-decimal or other base), also discernible on Schmidt's map[28] (quinary-vigesimal, pure vigesimal, quinary-decimal); the Caucasus (vigesimal-decimal amidst pure decimal), also seen on Schmidt's map (quinary-vigesimal); Papua New Guinea (showing all different bases coded), largely a white spot for Schmidt, though with a little pair, quinary-decimal, and quinary-vigesimal around the rim (nowhere "systemlos", though); Australia (exclusively "restricted"), whose north and interior are partly white for Schmidt, but which otherwise has "systemloses Zählen", "systemlos und Paarsystem gemischt", "Paarsystem", and "quinares Vigesimalsystem"; Meso-America (vigesimal-decimal and pure vigesimal, and marginally even restricted), also discernible on Schmidt's map, though not so neatly delimited (quinary-vigesimal, pure vigesimal, quinary decimal); and the northern part of South America (restricted, vigesimal, other base, decimal), which again is largely white for Schmidt, and otherwise has just about all his other options represented, with decimal limited to the western coastline.

Schmidt's final map No. XIV focuses on the position of genitive adnominals relative to their head ("genitive" taken in essentially the same wide sense as in *WALS*, not limited to genitive case marking: Bloomfield 1927 was horrified), distinguished for nominal and pronominal genitives, and also maps the placement of pronominal subjects relative to their verbs as well as the distribution of matriarchy. In addition, though not mapped, the book provides detailed datapoints concerning OV/VO and AN/NA ordering, relative to the placement of genitives. The *WALS* map to be compared is primarily No. 86, Order of genitive and noun, but subsidiarily also others to do with dominant word order.

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28. Though harder, because all shadings are in green: you need to turn to the prose in the book (1926: 364–380) to get the numeral-base datapoints straight.

WALS map No. 86 has an overall predominance of Genitive–Noun over Noun–Genitive, and the macro-areas for each alternative tend to be internally rather homogeneous. Schmidt (with only his nominal genitive shadings looked at, ignoring the prominal genitives) and Dryer largely agree in finding an NG predominance in North Africa, Central and South East Africa, South East Asia and Oceania (minus Papua New Guinea), at the north-west coast of North America, in Meso-America, and in interior parts of South America. They agree in finding a GN predominance in West Africa, North East Europe and most of Asia, Papua New Guinea and Australia (so far as Schmidt could tell), most of North America and of South America. It is essentially only over good old Europe (minus Scandinavia) that Schmidt and Dryer disagree: while Dryer paints this area red (NG) and grey (no dominant order), with only newcomer Welsh Romani and left-over Basque deviantly GN, for Schmidt this was a GN heartland ("volle Genitivvoranstellung beim Nomen und beim Possessiv"), with around Rome as the only deviant zone.

Well, Rome wasn't built in a day. In typology, you live and learn, and sometimes better forget – Father Schmidt's *Sprachenkreise* and *Kulturkreise*, for example: or can somebody replicate these *Kreise* with *WALS*, given such striking congruity between maps?

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