Resources for Suppletion:
A Typological Database and a Bibliography[1]

Greville G. Corbett, Dunstan Brown, Marina Chumakina & Andrew Hippisley
Surrey Morphology Group - University of Surrey
http://www.surrey.ac.uk/LIS/SMG/

1. The Special Interest of Suppletion

The phenomenon of suppletion, as found in English *go~went* where different inflectional forms of the same lexical item are not related phonologically, has a special place in morphology. Part of its importance is that it sets one of the outer bounds for the notion 'possible word' in a human language. It provokes questions about how such forms are to be treated in our theories, and how they are stored (Carstairs-McCarthy 1994). There has been considerable work on suppletion, particularly from Osthoff (1899) onwards. Current interest in the topic is shown by the recent appearance of two dissertations (Veselinova 2003 and Veselinovič 2003). While the body of research is extensive, the range of languages investigated is rather restricted in many publications. In order to stimulate further progress, we have constructed and made available a database (Brown, Chumakina, Corbett and Hippisley 2004). We hope this will help to put future research on a broader empirical base An annotated bibliography is now available (Chumakina 2004); it contains over seventy entries on works written in five different languages (English, French, German, Italian and Russian) and this will give the reader a view of the literature.

2. The Canonical Approach in Typology

At the Barcelona meeting (MMM3), the first author outlined a 'canonical' approach to typology. In a canonical approach, we take definitions to their logical end point and build theoretical spaces of possibilities. Only then do we ask how this space is populated. The canonical instances, which are the best examples, those most closely matching the canon, may well not be the most frequent. Rather they may be rare, or even non-existent. They serve to fix a point from which occurring phenomena can be calibrated, and it is then significant and interesting to investigate frequency distributions. This approach was worked out with regard to agreement (Corbett 2003). It is an interesting issue how such an approach can be viable for a phenomenon like suppletion, which may be thought of as an 'extreme' phenomenon. It is clear that the

object of such a typology will be lexemes, rather than constructions or languages. A helpful start for such an approach is offered by a part of Mel´čuk's definition of suppletion:

> For the signs X and Y to be suppletive their semantic correlation should be maximally regular, while their formal correlation is maximally irregular.
> Mel´čuk (1994: 358)

Beginning from this suggestion, we can establish dimensions along which the phenomenon may vary. We can establish the canonical instances, namely those which are maximally transparent in semantic terms and maximally opaque in formal terms (cf. Mel´čuk 1994: 342). As part of this we can recognise, for example, that some restrict suppletion to inflectional morphology, while others including Mel´čuk allow for suppletion in derivational morphology. Semantic correlations are typically more regular (more transparent) in inflectional than in derivational morphology, hence the clearer (and for some linguists the only) instances of suppletion will be found in inflectional morphology. Only instances of inflectional morphology are included in the database. To date fifteen criteria for canonical suppletion have been proposed in what is ongoing research.

3.   The Surrey Database of Suppletion

The database was designed and implemented both to inform our research and to make available to other linguists the data which we had collected and analysed. It allows a range of queries, and can be searched on-line over the web (at www.smg.surrey.ac.uk).

3.1   Structure of the Database

The design, due primarily to the second author, is indicated in Figure 1. Each table is motivated by a possible query.
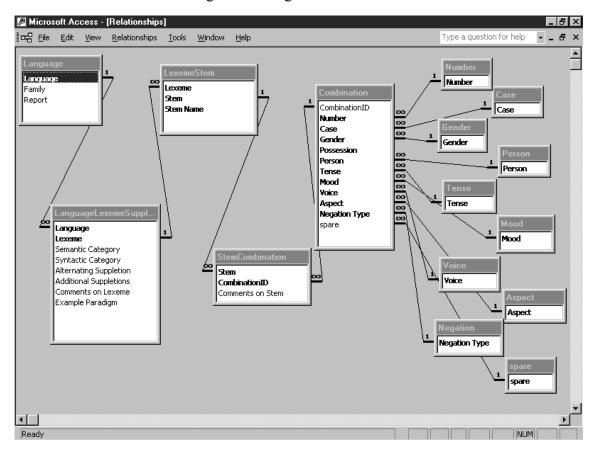
Figure 1: Design of the Database

