Chapter 2

The morphological theory of René de Saussure’s works

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The morphological theory presented in the texts reproduced as Parts I and II of the present work constitutes a sort of historic landmark. Although somewhat familiar to the community of students and advocates of the constructed language Esperanto, as discussed in §1, it has remained essentially unknown to scholars in the broader community of linguists. It represents a particularly explicit formulation of the sort of view that would later be associated with the theory of the Structuralist morpheme, and as such contrasts strikingly with what we can conclude about the view of internally complex words in the work of Ferdinand de Saussure.

1 René de Saussure’s conception of morphology

The retrospective importance of René de Saussure’s works on the nature of word formation lies in the fact that they articulate, at the very beginning of what we think of as the “modern” period in linguistics, a clear version of one of the two poles that would come to dominate discussion of this area within the field. From the outset, after distinguishing simple words (e.g. French homme ‘man’, grand ‘large, tall’, etc.) from compounds (e.g. French porte-plume ‘penholder’, German Dampfschiff ‘steamship’, etc.) and derived words (e.g. French grandeur ‘size, height’, humanité ‘humanity’), he argues that

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1The material in this section has been presented in part to audiences at Mediterranean Morphology Meetings 10 (Haifa, 2015) and 11 (Cyprus, 2017). Helpful comments from the audiences on those occasions is gratefully acknowledged.

2For a review of this history, largely from an American point of view, see Anderson (2017; 2018). Some of the discussion below is drawn from these sources.

[However,] “[a]u point de vue logique, il n’y a pas de différence essentielle entre un radical et un affixe; […] On peut donc considérer les affixes comme des mots simples, et les mots dérivés au moyen d’affixes, comme de véritables mots composés. II n’y a plus alors que deux sortes de mots : les mots simples (radicaux, préfixes, suffixes), et les mots composés par combinaison de mots simples.” (de Saussure 1911: 4–5)³

On this view, derived words are just a class of compounds. As a consequence, affixes are to be viewed as simple sound-meaning pairs, just like simple words. Derived words are no different from compounds in that both are composed of two or more atoms in structured combination with one another. The type example Saussure gives, violoniste ‘violinist’, is thus analyzed as a compound composed of two equally basic units, both nouns: violon ‘violin’ and -iste ‘person whose profession or habitual occupation is characterized by the root to which it is attached’ with the two parts being parallel simple associations between sound and meaning.

2 Differences between René’s view and that of his brother

Readers familiar with the work of René’s brother Ferdinand de Saussure may be struck by the difference between this position on the structure of complex words and the one that pervades de Saussure 1916 [1974]. What matters here is the fact that René de Saussure (1911) enunciates categorically the view that all morphological elements, roots and affixes alike, constitute parallel atomic sound-meaning pairings. In this regard, such elements are uniformly of the type Ferdinand de Saussure (1916 [1974]) would analyze as minimal signs: arbitrary, irreducible associations of expression (sound, gesture, orthography) with content. As pointed out by Matthews (2001), the observation that such associations are a core characteristic of natural language was by no means completely original with Saussure, but his importance lies in having made them the center of attention in the study of language.

³“There are two kinds of primitive element: root words, such as homme ‘man’, grand ‘tall’, etc., and affixes, such as -iste (in violoniste ‘violinist’), pré (in prévenir ‘precede’), etc. From the logical point of view, there is no essential difference between a root and an affix: […] We can therefore consider affixes as simple words, and words derived by means of an affix as real compound words. There are then only two sorts of word: simple words (roots, prefixes, suffixes) and compound words formed by combining simple words.”
Where the brothers part company is in the more general analysis of words. For both, simple words (e.g. *arbre* ‘tree’) are minimal signs, but where René saw derived words like *violoniste* ‘violinist’ as simply combinations of such units, Ferdinand presents a rather different view. For him, words that are not simple are also signs — of a type he refers to as relatively or partially motivated. That is, the sign relation between form and meaning obtains here, too, but in such cases it is not completely arbitrary: part of the relation is motivated by the relation between this sign and others:

