CHAPTER 1

Dangerous liaisons

An introduction to derivational paradigms

Livio Gaeta University of Turin

Paradigms we live by

Paradigms are strictly associated with languages. Since their early childhood, speakers of the most disparate languages of the world are exposed to more or less complex versions of the question: What is the paradigm of the word X? A simpler version of this question is found in languages which are relatively poor of morphology like English and it reads: What is the plural form of the words *chicken* and *ox*?, where the answer is of course *chickens* and *oxen*. Slightly generalizing the question in wider terms, we can rephrase it as: What is the word for expressing the plural of *chicken* or a person who paints? The obvious answers *chickens* and *painter* imply that the original question has been remolded in accordance with the onomasiological dimension, i.e., the speakers' implicit illocutionary intention of using a formal way to refer to a certain relevant mental or cognitive content (cf. Štekauer 2005; Geeraerts 2010: 23). The questions and the corresponding answers naturally arise from the speakers' pronounced cognitive ability to make associative relations among words. As already envisaged by Saussure's "rapports associatifs" (1916: 176), this ability is essentially of an analogical nature and results from the sheer exposure to bunches of pairs of related words like bird/birds, ship/ships, tree/trees, etc. on the inflectional side, and lead/leader, sing/singer, write/writer, etc. on the derivational one. Saussure (1916: 181) was well aware of the fact that associative relations based on morphological relatedness pose a strong limit to his principle of arbitrariness insofar as they introduce a "motivation relative". In his mind, on a par with arbitrariness, a principle of motivation should be assumed serving as its conceptual counterpart because "[i]l n'existe pas de langue où rien ne soit motivé; quant à en concevoir une où tout le serait, cela serait impossible par définition" (1916: 183) ["There is no language in which nothing is motivated, and our definition makes it impossible to conceive of a language in which everything is motivated" (ET: 133)]. It has to be added that we normally find a much more restricted number of theoretically conceivable pairs alternative to *bird/birds*, *ship/ships*, etc. for plurals and to *lead/leader*, *sing/singer*, etc. for agents, in which the words expressing the shared onomasiological content are lexical atoms. These would be unrelated non-complex words, namely pairs like *chicken/poultry*, *ship/fleet*, *tree/wood*, etc. for referring to a plurality of entities, or *to lead/chief*, *to reign/king*, *to steal/thief*, etc. for referring to an agent performing an activity. Associative relations of this kind – namely on a pure onomasiological basis – are likely to require an additional challenge for the speakers' memory since the relation is not supported formally, i.e., the associations are not activated straightforwardly in the word family.

On the other hand, even though it imposes a severe challenge to the working memory, a language in which associative relations are systematically expressed by means of pairs of lexical atoms is perfectly conceivable, at least theoretically, as also required by Saussure's arbitrariness. Why is this not the case? In this regard, the competing role of syntax should not be forgotten here, which concurs with morphological coding for onomasiological purposes. This reminds us of Seiler's (1975: 39-41) distinction between descriptive and labeling languages, in which descriptive languages widely employ "analyzable" words, i.e., Saussurean motivated signs, while labeling languages make large use of arbitrary signs. Accordingly, syntax is more descriptive than morphology to the extent that it makes use of full referential expressions, i.e., primary signs: the words, while morphology employs morphemes, i.e., secondary signs. At the labeling pole of the continuum, we find lexical atoms as in the pairs mentioned above: to reign/king, etc. In essence, it is this descriptive relief that allows us to extract associative relations of the sort invoked in paradigms, even from clearly syntactic, i.e., fully descriptive, patterns (cf. Gaeta & Angster 2019). In addition, it should not be forgotten that the descriptive/labeling continuum also unveils a diachronic dimension whereby fully descriptive expressions can reduce their degree of transparency giving rise to cohesive grammaticalized units and, lastly, to fully atomic expressions and to phonogenesis (Greenberg 1991; Hopper 1994, 1998; Gaeta 1998, 2004). As again already envisaged by Saussure (1916):

^{1.} Note that for Seiler the conceptual opposition between labeling and description does not correspond strictly to Saussure's dichotomy between arbitrariness and motivation. For Saussure, syntactic coding of the sort found in isolating languages is clearly an instance of arbitrariness, while for Seiler a gradient view is assumed leading from full descriptivity (achieved through morpho-syntactic coding) to full labeling via intermediate stages in which morphological coding – including noun incorporation – is largely found.