The design of the database in this figure allows for detailed description of the environments in which suppletion occurs and for the non-redundant storage of the information. On the right side of the figure there are the tables for feature sets (such as Case, Number, Person etc). Any feature in a feature set table occurs once in that table, but many times in the Combination table to the left of the feature sets. Feature combinations are then paired with stems (in the StemCombination table). The stem in a lexeme-stem pairing (in LexemeStem table) may occur with more than one feature combination. The relationship between the stem field in the LexemeStem table and the stem field in the StemCombination table is therefore one-to-many. The LanguageLexemeSuppletion table brings all the information together, combining the languages from the Language table with the lexemes from the LexemeStem table. The database has been implemented using Microsoft Access.

3.2 The Data

Languages were selected to ensure genetic and areal diversity. In addition, languages had to have the potential for inflectional suppletion (hence those with no inflectional morphology were not included). The data were derived from published grammars and dictionaries, and in many cases were checked with specialists. We are very grateful to Willem Adelaar, Nicholas Evans, George Hewitt, Paulette Levy, Marianne Mithun and Larry Trask for their help. The data on two languages, Komi and Xakass, were obtained

on field trips. The database records all instances of suppletion that were found in the following languages:

Language	Family
!Xóõ	Khoisan
Arapesh	Toricelli
Archi	Nakh-Daghestanian
Basque	Basque
Chichewa	Niger-Congo
Georgian	Kartvelian
Guaraní	Tupí
Hebrew	Semitic
Hua	Trans-New Guinea
Hungarian	Ugric
Itelmen	Chukotko-Kamchatkan
Jacaltec	Mayan
Japanese	Japanese
Kannada	Dravidian
Kayardild	Tangkic
Ket	Yenisei -Ostyak
Koasati	Muskogean
Komi	Finno-Permic
Limbu	Sino-Tibetan
Mayali (Bininj Gun-wok)	Gunwinyguan
Tetelcingo Nahuatl	Uto-Aztecan
Navajo	Athabaskan
Nishnaabemwin	Algonquian
Palauan	Austronesian
Qafar	Cushitic
Russian	Indo-European
Tariana	Arawak
Tarma Quechua	Quechuan
Totonac	Totonacan
Turkana	Nilo-Saharan
Xakass	Turkic
Yimas	Sepik-Ramu
Yukaghir	Yukaghir
Yup'ik	Eskimo-Aleut

For each example we present the phonologically distinct stems that belong to the same paradigm, and define the categories according to which the suppletion can be delineated. The database contains pointers to examples, illustrating each instance of suppletion in a particular language. In addition, there is a link to a report for each language, giving sources and enabling the user to see how decisions were made. We describe briefly for each language the morphonological processes relevant for defining suppletion, and the inflectional system (major word classes and the categories they inflect for). We list the instances of suppletion and give examples of regular inflected items for contrast. In the cases where our analysis of the language material differs from

that of the source, we present both views and give our reasons for deciding whether or not to include this particular example in the database. [2]

Users can query the database online. Besides obvious searches, such as by language, it is also possible to do cross-linguistic searches in terms of semantic and morpho-syntactic categories. The web interface provides the user with pulldown menus for each of the relevant categories. There are three readme files with the database to aid initial searching.

3.3   Some Initial Results

A first observation is that suppletion is relatively common cross-linguistically. Out of the 34 language surveyed, in only four could we find no instances of suppletion (recall that in order to be included a language had to have inflection and hence the theoretical possibility of inflectional suppletion). The four languages are: Navajo, Tarma Quechua, Yukaghir and Yup'ik.

The database contains 178 lexical items and 417 stems. Among the morphological features involved in suppletion it is interesting to note person (in verbs) in Totonac; possession in Jacaltec and Nishnaabemwin; politeness in Japanese and Tetelcingo Nahuatl; and negation in Russian, Limbu and Hua.

It is true that the lexical items involved are usually frequent items like 'go' and 'child'. But that is not invariably the case. The Nakh-Daghestanian language Archi has the following remarkable suppletive item: *bič'ni* (SG) / *boždo* (PL) 'corner of a sack' (Kibrik 1977: 46). Some results are presented in Hippisley, Chumakina, Corbett & Brown (2004); we intend to continue exploiting the database, in parallel with other researchers.

