Contrastive Analysis Revived

as (i) Typology with Self-imposed Limits or (ii) Diachrony of Minimal Steps

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1. What is it that I am doing these days? Contrastive Analysis?

Could I have given a talk on, for example, 'and such' at this conference?

•   In such a talk I'd have dealt with an <u>individual</u> parameter for possible variation: with a single notion — 'and others of the same kind in question, not here enumerated exhaustively' (for short, 'and such') — and with how languages give it grammatical recognition — through DE-PARTICULARISING SENTENCES (plural for singular, indefinite for definite) or through ECHO REDUPLICATION OF WORDS OR PHRASES.

To illustrate these two grammaticalised kinds of expression.

A. Sentences de-particularised (plural for singular, indefinite for definite)

(1) English (Germanic, Indo-European)

[...] refusing to accept that the prophecy of Ramram Seth had been intended for Winkie's boy [=Shiva], that it was to Shiva that <u>Prime Ministers had written</u>, and for Shiva that <u>fishermen pointed out to sea</u> [...], I resolved that my destructive, violent alter ego [=Shiva] should never again enter the increasingly fractious councils of the Midnight Children's Conference [...]. (Salman Rushdie, *Midnight's Children*, London: Jonathan Cape, 1981)

(1´) 'refusing to accept ... that it was to Shiva that <u>such extraordinary things would happen as (to mention two conspicuous examples)</u> the Prime Minister writing to him and as a fisherman (or ᴛʜᴇ fisherman on a particular painting) pointing out to sea'

(2)   English (Germanic, Indo-European)

'It was much pleasanter at home,' thought poor Alice, 'when one wasn't always growing larger and smaller, and being ordered about by mice and rabbits.'

(Lewis Carroll, *Alice in Wonderland*, Chapter 4, at which point Alice had been ordered about by only one particular mouse and only one particular rabbit, and her growing larger and smaller had not been going on continuously, either, pace the all-quantifying temporal adverb. Thus, rephrased à la (1´): '... when no such unpleasant things would happen to me as, to mention two examples, me growing larger and smaller and me being ordered about by the mouse and the rabbit'.)

(3) Finnish (Uralic)

Häne-llä   *on*   *auto-t*   *ja*   *kesämöki-t.*

s/he-ADESSIVE   is   car-NOM.PL   and   summer.cottage-NOM.PL

'S/he has a car and a summer cottage and possesses other such typical attributes of wealth.' (For regular plural readings in sentences not so contextualised one would have to use the partitive plural, *auto-ja ja kesämökke-jä*, rather than the nominative plural here.)

(4) Russian (Slavonic, Indo-European)

Kto   *èto*   *košel´k-i*   *raskidyva-et?*

who   PARTICLE   purse-ACC.PL   scatter-3SG

'Who's been leaving purses lying around!?' ('Who's been so careless as, among other such things, to leave her/his purse lying around!?')

(5)   Dogon (Niger-Congo)

ibɛ   *ya-ɛ-w*   *yo,   isu   mbe   nie   mbe   bawiɛ.*

market   go-AORIST-2SG   if,   fish   PL   oil   PL   buy.IMP.2SG

'If you go to the market, buy fish, oil, and (do/buy) other such things.'

B. Echo Reduplication of words or phrases

(6) Turkish (Altaic)

Dergi mergi okumuyor

journal(s)   REDUPL   s/he.does.not.read

'S/he doesn't read journals and suchlike (periodicals, magazines, etc.)'

(<u>Not</u>, with sentential scope: 'S/he doesn't do anything to educate and/or entertain her/himself, such as reading journals, watching TV, going to the movies, listening to talks'.)