Dans l'intérieur d'une même langue, tout le mouvement de l'évolution peut être marqué par un passage continuel du motive à l'arbitraire et de l'arbitraire au motivé ; ce va-et-vient a souvent pour résultat de déplacer sensiblement les proportions de ces deux catégories de signes [Within a given language, all evolutionary movement may be characterized by continual passage from motivation to arbitrariness and from arbitrariness to motivation; this see-saw motion often results in a perceptible change in the proportions of the two classes of signs (ET: 134)].

(Saussure 1916: 183-184)

In this introductory chapter, I will briefly introduce the general content of the book pinpointing a number of problems which are discussed in the single chapters.

2. Associative relations and derivational paradigms: A plea for the unity of morphology

Despite the common agreement on the fact that associative relations lurk everywhere in language, the role of the paradigm in morphology has only recently attracted the scholars' attention after decades of oblivion (cf. Blevins 2016 for a recent overview). One particular phenomenon which has driven the attention back on paradigms is the role of analogy and especially of analogical change, which is apparently better accounted for with the help of paradigms than with (extrinsically ordered) rules (cf. Becker 1990, 1993; Gaeta 2010 for a survey).

The new interest for the role played by paradigms in inflectional morphology has also fostered a new life for paradigms in word formation, starting with van Marle's (1985) pioneering book. As discussed by Štekauer (2014: 360), it has been observed that new complex words do not come into existence as isolated units but rather as complete paradigms. Behind this statement we can unveil the old Saussurean truth that languages are "organic" systems ("où tout ce tient" – where everything sticks together). Accordingly, no isolated atoms can be the result of the system's activity. Rather, the researcher should aim at discovering identities and differences through the paradigmatic networks in which the linguistic units appear. Clearly, researchers disagree on how such networks should be modeled. The issue is discussed in more detail in Chiara Melloni & Serena Dal Maso's theoretical chapter of this volume. From an applied perspective, the unsystematic treatment of paradigms in English language teaching is addressed in Tomáš Gráf and Kateřina Vašků's chapter.

One important issue on which most chapters contained in this volume converge is that word formation should be treated on a par with inflectional morphology with regard to the conceptual necessity as well as the empirical benefit of assuming the presence of some form of paradigmatic relations among complex words. In other

words, derivational paradigms seem to support the idea that morphology cannot be split in two separate components hosted in different parts of the linguistic module, and accordingly reject the Split-Morphology Hypothesis (cf. Anderson 1992; Booij 1993). Perhaps the only exception is Antonio Fábregas' chapter, which however only focuses on inflectional morphology. In particular, he tries to generalize through the English verbal classes a rule-based approach which largely dispenses with paradigms as an organizational asset.

Understanding morphology as a unique component of the grammar dealing with the internal structure of words has important consequences on the format of the grammar as a plausible model of the speakers' competence. In this light, the emphasis on the paradigmatic organization of morphology is likely to bring substantial empirical evidence to assess the issue of the place of inflection and word formation within the grammar.

3. Paradigms for word formation

The role of paradigms in word formation can be thought of along different perspectives and dimensions. The first relevant (dichotomic) dimension concerns the distinction between derivation stricto sensu, i.e., affixal word formation, and compounding. As is well known, it is all but easy to trace a neat divide-line between the two domains, especially if we include the diachronic perspective whereby new affixes arise from old compound forms through a "semi-affixal" or "affixoid" stage (Van Goethem 2008). In this vein, it is often claimed that the transition from compound form to affixal status is due to an increase in paradigmaticity. The latter is intended as the range of possible choices that a certain slot in a construction normally allows for. For instance, it is claimed that for the element -free found in alcohol-free, atom-free, caffeine-free, car-free, plastic-free, error-free, problem-free, salt-free, etc., a semi-affixal pattern has to be assumed in which the empty slot is fixed (or constructionalized) mostly in connection with nouns denoting material, substance, concrete objects, etc. (cf. Górska 1994 and Bauer et al. 2013: 340, 354 for a different view and related discussion). With regard to its role in compounds, the range of possible combinations is sensibly reduced in the relevant lexical environment. Thus, -free has developed its own paradigm. One may remark incidentally that this view sees the paradigm as the sum of the eligible alternatives within an abstract pattern (see Stump 2020 for such a view of paradigms).