4.   A Bibliography of Suppletion

A second resource relating to suppletion is the annotated bibliography whose entries we give here. The related abstracts are accessible at http://www.surrey.ac.uk/LIS/SMG/

Aski, J.M. (1995), *Verbal suppletion: an analysis of Italian, French and Spanish 'to go'*, "Linguistics" 33. 403–432.
Beckmann, W. (2002), *Suppletion im Niederdeutschen, Niederdeutsche Studien*, 47, Köln, Böhlau.
Bhat, Shankara D.N. (1967), *Lexical suppletion in baby talk*, "Anthropological Linguistics" 9, No 5. 33–36.
Bittner, A. (1988). *Reguläre Irregularitäten: Zur Suppletion im Konzept der Natürlichen Morphologie*, "Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforchung" 41, 416–425.
Börjars, K., C. Chapman, & N. Vincent (1997), *Paradigms, periphrases and pronominal inflection: a feature-based account*, "Yearbook of Morphology" 1996, ed. by G. Booij and J. van Marle, 155–180, Dordrecht, Kluwer Academic Publishers.

---

[2] The issue of reproducibility is discussed in Corbett (2004).

Bortnik, N. (1979), *Nekotorye osobennosti osnov, obrazujuščix dvojnye formy množestvennogo čisla* (Some peculiarities of stems that have two alternating forms for the plural), "Russian Language Journal", Vol. 32, part 112, 43–58.

Boyd, J. (2003), *Cognitive limits on natural language suppletion*, (Not published).

Carstairs, A. (1988), *Some implications of phonologically conditioned suppletion*, "Yearbook of Morphology" 1988, ed. by G. Booij and J. van Marle, 67–94, Dordrecht, Kluwer Academic Publishers.

Carstairs, A. (1990), *Phonologically conditioned suppletion*, in *Contemporary morphology,* ed. by W.U. Dressler, H.C. Luschützky, O.E. Pfeiffer & J.R. Rennison, Berlin - New York, Mouton de Gruyter, 17–23.

Carstairs-McCarthy, A. (1994), *Suppletion*, in *The Encyclopedia of Language and Linguistics,* Vol. VIII, ed. by R. E. Asher, Oxford, Pergamon, 4410–4411.

Deshpande, M.M. (1992), *Justification for verb-root suppletion in Sanskrit*, "Historische Sprachforschung" 105, Part 1, 18–49.

Dressler, W.U. (1985), *On the predictiveness of Natural Morphology*, "Journal of Linguistics" 21. 321–337.

Dressler, W.U. (1985), *Sur le statut de la suppléance dans la morphologie naturelle*, "Langages" 78. 41–56.

Dressler, W.U. (1985), *Suppletion in word formation*, in *Historical semantics − historical word-formation,* ed. by J. Fisiak, Berlin: Mouton de Gruyter, 97–112.

Dressler, W.U. (1986), *Inflectional suppletion in natural morphology* in *Languages in Global Perspective*, ed. by B.F. Elson, Dallas, Summer Institute of Linguistics, 97–111.

Fertig, D. (1998), *Suppletion, natural morphology and diagrammaticity*, "Linguistics" 36. 1065–1091.

Gorbačevskij, A.A. (1967), *K voprosu o putjax vozniknovenija suppletivnyx form v slavjanskix jazykax,* Dušanbe.

Grasserie, R. de la (1895), *Du syncrétisme pronominal*, Paris, Jean Mainsonneuve. [Reprinted from: "Revue de Linguistique et de Philologie Comparée" 28, 47–72, 113–157.]

Greenberg, J.H. (1997), *The Indo-European first and second person pronouns in the perspective of Eurasiatic, especially Chukotkan*, "Anthropological Linguistics" 39. 187–195.

Hale, K., J. LaVerne & P. Pranka (1990), *On suppletion, selection and agreement*, in *Interdisciplinary approaches to languages,* ed. by C. Georgopoulos & R. Ishinara, Dordrecht, Kluwer, 255–270.

Hendrick, R. (1996), *Some syntactic effects of suppletion in the Celtic copulas*, in *The Syntax of the Celtic Languages: A comparative perspective*, ed. by R. Borsley & I. Roberts, Cambridge, Cambridge University Press, 75–96.