(7) Bengali (Indo-Aryan, Indo-European)

a. *Or   bari-te   kalo   makorša dekʰ-e-čʰ-o,   na   ki?*

   his   house-LOC black   spider(s)   see-PERF-PRES-2,   NEG   QU
   'Did you really see black spiders at his house?

b. *... kalo   ṭalo   makorša ...*

   ... black   REDUPL   spider(s) ...
   'black and other-coloured spiders'

c. *... kalo   makorša   ṭakorša ...*

   ... black   spider(s)   REDUPL ...
   'black spiders and other such (not necessarily black) beasties'

d. *... kalo   makorša   ṭalo   makorša   ...*

   ... black   spider(s)   REDUPL   ...
   'black and other-coloured spiders'

- I'd be comparing a handful, or two handfuls, of languages, and I'd report having found <u>differences</u> (contrasts) (between English et al. and Turkish et al.) as well as <u>identities</u> or <u>similarities</u> (between English, Finnish et al., between Turkish, Bengali et al.).

- I'd thereby have made a contribution to the better understanding of how languages can vary ('and such' is not grammaticalised invariantly) and to how variation is limited (although I've not really <u>established</u> that there are no further kinds of grammaticalised expressions for 'and such' than the two I've found in the few languages I've looked at: to be certain of what is humanly possible, <u>all</u> languages — past, present, future — would have to be taken into account).

- In my work on 'and such' I've not found, nor indeed have I seriously looked for, co-variation of this parameter with other individual structural parameters: an inexcusable omission for a typologist. Well, there is a <u>logical prerequisite</u>, insofar as a language needs to have particularising morphosyntax (singular-plural contrast, definite-indefinite contrast) to be able to express 'and such' through de-particularisation. Also, I suspect a language needs to productively use reduplication also for other purposes if echo reduplication is to be used for expressing 'and such': 'and such' never appears to be the only use of reduplication, and specifically echo reduplication (onset alternation) never appears to be the only manifestation of reduplication in a language. (If valid, this would be an <u>empirical prerequisite</u>, not a logical one.)

- I've also looked at, if only cursorily, at <u>where</u> languages are spoken which express 'and such' through de-particularisation or through echo reduplication. Especially those practising echo reduplication would seem to be <u>areally contiguous</u> rather than being randomly spread over the globe: they are concentrated in South East Asia, South Asia, the Middle and Near East.

What could such areal patterning conceivably mean?

- <u>joint inheritance</u>: something innovated once in the proto-language and since then hanging on pertinaciously, unfallibly re-acquired by successive generations of language learners (with the original single speech community splitting up and moving to other areas, always adjacent to the original homeland).

- <u>borrowing</u> from neighbouring speech communities.

- I've not asked myself whether my findings are potentially useful for the learning and teaching of second languages. Would someone whose L1 is English find it easier to learn how to express 'and such' when learning Finnish than when learning Bengali? Or would such a learner need to learn and be taught the grammar of 'and such' in either case?

Implications of implications for language learning and teaching?

    If p then q ≡ If not-q then not-p ≡ not (p and not-q)

e.g., If Dual then Plural ≡ If not Plural then not Dual ≡ not (Dual and not Plural);

If NP Gen then NP Postp ≡ If Prep NP then Gen NP ≡ not (NP Gen and Prep NP);

If labio-dental affricates then alveolar or post-alveolar affricates ≡ If no alveolar or post-alveolar affricates then no labio-dental affricates ≡ not (labio-dental affricates and no alveolar or post-alveolar affricates).

Implications, somehow, <u>mentally represented</u> and <u>governing</u>, or <u>guiding</u>, the acquisition of an L1/L2? If a learner has learnt that the language s/he is learning has p, then s/he needn't specifically learn, or be taught, that this language will have q too, or, equivalently, if s/he has learnt that not-q, then it will follow that the language will not have p either.

2.   What is contrastive analysis, and why are you doing it or want to revive it?

<u>What</u> do you do when you do contrastive analysis? You compare any two languages, L1 and L2, and seek to identify, on the one hand, identities and, on the other, diferences (contrasts).

<u>Why</u> do you do contrastive analysis?   Because you're in the business of second (or third etc.) language acquisition, or rather teaching, and you assume that someone who knows an L1 and wants to learn any L2 only needs to learn what distinguishes L2 from L1, not what is identical between L1 and L2. (Positive transfer and negative transfer (or interference): learners will transfer their lexicon & grammar of L1 to L2, getting it right where L1 and L2 are identical and wrong where L1 and L2 differ — hence the need for them to focus on differences, contrasts.)