The paradigm of *-free* can be further connected within a network in which its antonymic correspondent is the similar – in diachronic terms – element *-ful*, found in *errorful*, *gleeful*, *fruitful*, *limbful*, *mournful*, *poisonful*, *problemful*, etc.

which however mostly selects abstract nouns, as well as other *bona fide* suffixes like -(at-)ic, found in alcoholic, atomic, ozonic, problematic, etc. or -en, found in silken, wooden, etc., while its (near-)synonymic competitor is -less, found in atomless, errorless, fatless, furnitureless, plasterless, problemless, saltless, etc. (Bauer et al. 2013). We can attempt to sketch the following (micro-)network in which the abstract patterns have to be seen as linked via their concrete correspondents displaying partially overlapping lexical inputs:

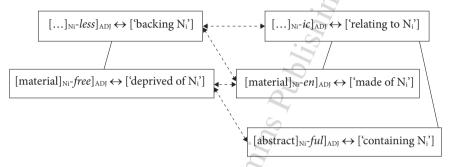


Figure 1. Micro-paradigm of -free

It has to be stressed that the development of *-free* results from associative relations clearly arising in compound series which are further expanded and entrenched up to the point when their paradigmatic cohesion is clearly networked as shown in Figure 1 above. Thus, also for compounds, a paradigmatic dimension along different axes is of high relevance and it does not come out as a surprise that

four contributions in the volume are devoted to this issue. The chapter by Laurie Bauer deals with several aspects of compounding where paradigmatic networks can clearly be projected onto larger word families starting respectively with the head or the modifier. The chapter by Bożena Cetnarowska focuses on synthetic compounds headed by an agent noun. The chapter by Elisa Mattiello is devoted to a peculiar pattern which naturally lends itself to a treatment in terms of paradigmatic morphology, i.e., the compounds based on so-called combining forms, also called confixes in the German tradition, and semi-words or neoclassical compounding in the Italian tradition. A fourth chapter by Bagasheva & Fernández-Domínguez deals with the peculiar case of compound verbs, often resulting from processes of back-formation.

This latter type provides an ideal link to one particular pattern which is of peculiar interest given the main focus of the volume on English, namely the issue of conversion. The three chapters by Magda Ševčíková & Hana Hledíková, by Alexandra Soares Rodrigues and by Alina Villalva are devoted to the verb-forming type, with peculiar focus on the contrastive analysis of English compared to Czech and Portuguese, while the chapter by Gianina Iordachioaia deals with the noun-forming type. In this connection, also the chapter devoted to present and past participles by Gergana Popova can be considered because of the weird categorical status of participles. As is well known, the issue of conversion is extremely thorny insofar as it is not clear whether this stands in a clear connection with the rest of affixal word formation, or whether it constitutes a different procedure to be dealt with separately. In the volume this second position is defended, without any reference to the alternative assumption of a zero-suffix that has characterized the research in word formation in the previous decades (cf. Kastovsky 1996; Gaeta 2013 for discussion). The actual view strengthens the paradigmatic understanding of this non-concatenative procedure to the extent that it emphasizes the contextual nature of these derivatives which are held to result from the context-sensitive selection of possible alternatives, while the analysis in terms of a zero-suffix clearly supports a combinatory and syntagmatic approach. In this paradigmatic perspective, the phenomenon of back-formation is particularly well accommodated because it can be seen as a result of the paradigmatic strength filling all possible slots opened or inferable in a nested word family.

Perhaps one limit of the whole paradigmatic enterprise as is reflected in the volume is the scarce attention paid to the semantic analysis of the word families involved in the derivational networks. This is a substantial limit to the extent that inflectional paradigms are normally organized around clear-cut clusters of semantic features or values, which are clearly identifiable and normally active for most lexemes. While deviations from this optimal understanding of paradigms are found,

as shown by the phenomena of defectivity, i.e., the blocking of certain forms within a paradigm, and of overabundance, i.e., the occurrence of more than one form for certain feature clusters, they are generally held to be marginal to the extent that they do not harm the global system of paradigms and of paradigmatic classes. Unfortunately, in spite of certain authors' optimism (see Bonami & Strnadová 2019), the same cannot be claimed for word formation, where it is often difficult to identify clear-cut derivational categories and the occurrence of more than one form for a certain alleged slot is the norm rather than the exception (for some discussion on this issue, see Lehmann 2015 and Gaeta 2015 on action nominals in Romance languages). In the volume, the issue of derivational categories and meanings goes mostly unnoticed, while no serious attempt is made to bring fresh substantial evidence showing derivational meanings consistently associated with different derivational procedures or classes in a manner similar to what we normally observe with inflectional meanings associated with different inflectional procedures or classes. More research is urgently needed on this aspect, which should substantially extend the domain of investigation, especially to non-European languages, in the spirit of Bauer's (2002) pilot study on large derivational categories.