“Une unité telle que *désireux* se compose en deux sous-unités (*désir-eux*), mais ce ne sont pas deux parties indépendantes ajoutées simplement l’une à l’autre (*désir+eux*). C’est un produit, une combinaison de deux éléments solides, qui n’ont de valeur que par leur action réciproque dans une unité supérieure (*désir×eux*). Le suffixe, pris isolément, est inexistant; ce qui lui confère sa place dans la langue, c’est une série de termes usuels tels que *chaleur-eux, chanc-eux*; etc. À son tour, le radical n’est pas autonome; il n’existe que par combinaison avec un suffixe; dans *roul-is*, l’élément *roul-
n’est rien sans le suffixe qui le suit. Le tout vaut par ses parties, les parties valent aussi en vertu de leur place dans le tout, et voilà pourquoi le rapport syntagmatique de la partie au tout est aussi important que celui des parties entre elles” (de Saussure (1916 [1974]): 176–177; cf. also de Saussure (1993): 85–90).

The point to focus on here is that for Ferdinand, as opposed to René, a suffix in a derived word does not have value in and of itself as a minimal sign, but rather it obtains its significance from the fact that words of similar form are related to one another. Elsewhere in the *Cours* he gives the example of *poirier* ‘pear tree’. This is obviously related to *poire* ‘pear’, but the meaning of *poirier* is not just a compound of two meanings ‘pear’ and ‘tree bearing fruit specified by the root to which it is attached’ (in the way René analyzes the meaning of *violoniste*). Rather, it arises because the relation between *poire* and *poirier* is similar to that of other pairs in the language: *cerise* ‘cherry’ / *cerisier* ‘cherry tree’, *pomme* ‘apple’ / *pommier* ‘apple tree’, etc. Complex words thus get their sense from their place in a constellation of relations among words.

The picture in Figure 2 is quite different from the view presented by René, who explicitly rejects such an account:


We can categorize the difference between the views of the two Saussure brothers, at least roughly, in terms of two useful dimensions of theories as distinguished by Stump (2001: 1). On the first of these, theories can be lexical, and treat all form-content associations as listed; or they can be inferential, in treating form-content relations in complex words as more holistic.

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4“*A unit such as desireux is composed of two sub-units (desire+ous), but these are not two independent parts simply added to one another. It is a product, a combination of two linked elements which only have their value by their reciprocal relation within a larger unit. The suffix, taken in isolation, does not exist: what gives it its place in the language is a series of words like chaleureux ‘warm-ous, warm’, chanceux ‘fortune-ous, lucky’, etc. In its turn, the root is not autonomous: it only exists through its combination with a suffix. In roulis ‘rotation’, the element roul- ‘roll’ is nothing without the suffix that follows it. The whole has value through its parts, the parts also have value through their place in the whole, and that is why the syntagmatic relation of the part to the whole is as important as that of the parts to one another.”

5“*There is thus no need to establish rules of derivation linking to each other the senses of words belonging to the same family (such as homme ‘man’, humain ‘human’, humanité ‘humanity’; couronne ‘crown (n.)’, couronner ‘(to) crown’, couronnement ‘coronation’), because that would create artificial links between atoms that must remain independent and interchangeable like the different parts of a machine.”
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Lexical theories are those where associations between (morphosyntactic) content and (phonological) form are listed in a lexicon. Each such association is discrete and local with respect to the rest of the lexicon, and constitutes a morpheme of the classical sort.

Inferential theories treat the associations between a word’s morphosyntactic properties and its morphology as expressed by rules or formulas.

Independent of this distinction, theories can be incremental, with elements of content associated in a one-to-one fashion with elements of form, or realizational, in which the relation is less direct, such that a single element of content can be associated with one element of form, or several, or none at all, and vice versa.

Incremental theories are the ones on which a word bears a given content property exclusively as a concomitant of a specific formal realization.

Realizational theories are the ones on which the presence of a given element of content licenses a specific realization, but does not depend on it.
The two dimensions are logically independent, and Stump identifies examples of all four possible combinations of values. By and large, though, most theories are either lexical and incremental or inferential and realizational. The first class sees the locus of form-content relations as a set of something like Saussurean minimal signs, identifiable generally with the classical understanding of the morpheme. Inferential/realizational theories, in contrast, see the form-content relation as rather more diffuse, and in practice continue the distinct classical tradition of “word and paradigm” analysis.