Hippisley, A., M. Chumakina, G.G. Corbett & D. Brown. (2004), *Suppletion: frequency, categories and distribution of stems*, "Studies in Language" 28, 387–418.

Jackendoff, R. (1975), *Morphological and semantic regularities in the lexicon*, "Language" 51, 639–671.

Johnson, D. B. (1972), *Semi-suppletive aspect pairs in Slavic*, in *The Slavic Word*, ed. by D.S. Worth, The Hague, Mouton, 169–188.

Juge, M.L. (1999), *On the rise of suppletion in verbal paradigm,* in *Proceedings of the twenty-fifth annual meeting of the Berkeley Linguistics Society,* ed. by S.S. Chang, L. Liaw & J. Ruppenhofer, Berkeley, BLS, 183–194.

Koneckaja, V.P. (1973), *Suppletivizm v germanskix jazykax*, Moskva, Nauka.

Lamarche, J. (1996), *Gender Agreement and Suppletion in French*, in *Grammatical theory and Romance languages: selected papers from the 25th Linguistic Symposium on Romance Languages,* ed. by K. Zagona, Amsterdam, Benjamins, 145–157.

Letoublon, F. (1985), *Il allait, pareil à la nuit. – Les verbs de mouvement en grec: suppletivisme et aspect verbal,* Paris, Klincksieck.

Levin, S. (1972), *Non-paradigmatic forms: suppletion or preemption?* "Foundations of Language" 8. 346–359.

Loi Corvetto, I. (1989), *Anomalie e paradigmi. Il suppletivismo nelle lingue romanze,* "Annali della Facoltà di Magistero" 34, Cagliari, Università di Cagliari.

Maiden, M. (1992), *Irregularity as a determinant of morphological change,* "Journal of Linguistics" 28, 285–312.

Maiden, M. (1995), *A proposito dell'alternanza esce, usciva, in italiano*, "Lingua Nostra" 56, 37–41.

Maiden, M. (2001), *Morphological bootstrapping? Paradigmatic autonomy and the rise of suppletion*, Paper read at ICHL, Melbourne.

Mańczak, W. (1966), *La nature du supplétivisme*, "Linguistics" 28, 82–89.

Markey, T.L. (1969), *The verbs* varda *and* bliva *in Scandinavian: With special emphasis on Swedish,* "Studia philologiae Scandinavicae Upsaliensia" 7, Acta Universitatis Upsaliensis, Uppsala Universitetet.

Markey, T.L. (1985), *On suppletion*, "Diachronica" II:1. 51–66.

Mel´čuk, I.A. (1976), *On suppletion*, "Linguistics" 170. 45–90.

Mel´čuk, I.A. (1983), *Suppletivologičeskie ètjudy*, "Russian Linguistics" 7. 207–218.

Mel´čuk, I.A. (1992), *Suppletion*, in *International Encyclopedia of Linguistics*, ed. by W. Bright, New York, Oxford University Press, 97–99.

Mel´čuk, I.A. (1994), *Suppletion: Toward a logical analysis of the concept*, "Studies in Language" 18, 339–410.

Mel´čuk, I.A. (2000), *Suppletion*, in *Morphologie / Morphology*: *Ein internationales Handbuch zur Flexion und Wortbildung / An International Handbook on Inflection and Word-Formation* 1, ed. by G. Booij, C. Lehmann & J. Mugdan, Berlin - New York, Mouton de Gruyter, 510–524.

Myhill, J. (2001), *Suppletion, lexical meaning, semantic primitives, and translation data*, "Linguistics" 39, 761–802.

Nicholson, J.G. (1988), *Correlative dependencies of a suppletive type in the East Slavic verbal paradigm*, "Canadian Slavonic Papers" 30, part 1, 34–40.

Nicholson, J.G. (1989), *The incidence of suppletion within inflection*, "Lacus Forum" 16, 250–259.

Nübling, Damaris. (2000), *Prinzipen der Irregularisierung. Eine kontrastive Analyse von zehn Verben in zehn germanischen Sprachen*. Tübingen: Max Niemeyer Verlag.