Remit of Contrastive Analysis Revived defined as follows:

> A contrastive analysis can be seen as the complement of a typological study. Instead of comparing a <u>large</u> number of languages with respect to a <u>small</u> subsystem or a <u>single</u> variant property (word order, case marking, passive constructions, etc.), <u>only two</u> languages are compared with respect to a <u>wide variety</u> of properties.
> (König & Gast 2007: 3; similarly in the Call for Papers for this conference).

(In parentheses: Isn't this reminiscent of advocating "mass comparison" in addition to, or even instead of, the comparative method?)

Remit of the typological programme

(would seem to subsume the contrastive programme):

(i) identify all parameters along which languages can vary;

(ii) ascertain whether variation is, structurally speaking, unlimited or limited, where limitations often take the form of the choice for one parameter being dependent on the choice for another (co-variation);

(iii) explain why variation is constrained the way it is found to be constrained;

(iv) try to make sense of anything in any language that is not dictated by structural universals, but connects with anything else in the history of the respective speech community (things not co-varying as per a universal but co-borrowed from other speech communities or co-inherited from an ancestral speech community).

What advocates of CART (=Contrastive Analysis Revived as Typology with Self-imposed Limits) would like to conclude is that they have identified instances of co-variation, that they have "unified" and "understood" contrasts:

> ... questions concerning the connections among various contrasts between two languages and the possibility of subsuming them under higher-level generalizations can be pursued within a contrastive analysis, and the question as to whether there is a certain unity among the contrasts describable in terms of a holistic typology or characterology for the relevant languages can be addressed.
> (König & Gast 2007: 3; more cautiously, the Call for Papers puts this as a question)

But that just doesn't follow: on the basis of only two languages — out of over 7000 known languages and many more unknown, vanished without a trace during the 100-200,000 years of speaking man, and some more yet to come, perhaps — there is no way of finding out inductively whether two variables co-vary by universal principle or by chance, or also by virtue of co-inheritance or co-borrowing.

For example:

- Modern Standard English lacks dorsal and has dental fricatives (/θ ð/), and thus contrasts with New High German, which has dorsal (/ç x ɣ/) and lacks dental fricatives, on both counts.

- Both Modern Standard English and New High German have postalveolar affricates (/t͡ʃ (d͡ʒ)/), while they differ on both labio-dental and alveolar affricates, which German has (/p͡f t͡s/) and English lacks.

- English has a voicing contrast for obstruents in syllable codas while German has syllable-final devoicing.

It would be rash to conclude, on this narrow basis,

(i) that universally dorsal and dental fricatives (or rather the relevant contrastive features) mutually exclude each other (that is, a phoneme inventory will only have dental fricatives if it lacks dorsal fricatives, and will only have dorsal fricatives if it lacks dental fricatives);

(ii) that only if a phoneme inventory includes labio-dental affricates it will also include alveolar affricates, and vice versa;

(iii) that if a phoneme inventory includes labio-dental and/or alveolar affricates it will also include dorsal fricatives (or: it will also exclude dental fricatives), and vice versa;

(iv) that if there is syllable-final devoicing there will be no dental fricatives (or: there will be labio-dental and/or alveolar affricates), and vice versa;

(v) that postalveolar affricates are universal parts of phoneme inventories.

I also fail to see a meaning and use for a "Contrastive Analysis Revived <u>as a Complement to</u> Typology", rather than as Typology-on-a-Small-Scale. What would typology need to be complemented for? Isn't the typological programme pretty comprehensive, covering everything under the rubric of diversity and unity, across all languages and therefore across any two of them? If your interest really is in co-variation then you'll have to do full-scale typology: there are no shortcuts to typological knowledge.

The supposed utility of a "Contrastive Analysis as Heuristic" eludes me, too.