4. The paradigmatic dimension and the return of lexicality

In the first edition of their textbook, Hopper & Traugott (1993: 7) accurately distinguish between two different clines of grammaticalization (see also Gaeta 1998):

- i. a cline of grammaticality, concerning "syntactic" phenomena of grammaticalization, such as cliticization, affix-formation, etc. for which they provide the following schema:
 - "content item > grammatical word > clitic > inflectional affix"
- ii. a cline of lexicality, concerning more specifically the evolution of free lexical forms into word-formation affixes, often through a compounding stage, for which they only provide the example of *-ful* seen in Figure 1 above:
 - "a basket *full* (of eggs ...) > a cup*ful* (of water) > hope*ful*"

This reflects the idea that both inflectional and derivational affixes are likely to originate diachronically in earlier lexical material, via similar processes of meaning extension, generalization, phonological reduction, and the like. In the second edition of their textbook (2003), however, the reference to the cline of lexicality was dropped. Probably, the main reason for this was the lack of agreement about the relation between grammaticalization and lexicalization, which has been interpreted

in terms of a neat opposition between grammar and the lexicon. In fact, several authors, including Christian Lehmann, neatly oppose the two phenomena and exclude the rise of derivational affixes from the domain of grammaticalization (see Szczepaniak 2009: 25–28). In a way, this reminds us of and actually closely corresponds to the Split-Morphology Hypothesis mentioned above: While inflectional morphology belongs to grammar and can result from grammaticalization, derivational morphology does not and accordingly results from another process, namely lexicalization.

Apart from other considerations (for which see the accurate discussion provided by Hüning & Booij 2014), what is really unsatisfactory in this view is its complete neglection of the paradigmatic dimension lurking in derivational morphology as well as in inflectional morphology. Hüning and Booij attempt to provide a compromise solution centering on the property of constructional approaches of hosting under the same umbrella – the construction – different sorts of constructions. In this way, both grammaticalization and lexicalization produce inflectional and derivational constructions partially sharing their properties, and in particular the paradigmatic dimension. While one cannot but agree with this conclusion, it must be added that paradigms are not really popular in current constructional theorizing. In fact, it is not by chance that Diewald (2020: 290) has recently emphasized that "the notion of paradigm has been lost in most constructional approaches".

To my mind, Hopper & Traugott's (1993) original suggestion had one attractive property which I want to defend here. Assuming two parallel but disjoined clines emphasizes the similarities between the two phenomena without forcing unwarranted conclusions relating to their possible sequencing or convergence. This latter view is suggested for instance by Stevens (2005), who sees derivational morphology as converging with inflectional morphology:

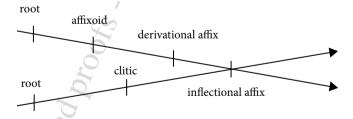


Figure 2. Grammaticalization of inflectional affixes (Stevens 2005: 81)

In this cline, derivational morphology appears as an intermediate step on the grammaticalization channel towards inflectional morphology. This is allegedly justified by cases where inflectional morphology can arguably be held to arise from

derivational procedures. One example is given by the English suffix -ing which used to serve as an abstract suffix to form action nouns similarly to its German or Dutch cognates -ung and -ing and was later employed to form participles and gerunds. As pointed out by Haspelmath (1989), verbal nouns generally provide a source for verbal non-finite forms, especially in their accusative or allative case form. However, a strong drawback of this view is the implication that any change from inflection to derivation has to be interpreted as a step backwards, namely as a degrammaticalization. Accordingly, the case of the Romanian so-called long infinitive suffix -re, which is nowadays a means to form action nouns from verbs while its origin clearly lies in the Latin infinitive, would be a step backwards towards a more lexical status. As a matter of fact, the Romanian suffix -re (1a) is subject to typical lexical restrictions like rule blocking insofar as its occurrence with certain verbs is blocked by other derivational procedures (1b) (cf. Gaeta 2015):

- a. a exprima 'to express' → exprimare 'expression' a învăţa 'to learn' → învăţare 'acquisition'
 - b. *a muri* 'to die' → **murire/moarte* 'death' *a ajuta* 'to help' → **ajutare/ajutor* 'help'

Moreover, it displays the typical syntax of noun phrases (2a) in contrast to the so-called short infinitive which retains the sentential complementation (2b):

- (2) a. *învățare-a limbilor străine de* acquisition-DEF language.DEF.PL.GEN strange.F.PL of *către englezi* toward English.M.PL 'the acquisition of the foreign languages by the English'
 - b. *El vorbește fără a comunica nici o idee* 3m.sg talk.3sg without to communicate NEG one idea 'He talks without conveying any idea'

In Stevens' (2005) representation given in Figure 2, the Romanian long infinitive clearly profiles an instance of degrammaticalization to the extent that the original Latin inflectional suffix *-re* climbs one step back towards the derivational station. On the other hand, this does not amount to a decrease of paradigmaticity because the action nouns form a tight-knit cluster within a derivational paradigm in which the relevant slot cannot be occupied twice.