Osthoff, H. (1899), *Vom Suppletivwesen der indogermanischen Sprachen,* Heidelberg, Kommissionsverlag von Alfred Wolff.

Plank, F. (1994), *Homonymy vs. suppletion: A riddle (and how it happens to be solved in ...)*, "EUROTYP Working Papers" VII/23. 81–86.

Ronneberger-Sibold, E. (1987), *Verschiedene Wege zur Entstehung von suppletiven Flexionsparadigmen: deutsch gern – lieber – am liebsten*, in *Beiträge zum 3. Essener Kolloquium über Sprachwandel und seine bestimmenden Faktoren,* ed. by N. Boretzky, W. Enninger & T. Stolz, Bochum, Brockmeyer, 243–264.

Ronneberger-Sibold, E. (1988). *Entstehung von Suppletion und Natürliche Morphologie*, "Zeitschrift fur Phonetik, Sprachwissenshaft und Kommunikationforschung" 41, 4, 453–462.

Ronneberger-Sibold, E. (1990), *The genesis of suppletion through morphological Change*, in *Proceedings of the Fourteenth International Congress of Linguistics. Berlin/GDR, August 10-August 15, 1987,* Vol. I, ed. by W. Bahner, J. Schildt, & D. Viehweger, Berlin: Akademie-Verlag, 628–631.

Rudes, B.A. (1980), *On the nature of verbal suppletion*, "Linguistics" 18, 655–676.

Schwarze, C. (1970), *Suppletion und Alternanz in Französischen*, "Linguistische Berichte" 6, 21–34.

Sokolova M.A. (1952), *Iz istorii slov osnovnogo slovarnogo fonda russkogo jazyka*, "Doklady i soobščenija Instituta Jazykoznanija AN SSSR" 2. 8–19.

Swiggers, P. (1985), *How to order eggs in French*, "Folia Linguistica" 19. 63–66.

Tanaka, T. (2002), *The Origin and Development of the *es vs. *wes suppletion in the Germanic copula: from a Non-Brugmannian Standpoint*, "NOWELE" 40 (April)*,* 3–27.

Testen, D. (1997), *The suppletive imperative of Arabic 'come'*, in *Perspectives on Arabic Linguistics X: Papers from the Tenth Annual Symposium on Arabic Linguistics,* ed by M. Eid & R.R. Ratcliffe, Amsterdam, Benjamins, 173–187.

Theakston, A.L., E.V.M. Lieven, J.M. Pine & C. F. Rowland. (2002), *Going, going, gone: the acquisition of the verb 'go'*, "Journal of Child Language" 29. 783–811.

Tranel, B. (1993), *On Suppletion and French Liaison*, in *Romance languages and modern linguistic theory: 20th Linguistic symposium on Romance languages*, ed. by P. Hirschbühler and K. Koerner, Amsterdam, Benjamins, 269–308.

Tuggy, D. (1997), *Rule-governed allomorphy can be suppletive also*, in *Work papers of the Summer Institute of Linguistics, University of North Dakota Session* 41. 65–69.

Unbegaun, B.O. (1969), *Les anciens Russes vus par eux-memes*, in *Selected Papers on Russian and Slavonic Philology*, Oxford, Clarendon Press, 272–286.

Veselinova, L. (2000), *Suppletion in the paradigms of copula verbs*, in *Cognition and function in language*, ed. by B.A. Fox, D. Jurafsky & L.A. Michaelis, Stanford, Center for the Study of Language and Information, 65–83.

Veselinova, L. (2003), *Suppletion in verb paradigms: Bits and pieces of a puzzle*, Ph.D. dissertation, Department of Linguistics, Stockholm University.

Veselinovič, E. (2003), *Suppletion im irischen Verb,* (Philologia – Sprachwissenschaftliche Forschungsergebnisse, 55), Hamburg, Verlag Dr. Kovač.

Vincent, N. & K. Börjars. (1996). *Suppletion and syntactic theory*, in *Papers from the 1st LFG Colloquium. Grenoble*, ed. by M. Butt and T. Holloway King, 448–462.

Wełna, J. (2001), *Suppletion for suppletion, or the replacement of ēode by went in English*, "Studia Anglica Posnaniensia" 36, 95–110.