> The constructive method proves to be a useful heuristic tool capable of
> throwing valuable light on the characteristic features of the languages
> contrasted. (Firbas 1992: 13; quoted yesterday by Stig Johansson)

What are supposed to be "characteristic" features of a language? Those which are
unique? Or those which are shared without being universal, and which are
predictors of lots of other features?

Alas, neither rara/rarissima nor potent predictors can be identified, let alone be
thrown valuable light on, if one is limiting one's comparison to only two languages.

3. Contrastive Analysis Revived as Diachrony: Three issues

3.1. What are possible/actual <u>minimal</u> differences between languages?

How can one lexicon & grammar <u>minimally</u> differ from another?

3.2. What are possible/actual <u>minimal changes</u>?

3.3. Change happenz, but at <u>what speed</u> does (minimal) change happen?

3.1. What are possible/actual <u>minimal</u> differences between languages?

How can one lexicon & grammar <u>minimally</u> differ from another?

- Pursuing this question, you'll be doing something akin to the <u>Microvariation/Microparameters</u> research programme, where the focus is on dialects rather than languages as the varieties supposedly least different from one another.

- For example:

  - Would having or lacking a category AUX for the expression of modal meanings be a <u>minimal</u> difference? No: this involves a whole range of lower-level morphological and syntactic differences between verbs and AUX, sharing more or less properties with verbs. Minimal differences would involve <u>elementary</u> distinctions; identifying elementary distinctions is an empirical issue.

  - Same question: Can languages minimally differ in having or lacking individual fricatives (dental, dorsal) or only in having or lacking both front and back fricatives? Answer: the former, on the evidence of English vs German.

  - Same question for affricates: Can languages minimally differ in having or lacking any individual affricates or only in having or lacking the full series of velar, postalveolar, labio-dental, bilabial affircates. The former.

- Would <u>any</u> two languages be able to show minimal differences, or only pairs of languages <u>genealogically closely related</u>, ideally as immediate daughters of the same proto-language?

- Through bilateral comparisons we won't be in a position to tell what are <u>im</u>possible minimal differences; that would require comparing all language pairs. Still, from comparing languages such as English and Bengali, I'd have a gut feeling that languages cannot minimally differ in expressing 'and such' through de-particularisation or through echo-reduplication: languages which show this difference will also show lots of others.

3.2. What are possible/actual <u>minimal changes</u>?

(Change = successful innovation, spread through entire speech communities or through parts of them, causing splits.)

• By adding a diachronic dimension to CA, <u>minimal differences</u> between genealogically closely related languages are seen as potentially <u>the result of minimal changes</u>.

The splitting up of a proto-language into two or more daughter languages, or equally of a language into two or more regional varieties, consists in one subpart of the original speech community instituting minimally one change: Through minimal changes Indo-European was able to become Germanic (rather a lot of change here: word stress; Auslautgesetze; Grimm's Law, Verner's Law; inflectional simplification, also inflectional elaboration: weak/strong adjective

declensions, weak preterite; massive lexical borrowing; verb-second?; ...), Balto-Slavic, Celtic ...; Germanic was able to become East, North, and West Germanic (the latter: consonant gemination, loss of marked nominative); West Germanic was able to become Ingvaeonic, Istvaeonic, Erminonic; ...; (Ingvaeonic) Anglo-Frisian was able to become English and Frisian.

- Examples: Losing <u>individual</u> verbal properties and becoming more and more of an AUX.
- Getting or losing phonemic contrasts differentiating <u>individual</u> fricatives.
- Getting or losing phonemic contrasts differentiating <u>individual</u> affricates.
- Giving up a voicing contrast in syllable codas.

- Innovations/changes are of profound importance for the Typological Programme: <u>Diversity</u> comes about through <u>change</u> (and <u>only</u> through change, assuming a single ultimate proto-language, Proto-Human). If there are constraints on (synchronic) diversity, they must be due to (diachronic) constraints on innovations and/or their propagation through speech communities.