The advantage of two distinct clines as originally suggested by Hopper and Traugott (1993) allows us to emphasize their similarities while at the same time their differences are not blurred:

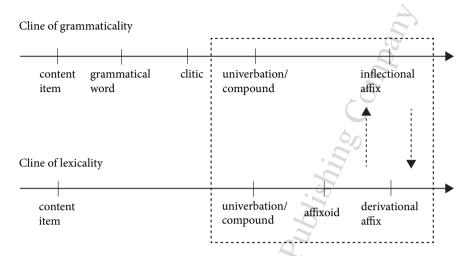


Figure 3. The parallel clines of grammaticalization

The similarities relate to the nature of the process whereby bounded complex forms result from independent lexical units. One important difference between the two clines regards the occurrence of grammatical words (typically auxiliaries, but also particles of different nature, e.g., adverbs, conjunctions, etc.) and clitics in the cline of grammaticality, which are not normally found in the cline of lexicality (see Traugott & Trousdale 2013: 192-193 for a detailed discussion of the similarities and differences between the two different clines). While they turn out to form peculiar morphological objects occurring in analytic constructions, auxiliaries and clitics cannot be held to constitute themselves word forms of other lexemes. In this sense, they cannot be lumped together with derivational affixes as bounded morphemes populating the morphological component, as shown by the dotted square in Figure 3 above which curtails the realm of morphology proper. This latter stage is normally reached through a process of univerbation or compounding.² It has sometimes been objected that the cline of lexicality exploits compounding as an important source or step towards the rise of bounded affixes, while this is allegedly not or much less common for the cline of grammaticality. For instance, Szczepaniak (2009: 27) stresses that only derivational affixes arise through compounding while

^{2.} Note that on the cline of lexicality in Figure 3, a stage for affixoids is assumed in the shade of Stevens (2005). As is well known, affixoids are a problematic category whose status is questioned by several authors (see Booij & Hüning 2014 for discussion). I don't stick particularly to the assumption of affixoids, but they are nevertheless retained in Figure 3 as a homage to the Italian linguist Bruno Migliorini, who firstly introduced this term in linguistics in his seminal paper published in 1935.

inflectional affixes "[...] haben ihren Ursprung in einem selbstständigen Wort, das Teil eines Syntagmas ist" ['have their origin in an autonomous word which is part of a phrase' (my translation)]. This might be true, but it is in my view to a large extent a problem of perspective. In fact, it cannot be denied that the stage of compounding – truly understood as univerbation – is a very important moment of many "fusive" changes and actually lies at the core of any "rapport associatif". In this regard, Hermann Paul (1920: 325) must be recalled, who starts his chapter on the "rise of word-formation and inflection" with the claim: "Die eigentlich normale Entstehungsweise alles Formellen in der Sprache bleibt daher immer [...] die Komposition" ["Thus the strictly normal method of the growth of everything formal in language is, and remains, [...] composition" (ET: 368)]. This is true in a clearly parallel way both for the rise of one prototypical example of grammaticalization such as the dental preterite in Germanic (3a) and for the rise of Germanic compounds (3b):

- (3) a. PGmc ⁺nasjan dēdum 'we did save' > Go nasidēdum 'we saved' / OHG neritum 'we saved' > MSG nährten 'we nourished'
 - OHG beren hūt 'bear's skin', tages lieht 'day's light' >
 OHG berenhūt 'bearskin', tageslieht 'daylight' >
 MSG Bärenhaut 'bearskin', Tageslicht 'daylight'

Due to univerbation (or 'syntactic juxtaposition', as labeled by Hermann Paul, see Lehmann 2020 for a recent discussion), the original verb DO develops from a Proto-Germanic (PGmc) phrasal unit into the preterit marker found in Modern Standard German (MSG), as well as in the rest of the Germanic family, through a sequence of steps of increasing fusion as early attested in Gothic (Go) and in Old High German (OHG). On the same track, MSG compounds clearly go back to phrasal units in which a genitive precedes its nominal head reflecting the constituent order of early OHG, which is reversed in the actual MSG, and leaving behind the linking elements -en- and -es-, which cannot be held to be inflectional suffixes synchronically. Already Paul (1920: 349) emphasizes this old truth: "Auf die gleiche Weise wie die Ableitungssuffixe entstehen Flexionssuffixe. Zwischen beiden gibt es ja überhaupt keine scharfe Grenze" ["Inflexional suffixes take their rise in the same way as derivative suffixes. In fact, no sharp line of demarcation between the two exists at all" (ET: 400)]. Furthermore, especially for the examples giving rise to inflectional affixes, Paul (1920: 349) comments: "es scheint mir überflüssig aus der Masse des allgemein bekannten und jedem zur Hand liegenden Materials noch weitere Beispiele zusammenzutragen" ["it seems superfluous, when the mass of materials is so well known and so easy of access, to collect further examples"