In those terms, we can categorize the Saussure brothers’ views of the nature of a complex word like *poirier*: René sees this as the combination of two independent lexical elements, where each part of the meaning is associated uniquely with a specific, independently listed element of form. His theory is thus a lexical/incremental view, and the components of a complex word are essentially what would later be called morphemes.

Ferdinand, in contrast, sees the complex meaning as arising from a relation that has a status in the language. It is this rule relating *poire* and *poirier* (and also *cerise/cerisier*, etc.), not the suffix -*ier* itself, that yields the meaning ‘pear tree’. His is an inferential theory, and while this example does not serve to make the point, from other sources (such as discussions of Gothic, Greek and Latin morphology in his courses on these languages) we can say that it is realizational rather than incremental.

The contrast between these somewhat different views does not seem to have attracted much attention at the time, although it represents what has historically been the basic opposition in morphological theory. René’s story is an early version of what we can call a morphemic theory, one that takes internal components of complex words as the basic locus of meaning. These are combined by an extension of the syntax, and the resulting structures are compositional functions. Ferdinand’s story, in contrast, is a version of what would later be called a word and paradigm theory, where whole words are the locus of meaning and an understanding of their content, as well as their form, comes from an analysis of their place in a network of relations to other words.

In the difference between the two, we can see the origins of a basic contrast between theories of morphology. In practice, however, this contrast did not become a matter of theoretical discussion immediately. René saw the decomposition of complex words into combinations of simplexes — their analysis as structured concatenations of minimal signs — as transparently obvious, a simple matter of logic, and his 1911 book and its 1919 continuation develop this picture in some detail, discussing the logical/grammatical types of simple words that we find, and
the varieties of combination of these atomic units that exist (in French, at least, and to a lesser extent in German and in English).

Although the theoretical difference between these two views was not a focus of attention in the work of either of the de Saussure brothers, that does not mean that it went unnoticed. In the conclusion to the portion of the later work included here (de Saussure 1919: 27–28), René observes that his theory attributes the same kind of structure to all languages, a type that is nicely suitable for artificial languages, but that this is not the only way to view the structure of derived words. Citing the views of his late brother, which had become available in 1916 with the publication by his students of the *Cours de linguistique générale*, he notes that the structure of e.g. the made-up word *indécorable* could be analyzed in two ways. On the one hand, we could isolate component elements (*in*, *décor*, *able*) and combine these in quasi-syntactic fashion along the lines of his theory. Alternatively, we could regard it as a unit whose content is revealed by an analogical proportion:

\[ \text{pardonner: impardonnable} = \text{décorer: } x \]
\[ x = \text{indécorable}. \]

Discussing the contrast between these views, Ferdinand poses the question of which of them “correspond à la réalité”: that is, in our terms, whether we ought to prefer a morphemic theory, which he associates with “Hindu grammar” or the work of classical Sanskrit grammarians, or an inferential-realizational one, which he identifies with “European” grammatical presentation. René’s answer to this is clear and categorical: although nominally restricting himself to artificial languages, his opinion is that “the method of Hindu grammar is the only satisfying one.”

In support of this opinion, he again invokes Ferdinand’s opinion in the *Cours* that “abstract entities always rest, in the final analysis, on concrete entities.” It is unclear, however, why René thought that this should imply that the structure of complex words is to be regarded as a structured concatenation of elementary atoms, rather than as systematic associations among related words. In context, Ferdinand invokes this principle in connection with abstractions such as “genitive case” in e.g. Latin, where a number of different inflectional forms all support the same function. Positing an entity “genitive case” is here based on the fact that a number of diverse concrete forms manifest it in their relation to other forms

\(^6\) René cites pages 235 and 236 of the *Cours*, although the passage in question appears on pages 228–230 in the edition we use here.

\(^7\) Cited by René as found on pages 196, 197 and 198; in the edition used here, the relevant passages are on pages 190, 191 and 192. My translation: sra.
within the paradigm of a Latin noun, which would be illicit if there were no such concrete support for the category, but this fact does not require us to analyze case marking in Latin as exclusively a syntagmatic rather than a paradigmatic matter (in Ferdinand’s terms).

Similarly, in the passage in question, he notes that English *the man I have seen* has no overt relative pronoun, but denies that in order to analyze this as a relative clause, there must be an abstract unpronounced element to represent the missing object: the material support here for the notion of relative clause structure is said to be the word order of the concrete words involved. The point at stake in this part of the *Cours* (chapter 8 of part II) is not directly relevant to a choice between the “Hindu” and “European” conceptions of word structure.