Werner, O. (1977), *Suppletivwesen durch Lautwandel*, "Salzburger Beiträger zur Linguistik" 3. 269–283.

Werner, O. (1987), *Natürlichkeit und Nutzen morphologischer Irregularität*, in *Beiträge zum 3. Essener Kolloquium über Sprachwandel und seine bestimmenden Faktoren,* ed. by N. Boretzky, W. Enninger & T. Stolz, Bochum, Brockmeyer, 289–316.

Werner, O. (1987), *The aim of morphological change is a good mixture – not a uniform language type*, in *Papers from the 7th International Conference on Historical Linguistics. Pavia, Italy*, ed. by A. Giacalone Ramat, O. Carruba and G. Bernini, Amsterdam, Benjamins, 591–606.

Werner, O. (1991), *The incorporation of Old Norse pronouns into Middle English. Suppletion by loan*, in *Language Contact in the British Isles: Proceedings of the Eighth International Symposium on Language Contact in Europe, Douglas, Isle of Man,* ed. by S. Ureland and G. Broderick, Tübingen: Max Niemeyer Verlag, 369–401.

Wurzel, W.U. (1985), *Die Suppletion bei den Dimensionsadjektiven*, "Linguistische Studien" (Zentralinstitut für Sprachwissenschaft, Akademie der Wissenschaften der DDR) A126, 114–143.

Wurzel, W.U. (1987), *Zur Morphologie der Dimensionsadjektive*, in *Grammatische und konzeptuelle Aspekte von Dimensionsadjektiven,* ed. by M. Bierwisch and E. Lang, Berlin, Akademie-Verlag, 459–516.

Wurzel, W.U. (1990), *Gedanken zu Suppletion und Naturlichkeit*, "Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung" 43, 86–91.

5.   Conclusion

Suppletion is indeed a challenge for morphologists and typologists. There are some remarkable instances, which push back the boundary of what is a 'possible word'. By constructing the database, compiling the bibliography, and making both generally available, we hope to contribute to a better understanding of this extreme phenomenon.

References

Brown, D., M. Chumakina, G.G. Corbett and Andrew Hippisley. (2004), *The Surrey Suppletion Database*, available at: http://www.smg.surrey.ac.uk/

Carstairs-McCarthy, A. (1994), *Suppletion*, in R. E. Asher (ed.) *Encyclopedia of Language and Linguistics: 8,* 4410–4411, Oxford, Pergamon.

Chumakina, M. (2004), *An annotated bibliography of suppletion*, available at: http://www.surrey.ac.uk/LIS/SMG/Suppletion_BIB/WebBibliography.htm

Corbett, G.G. (2003), *Agreement: Canonical instances and the extent of the phenomenon*, in G. Booij, J. DeCesaris, A. Ralli and S. Scalise (eds.) *Topics in Morphology: Selected papers from the Third Mediterranean Morphology Meeting (Barcelona, September 20-22, 2001)*, 109–128, Barcelona Universitat Pompeu Fabra.

Corbett, G.G. (2004), *Suppletion in personal pronouns: theory versus practice, and the place of reproducibility in typology*, "Linguistic Typology" 8.3.

Hippisley, A., M. Chumakina, G.G. Corbett and D. Brown. (2004), *Suppletion: frequency, categories and distribution of stems*, "Studies in Language" 28, 387–418.

Kibrik, A.E. (1977), *Opyt strukturnogo opisanija arčinskogo jazyka: II: Taksonomičeskaja grammatika.* (Publikacii otdelenija strukturnoj i prikladnoj lingvistiki 12), Moscow, Izdatel´stvo Moskovskogo universiteta.

Mel´čuk, I.A. (1994), *Suppletion: toward a logical analysis of the concept*, "Studies in Language" 18, 339–410.

Osthoff, H. (1899), *Vom Suppletivwesen der indogermanischen Sprachen*. Heidelberg, Kommissionsverlag von Alfred Wolff.

Veselinova, L. (2003), *Suppletion in verb paradigms: bits and pieces of a puzzle.* PhD dissertation. Department of Linguistics. Stockholm University.

Veselinovič, Elvira M. (2003), *Suppletion im irischen Verb* (Philologia 55), Hamburg: Verlag Dr. Kovač.