(ET: 400)]. In keeping with Paul's comments, the problems of delimitation arising for the derivation/inflection continuum worsen the picture for those who consider grammaticalization as neatly distinct from lexicalization. This is not only due to the fact that inflectional affixes also are lexical objects and often result from common processes of lexicalization involving the "loss of internal constituency" according to Brinton & Traugott's (2005: 96) definition. Just to mention one common example, the future markers *cant-erò/-erai/-erà*, etc. 'sing-FuT1/2/3' occurring in Italian come from an earlier phrasal unit CANTĀRE HABEŌ/S/T 'sing.INF have.PRS.1/2/3sG'. The reduction of the ending provided by the verb HAVE is accompanied by a similar reduction of the infinite to the effect that a new 'fusive' marker arises. Clearly, such a fusive change has an immediate effect at the paradigmatic level, and in fact it is also found in the conditional cant-erei/-esti/-ebbe 'sing-COND1/2/3', which shares a similar origin from the phrasal unit CANTÉRE HABUĪ/STĪ/T 'sing.INF have.PST.1/2/3sG'. Moreover, similar endings characterize the verbs of the other inflectional class, like tem-erò/-erai-erà 'fear-fut1/2/3' and tem-erei/-esti/-erebbe 'fear-cond1/2/3' from temere 'fear.INF'. As already pointed out by Hermann Paul, similar fusive changes normally accompany the rise of derivational affixes stressing the common dimension of paradigmaticity. To mention just one much discussed example, the adverbial suffix -mente found in Italian and in many Romance languages as a result of a phrasal unit APERTĆ MENTE 'open.F.SG.ABL mind[F].SG.ABL' > apertamente 'openly' is accompanied by several allomorphies involving the original inflectional ending of the adjective. One peculiar development due to a micro-paradigmatic network is found in adverbs like cruentemente 'ferociously', violentemente 'violently' and the like, coming from the adjectives *cruento* and *violento*. Instead of the expected shape *cruentamente and *violentamente, their form is due to the paradigmatic association with the copious series of adjectives ending with -ente like ardente 'ardent', sapiente 'sapient', etc., whose respective adverbs are ardentemente, sapientemente, etc. The lesson taught by these cases is that the original inflectional endings found in the verbs and in the adjectives are remodeled in a similar way as a general consequence of univerbation, where we also observe clear paradigmatic effects resulting from associative relations (see Gaeta 2016 for a discussion of these and other phenomena under the heading of exaptive changes).

5. Conclusion

To wrap up, the paradigmatic dimension lying behind Saussure's "rapports associatifs" is constitutive of morphology, both in its inflectional and in its derivational side. Recalling this fundamental truth allows us to (re-)consider a number of different phenomena, which crucially call into play both the synchronic and the diachronic dimension. From the synchronic point of view, paradigmatic networks help us to describe associative relations established by the speakers on the basis of salient patterns from which generalizations are drawn, which have an impact on the diachronic development of the system. Understanding this makes us aware of the unity of morphology as a language component, while at the same time it requires us to overcome an atomistic view of word formation, in which single derivational rules are assumed, irrespective of the complex paradigmatic relations in which the patterns are immersed. The chapters collected in this volume try to bring solid empirical evidence pointing into this direction.

References

Anderson, Stephen R. 1992. *A-Morphous Morphology*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511586262

Bauer, Laurie. 2002. What you can do with derivational morphology. In *Morphology 2000: Selected Papers from the 9th Morphology Meeting, Vienna, 24–28 February 2000* [Current Issues in Linguistic Theory 218], Sabrina Bendjaballah, Wolfgang U. Dressler, Oskar E. Pfeiffer & Maria D. Voeikova (eds), 37–48. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.218.04bau

Bauer, Laurie, Lieber, Rochelle & Plag, Ingo. 2013. *The Oxford Reference Guide to English Morphology*. Oxford: OUP. https://doi.org/10.1093/acprof:0so/9780198747062.001.0001

Becker, Thomas. 1990. Analogie und morphologische Theorie. München: Fink.