Which is not to say that in opposing those two conceptions, Ferdinand felt as strongly as René that the choice between them in developing a theory of language was clear and unambiguous. Most discussion of complex words in the *Cours* is couched in terms of analogical relations between whole words, and not as a sort of syntax of morpheme-like simple signs. In various places, however, he also recognizes that the linguistic conscience of speakers commonly includes the identification of component roots, suffixes, desinences, etc., as well as the order in which these appear within a word.

Does this fact support the claim that word formation is fundamentally a matter of arranging such pieces? It is worth noting that in the section of the *Cours* where this issue is raised (de Saussure 1916 [1974]: 228–230) Ferdinand notes the existence of facts that cast doubt on such a conclusion. In a passage skipped over in René’s quote, he notes that in German

“[d]ans un cas comme *Krantz : Kräntze* fait sur *Gast : Gäste*, la décomposition semble moins probable que la quatrième proportionnal, puisque le radical du modèle est tantôt *Gast-* tantôt *Gäst-*.”

Here part of the indication of plurality is through variation in the shape of the stem, and not only by the presence of an atom *Plural*, although he qualifies the significance of that observation by noting, in effect, the existence of contextually determined allomorphy.

Ferdinand’s point here is that decomposition would only make sense if it resulted in invariants; where there is non-segmentable variation in shape associated with the formation of a morphologically complex form, the analysis based

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8“in a case like *Krantz : Kräntze* ’wreath’/’wreaths’ built on *Gast : Gäste* ’guest’ : ’guests’, decomposition seems less likely than proportional analogy, since the root of the model is sometimes *Gast-* and sometimes *Gäst-*.”
on a rule of proportional analogy gives a more satisfactory account. This is, per-
haps, the first instance in the literature of the use of non-concatenative mor-
phology as the basis of an argument against analysis into morphemes. We can 
note that the argument might have been strengthened, especially given his reluc-
tance (just noted) to posit significant zero elements, if he had cited pairs such as 
Tochter : Töchter ‘daughter : daughters’ or Mantel : Mäntel ‘overcoat : overcoats’ 
on the analogy of Mutter : Mütter ‘mother : mothers’ or Vater : Väter ‘father : 
fathers’ respectively, where the stem alternation is the only indication of the 
plural.

On the other hand, he did not regard the matter as entirely settled. The argu-
ment that he sees as most favorable to the analysis of complex words in terms of 
their components (de Saussure 1916 [1974]: 229–230) is somewhat curious, and 
based on a phenomenon in the history of Latin known as Lachmann’s Law. As 
described by Jasanoff (2004: 405), this is the rule “according to which verbal roots 
ending in an etymological voiced stop (*-b-, *-d-, etc.), but not a voiced aspirate 
(*-bh-, *-dh-, etc.), lengthen their root vowel in the past participle and its deriva-
tives (e.g. ađō ‘drive’, ptcp. āctus (+āctīō, etc.), cadō ‘fall’, ptcp. cāsus< *cāssus)” 
while similar verbs whose roots end in voiceless stops show no such lengthening 
(e.g. faciō ’make’, ptcp. fāctus, speciō ’watch’, ptcp. spēctus).

The participial forms in which the lengthening occurs were surely inherited 
from Proto-Indo European with the stem-final voiced stops devoiced (via regres-
sive assimilation from the t of the participle ending), and thus should not con-
trast with root-final voiceless stops where these are unchanged from the stem 
form. The operation of Lachmann’s Law thus requires a sensitivity on speakers’ 
parts to a difference between roots ending in voiced stops as opposed to voiceless 
ones, even in inflected or derived forms where that difference was not apparent 
in the word’s phonetic realization. And that, in turn, would seem to imply an 
awareness of the identity of roots independent of the specific complex words in 
which they appear. In de Saussure’s (1916 [1974]: 230) words, “[i]l n’a pu y arriver 
qu’en prenant fortement conscience des unités radicales aģ- tēg-” 
in tēctus].