Typological constraints can be conceived of A-chronically or DIA-chronically, as timeless laws (i) or as laws of change (ii):

(i) Universals, seen as timeless laws, impose (absolute or conditional) limits on variation across grammars & lexicons at any and all times, regardless of particular linguistic experiences;

they thereby constrain change insofar as a grammar & lexicon must not change (not be restructured) so as to violate such a universal, or at any rate not without subsequent changes swiftly redressing the balance.

(Possibly: There are no laws of change itself; anything can be reanalysed as anything else independently of anything else.)

(ii) Particular targets (forms, categories, constructions, rules, constraints) can only result by particular mechanisms of change (reanalysis) operating on particular sources (forms, etc.) which an individual experiences at a particular time in a particular speech community;

such laws of change thereby impose limits on how grammars & lexicons can differ: they can only be what they could become, under the contingent historical circumstances.

(Possibly: There are no timeless universals. Or: Co-variation is due to co-evolution, with concomitance or consecutiveness of reanalyses being superintended by timeless laws.)

- Examples of co-evolution: Tendency for obstruents to change in entire series as to voicing, continuancy (fricatives), affrication (Grimm's Law, Second Consonant Shift); verbal properties being lost in unison; ...)

- On the view of universals as laws of change, what needs to be sampled by typologists, then, are not <u>whole languages</u>, but <u>individual events of successful innovations</u>. Such a sample can only be provided by CARD: <u>Contrastive Analysis Revived as the Diachrony of Small Steps by which the Same Language can Become Different Languages.</u>

- By examining minimal changes in the immediate offspring of single proto-languages, we're as close as we can ethically get to having laboratory conditions allowing the <u>replication</u> of experiments: if in very similar circumstances in two speech communities the <u>same</u> changes occur, or some pertinacious things remain <u>equally</u> unchanged, then one feels entitled to conclude that what has happened, or has not happened, in successive cycles of language acquisition has happened, or has not happened, by <u>necessity</u> rather than by chance.

3.3. What is the tempo of change?

• The amount of synchronic diversity does not only depend on <u>how many</u> changes have occurred since the times of a common proto-language. It is also a function of <u>how fast or slow</u> something changes. If innovations take long to institute, then the chances are that, at any given time, their results will be observed less frequently than the results of innovations which go fast.

• The tempo of linguistic change is underinvestigated. (It is essentially only the supposedly constant speed of <u>lexical turnover</u> that has received some amount of attention; but glottochronology has not been able to attain the reliability of radiocarbon dating.) One assumption is that <u>each (elementary) change takes the same time</u>: three generations, with the first innovating, the second undecided and showing variation, and the third accepting (or rejecting) an innovation.

- Through the contrastive analysis of the "same" changes in different languages, closely related or other, this assumption could be substantiated, or refined, or be replaced by more accurate measures of a differential rate of elementary linguistic changes (e.g., depending on the size and homogeneity of a speech community through which a change is propagating).

What is a possible change?

can be investigated by just examining changes in a single language

What is an impossible change? i.e., What canNOT happen in linguistic history?

can only be investigated by examining changes in all languages

And by comparing changes in TWO languages?

-- any arbitrary two languages

-- two closely related languages, originating in a single proto-language

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microvariation: focus on minimal differences/contrasts

to see what is a possible linguistic change

But how does one tell what is not a possible change?

Again, need to examine changes across languages: comparative historical linguistics

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Third, and this is the genuinely typological remit, more and more individual variables — parameters along which languages can vary — need to be identified, and it then needs to be ascertained whether or not these variables co-vary; where co-variation is found, it will want an explanation. The occupational hazard here is that it is the easier to persuade oneself that something, or a connection between some two things, is invariant the less one knows about actual variation. There are sceptics who doubt whether anything will remain which could truly claim universality once our awareness of diversity is sufficiently wide; if they are right (which is an empirical question), the typological programme in its classical formulation can be discontinued in favour of historical research, in particular (macro-)areal linguistics and population history (in the manner of Nichols 1992), with the remit of tracing to joint inheritance and borrowing what relevant languages (non-universally) share. This would, after all, still be the same general enterprise of seeking to answer the big question of predictability: What is predictable about a language, any language, on the basis of what? — with possible predictors including human languagehood as such (assuming there are universals), other structural properties of the language concerned, its internal and external history, the current and previous locations of its speech community, and current and previous contacts with other speech communities. What typologists may usefully ponder, until this question of what are valid predictors is decided, is whether anything should be EXPECTED to co-vary with anything else, unless logically connected. Surely, interpreted non-trivially, the old dictum that languages are systems, organisms, or mechanisms where *TOUT se tient* is a gross exaggeration. When common heritage (which in turn raises a question: Why should two independent traits be JOINTLY retained?), common contact possession (Why JOINTLY borrowed?), and chance are discarded, what is left that could nourish the expectation of co-variation for any two variables? Possible answers are: very general and abstract organising principles