Becker, Thomas. 1993. Back-formation, cross-formation, and 'bracketing paradoxes' in paradigmatic morphology. In *Yearbook of Morphology 1993*, Geert Booij & Jaap van Marle (eds), 1–25. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-017-3712-8_1

Blevins, James P. 2016. *Word and Paradigm Morphology*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780199593545.001.0001

Bonami, Olivier & Strnadová, Jana. 2019. Paradigm structure and predictability in derivational morphology. *Morphology* 29: 167–197. https://doi.org/10.1007/s11525-018-9322-6

Booij, Geert. 1993. Against split morphology. In *Yearbook of Morphology 1993*, Geert Booij & Jaap van Marle (eds), 27–49. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-017-3712-8_2

Booij, Geert & Hüning, Matthias. 2014. Affixoids and constructional idioms. In *Extending the Scope of Construction Grammar*, Ronny Boogaart, Timothy Colleman & Gijsbert Rutten (eds), 77–106. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9783110366273.77

Brinton, Laurel J. & Traugott, Elizabeth C. 2005. *Lexicalization and Language Change*. Cambridge: CUP. https://doi.org/10.1017/CBO9780511615962

- Diewald, Gabriele. 2020. Paradigms lost paradigms regained. Paradigms as hyper-constructions. In *Nodes and Networks in Diachronic Construction Grammar* [Constructional Approaches to Language 27], Lotte Sommerer & Elena Smirnova (eds), 277–315. Amsterdam: John Benjamins. https://doi.org/10.1075/cal.27.08die
- Gaeta, Livio. 1998. Some remarks on analogy, reanalysis and grammaticalization. In *The Limits of Grammaticalization* [Typological Studies in Language 37], Anna Giacalone Ramat & Paul J. Hopper (eds), 89–105. Amsterdam: John Benjamins. https://doi.org/10.1075/tsl.37.04gae
- Gaeta, Livio. 2004. Exploring grammaticalization from below. In *What Makes Grammaticalization? A Look from its Fringes and its Components*, Walter Bisang, Nikolaus P. Himmelmann & Björn Wiemer (eds), 45–75. Berlin: Mouton de Gruyter.
- Gaeta, Livio. 2010. Analogical change. In *Continuum Companion to Historical Linguistics*, Silvia Luraghi & Vit Bubenik (eds), 147–160. London: Continuum.
- Gaeta, Livio. 2013. Affix ordering and conversion: Looking for the place of zero. *Lingue e Linguaggio* 12(2): 145–170.
- Gaeta, Livio. 2015. Action nouns in Romance. In *Word-Formation. An International Handbook of the Languages of Europe*, Vol. 2, Peter O. Müller, Ingeborg Ohnheiser, Susan Olsen & Franz Rainer (eds), 1209–1229. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9783110246278-024
- Gaeta, Livio. 2016. Co-opting exaptation in a theory of language change. In *Exaptation in Language Change* [Current Issues in Linguistic Theory 336], Muriel Norde & Freek Van de Velde (eds), 57–92. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.336.03gae
- Gaeta, Livio & Angster, Marco. 2019. Stripping paradigmatic relations out of the syntax. *Morphology* 29(2): 249–270. https://doi.org/10.1007/511525-018-9326-2
- Geeraerts, Dirk. 2010. *Theories of Lexical Semantics*. Oxford: OUP. https://doi.org/10.1093/acprof:oso/9780198700302.001.0001
- Górska, Elżbieta. 1994. *Moonless nights* and *smoke-free cities*, or what can be without what? A cognitive study of privative adjectives in English. *Folia Linguistica* 28(3–4): 413–435. https://doi.org/10.1515/flin.1994.28.3-4.413
- Greenberg, Joseph H. 1991. The last stages of grammatical elements: Contractive and expansive desemanticization. In *Approaches to Grammaticalization*, Vol. 1 [Typological Studies in Language 19(1)], Elizabeth C. Traugott & Bernd Heine (eds), 301–14. Amsterdam: John Benjamins. https://doi.org/10.1075/tsl.19.1.14gre
- Haspelmath, Martin. 1989. From purposive to infinitive. A universal path of grammaticization. *Folia Linguistica Historica* 10(1–2): 287–310. https://doi.org/10.1515/flih.1989.10.1-2.287
- Hopper, Paul J. 1994. Phonogenesis. In *Perspectives on Grammaticalization* [Current Issues in Linguistic Theory 109], William Pagliuca (ed.), 29–45. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.109.09hop
- Hopper, Paul J. 1998. The paradigm at the end of the universe. In *The Limits of Grammaticalization* [Typological Studies in Language 37], Anna Giacalone Ramat & Paul J. Hopper (eds), 147–158. Amsterdam: John Benjamins. https://doi.org/10.1075/tsl.37.07hop
- Hopper, Paul J. & Traugott, Elizabeth C. 1993. Grammaticalization. Cambridge: CUP.
- Hopper, Paul J. & Traugott, Elizabeth C. 2003. *Grammaticalization*, 2nd edn. Cambridge: CUP. https://doi.org/10.1017/CBO9781139165525
- Hüning, Matthias & Booij, Geert. 2014. From compounding to derivation. The emergence of derivational affixes through "constructionalization". *Folia Linguistica* 48(2): 579–604. https://doi.org/10.1515/flin.2014.019