of (sub-)systems of linguistic articulation of thought; or developmental scenarios with stages and cycles, of particular durations, which happen to occur in sync.

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Constraints on analysis or reanalysis: Timeless laws or laws of change?

Disregarding the many ways in which this cherished concept is problematic, "a language", differing or not differing from "another language" in one or another particular, is something individual and social. Difference comes about when individuals innovate and other members of their community follow their example: this is where constraints must be effective.

The linguistic know-how of an individual is the grammar & lexicon represented in that individual's mind (well, brain). The know-how to express and communicate thought can be shared among individuals, or else it distinguishes one group of individuals from another: speech communities, with no differences in linguistic know-how among their individual members (an idealisation); families/genera/phyla and *Sprachbünde*/diffusion zones/macro-areas, with the members of each (sets of speech communities) sharing what is "inherited" or "borrowed" respectively; the whole subspecies of *homo sapiens$_1$ sapiens$_2$*, with at least that in common which earns it the attributes *sapiens$_2$* and its near-synonym *loquens* (openness or indeed recursion, double articulation, ...), and with further, non-definitional universals to be discovered through typological inquiry.

Grammars & lexicons are ACQUIRED: the linguistic histories of individuals and of populations are the histories of the acquisition of linguistic know-how by individuals within speech communities (with the early life span of individuals probably the most crucial), possibly enriched by input (early or late in an individual's life) across speech communities or from other sections of heterogeneous speech

communities. Constraints on crosslinguistic diversity, then, can only be constraints on acquisitions and on what acquirers can make of them and can get speech communities to accept as the general norm.

Now, when SOME grammars & lexicons, but not all, are found in some respect to be the same (and what is being compared are mental constructs), this will naturally be attributed to the particular linguistic experiences of the acquirers concerned having been (relevantly) the same — notwithstanding the possibilities that identical experiences can also lead to different grammars & lexicons and different experiences to identical grammars & lexicons. If ALL grammars & lexicons can plausibly be assumed to be the same, in one particular or more likely in the way two or more variables co-vary, and this identity is not a design feature "language" is defined through, there are two ways to make sense of such lack of diversity: (i) through constraints on acquisition (be they genetic or "functional", specifically linguistic or more generally cognitive) which always and everywhere invariably enforce the same grammatical & lexical representations irrespective of the particular linguistic experience of acquirers within their speech communities; or (ii) through constraints which in light of particular linguistic experiences encourage or even force acquirers (including borrowers) to set up grammatical & lexical representations different, though uniformly different, from those of their linguistic models.

Typological constraints can accordingly be conceived of A-chronically or DIA-chronically, as timeless laws (i) or as laws of change (ii):

(i)   Universals, seen as timeless laws, impose (absolute or conditional) limits on variation across grammars & lexicons at any and
        all times, regardless of particular linguistic experiences;
        they thereby constrain change insofar as a grammar & lexicon must not change (not be restructured) so as to violate such a
        universal, or at any rate not without subsequent changes swiftly redressing the balance.
        (Possibly: There are no laws of change itself; anything can be reanalysed as anything else independently of anything else.)

(ii)   Particular targets (forms, categories, constructions, rules, constraints) can only result by particular mechanisms of change

(reanalysis) operating on particular sources (forms, etc.) which an individual experiences at a particular time in a particular

speech community;

such laws of change thereby impose limits on how grammars & lexicons can differ: they can only be what they could

become, under the contingent historical circumstances.