- Kastovsky, Dieter. 1996. Verbal derivation in English: A historical survey or *Much Ado About Nothing*. In *English Historical Linguistics 1994* [Current Issues in Linguistic Theory 135], Derek Britton (ed.), 93–117. Amsterdam: John Benjamins. https://doi.org/10.1075/cilt.135.09kas
- Lehmann, Volkmar. 2015. Categories of word-formation. In *Word Formation. An International Handbook of the Languages of Europe*, Vol. 2, Peter O. Müller, Ingeborg Ohnheiser, Susan Olsen & Franz Rainer (eds), 1020–1034. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9783110246278-014
- Lehmann, Christian. 2020. Univerbation. *Folia Linguistica Historica* 41(1): 205–252. https://doi.org/10.1515/flih-2020-0007
- Migliorini, Bruno. 1935. I prefissoidi (il tipo *aeromobile, radiodiffusione*). *Archivio Glottologico Italiano* 27: 13–39 (repr. in Idem (1963), *Saggi sulla lingua del Novecento*. Firenze: Sansoni, 9–60).
- Paul, Hermann. [1880] 1995. *Prinzipien der Sprachgeschichte*. Tübingen: Max Niemeyer (English Translation by Herbert A. Strong. London: Longmans, Green and Co., 1891).
- de Saussure, Ferdinand. [1916]1995. *Cours de Linguistique Générale*, edited by Tullio De Mauro. Paris: Payot (English Translation by Wade Baskin. New York NY: Philosophical Library, 1959).
- Seiler, Hansjakob. 1975. Die Prinzipien der deskriptiven und der etikettierenden Benennung. In *Linguistic Workshop III. Arbeiten des Kölner Universalienprojekts*, Hansjakob Seiler (ed), 2–57. München: Wilhelm Fink.
- Štekauer, Pavol. 2005. Onomasiological approach to word-formation. In *Handbook of Word-Formation*, Pavol Štekauer & Rochelle Lieber (eds), 207–232. Dordrecht: Springer. https://doi.org/10.1007/1-4020-3596-9_9
- Štekauer, Pavol. 2014. Derivational paradigms. In *The Oxford Handbook of Derivational Morphology*, Rochelle Lieber & Pavol Štekauer (eds), 354–369. Oxford: OUP. https://doi.org/10.1093/oxfordhb/9780199641642.013.0020
- Stevens, Christopher M. 2005. Revisiting the affixoid debate: On the grammaticalization of the word. In *Grammatikalisierung im Deutschen*, Torsten Leuschner, Tanja Mortelmans & Sarah De Groodt (eds), 71–83. Berlin: De Gruyter. https://doi.org/10.1515/9783110925364.71
- Stump, Gregory. 2020. Paradigm Function Morphology: Assumptions and Innovations. In Oxford Research Encyclopedia of Linguistics. OUP. https://doi.org/10.1093/acrefore/9780199384655.013.578
- Szczepaniak, Renata. 2009. *Grammatikalisierung im Deutschen: Eine Einführung*. Tübingen: Gunter Narr.
- Traugott, Elizabeth C. & Trousdale, Graeme. 2013. Constructionalization and Constructional Changes. Oxford: OUP. https://doi.org/10.1093/acprof:050/9780199679898.001.0001
- Van Goethem, Kristel. 2008. *Oud-leerling* versus *ancien élève*: A comparative study of adjectives grammaticalizing into prefixes in Dutch and French. *Morphology* 18: 27–49. https://doi.org/10.1007/s11525-008-9121-6
- van Marle, Jaap. 1985. On the Paradigmatic Dimension of Morphological Creativity. Dordrecht: Foris.

Author queries

Please provide a complete reference for the citation '(Hermann Paul 1920)' in this article. Please provide a citation for the reference id "CIT0032 (Paul, Hermann. [1880] 1995)" since citation is missing in the article.

Uncorrected proofs - Solm Benjamins Publishing Company