(Possibly: There are no timeless universals. Or: Co-variation is due to co-evolution, with concomitance or consecutiveness

of reanalyses being superintended by timeless laws.)

In one or another guise, the view that has diachrony in charge of the constraining (ii) is the more traditional one, with types conceived of as developmental stages inexorably succeeding one another and perhaps recurring in cycles. For a while superseded by position (i), it has lately been regaining popularity, inspired by Greenberg's programme to "dynamicise" typology (with several important papers collected in Greenberg 1990). In the case of implicational constraints, the most straightforward way of dynamicisation has been to read "implies" ($\supset$, material implication) as "derives from" ($<$, is reanalysed from). To briefly illustrate with three examples from syntax, morphology, and phonology.

Prep NP $\supset$/$<$ N Genitive, NP Postp $\supset$/$<$ Genitive N:

When adpositions are "grammaticalised" from head nouns in attributive constructions, which is one of their sources and manners of origin (that is, when such constructions are analysed by acquirers differently from their models' analysis, along preordained lines leading from more lexical to more grammatical forms-in-constructions), then they will remain in the same position relative to the NPs which they continue to be in some sort of similar construction with, automatically harmonising in head–dependent ordering or in branchingness

direction with the source construction, provided the grammar & lexicon of the new generation within that speech community remains otherwise unaltered (thus, e.g., English *beside the house* ⊃/< *by the side of the house*; Turkish *Barış-a inat* Barış-DAT despite 'despite Barış' ⊃/< *Barış-ın inad-ı* Barış-GEN persistence-3SG.POSS 'Barış's persistence'; see further Aristar 1991, in a Greenbergian sense dynamicising seemingly achronic word order universals of Greenberg's 1963).

Infixes ⊃/< adfixes:

The (almost) only way infixes can come about is from adfixes being metathesised inside stems, around initial or final consonants or other phonological constituents, serving to improve syllable or other prosodic structures; in the company of stems where prosodic structures are unobjectionable anyhow, adfixes will remain external. (Gabelentz 1891: 330; more on in- and adfixation below, Section 3.5.)

Nasal vowel ⊃/< corresponding oral vowel:

The (almost) only way distinctive nasal vowels can come about is from oral vowels being nasalised through the influence of a following nasal consonant, itself consequently dropped from lexical representations. (For a recent all-out attempt to dynamicise phonological typology see Blevins 2004.)

Though seemingly straightforward in selected cases, this sort of "⊃ = <" dynamicisation is too facile, and cases are easily found where it is nonsense — e.g., dual ⊃ plural, an instance of marked ⊃ unmarked: duals are hardly ever due to reanalyses of plurals, *dual < plural, while, the other way round, dual forms frequently acquire plural meanings, dual > plural. The full diachronic stories behind

implications are far more complex, and to be meaningfully told, they need to be embedded in the histories of acquisitions of grammars & lexicons through individuals within their speech communities and with possible input also across speech communities.

As grammars & lexicons are being shaped, to some extent predictably, by the particular experiences acquirers happen to make, there would still seem a role to play, as per the achronic view of universals (i), for experience-independent laws prescribing or proscribing certain grammatical & lexical representations and superintending the concomitance or consecutiveness of reanalyses. But the question remains, and should be high on the typological agenda, precisely how (diachronic) constraints on reanalyses would relate to (achronic) constraints on analyses in limiting differences between mental grammars & lexicons which individuals can come up with, at any and all times as well as in particular historical circumstances.

And, to be able to govern the structuring or restructuring of mental representations, universal constraints themselves need to be (recognised as) part of the mental equipment of individual linguistic agents. But then, the most abstract universals on record perhaps excepted, which are arguably owed to human genetics, the mental status of universals, and especially of implicational universals, has rarely been an issue, however solid their "functional" grounding (facilitating the expression of thought; facilitating storage, access, production, processing; subserving inertia or extravagance; giving pleasure; etc.): it decidedly ought to be one in future.