A full discussion of Lachmann’s Law would take us well beyond our concerns 
here; for a recent summary of the facts and analytic controversies, see Roberts 
(2009). To assess de Saussure’s argument, however, it is not necessary to go into 
such detail. His position is that “it is necessary to suppose that āctus goes back 
to *āgtos and to attribute the lengthening of the vowel to the voiced consonant 
that follows” (de Saussure 1916 [1974]: 230 [my translation: sra]). Now we know 
from comparative evidence that the stem final consonants in these clusters were

9 “[i]t is not possible to arrive at this without being clearly aware of the root units aģ- tēg-”
already assimilated to the following $t$ in early Latin; and we also know that they were inherited as voiceless by the Romance daughter languages. In most generative phonological analyses, beginning with that of Kiparsky (1965), the voicing distinction is seen as preserved in the underlying form of the root (e.g. /ag-/), with assimilation in the participle stem but only after the required lengthening has taken place. Such an analysis was not, of course, available to de Saussure, but another possibility was, and in fact is evident in his positing of *âgto$\$ as the form to which lengthening applies and his subsequent discussion.

In fact, in an earlier paper, de Saussure (1889) argued that the root-final voiced consonants in these words were in fact restored in early Latin by analogy:

$$\text{fāciō : fāctus} = \text{āgō : x}$$

$$x = \text{āgto$$s$$}$$

These forms with the restored (though admittedly problematic in phonetic terms) voiced obstruents then underwent lengthening by Lachmann’s Law, after which voicing assimilation again operated to produce voiceless clusters.

Ferdinand’s claim that the root-final voiced obstruents were restored in early Latin just long enough for Lachmann’s Law to operate has generally been rejected by subsequent scholarship, but it is far from clear that, even if we were to accept it, his account would imply that the relevant participial forms would need to be analyzed as combinations of a root and an affix. After all, the crucial step is the analogy just offered that led to the (temporary) restoration of root-final $g$ in *âgto$\$, but this analogy is a matter of the relation between full word forms. After the incorporation of such forms with restored voiced stops into the language, purely phonetic change could then effect the lengthening by Lachmann’s Law, followed by another purely phonetic change of regressive voice assimilation. At no point in this scenario is it necessary to recognize the root /ag-/ as a structural unit, despite de Saussure’s claim to the contrary.

It seems, then, that there is no real argument to be found in Ferdinand’s discussion of the matter in the Cours that would support René’s opinion that “the method of Hindu grammar is the only satisfying one.” Indeed, while Ferdinand left open the possibility that languages might differ from one another as to which of the two analytic frameworks was most appropriate, his own practice generally relied on analogical (rather than compositional) operations as providing the basis for analyzing complex words. Note that it is not necessary to deny that speakers can identify stems, affixes, and desinences as these are found in complex words\textsuperscript{10} in order to suggest that complex words are formed on the basis of rela-

\textsuperscript{10}Note that in cases where part of a word’s content is signalled through “non-concatenative” means, the analysis of content in terms of combinations of atoms will not be exhaustive. See Anderson (1992) and much other literature for discussion.
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Tensions between whole words and not fundamentally by combining these elements syntagmatically. Stems are plausibly present in the lexicon on such a view, and affixal material, along with a variety of non-affixal ways of signalling morphological content, is represented in the structural changes of rules of word formation. These aspects of a grammar suffice to support the observed meta-linguistic awareness on speakers’ parts of components present in complex words without requiring that the analysis of such words be grounded in the quasi-syntactic combination of “morphemes” or the atoms of René’s theory.

The tension between the two views of complex words that we have been discussing, and the clear contrasting of these views in the work of René and Ferdinand de Saussure, provides important motivation for studying this neglected predecessor of the theories that would become prominent in the structuralist morphology of the mid-20th century. Significantly, de Saussure (1916 [1974]) already saw the tension between what we can call rule-based and morpheme-based accounts of the structure of complex words as a significant theoretical issue, to be resolved by empirical argument. If we are tempted to see this difference as a matter of recent morphological theory, or perhaps one that originates in Hockett’s (1954) “Two models” paper, we should see that in fact it has been with us since the very earliest days of what we think of as scientific linguistics.

3 Some specific points in René’s theory

If the only reason to read de Saussure (1911; 1919) were that he largely anticipates the later position of structuralist morphologists, these works might be written off as merely historical curiosities. In fact, however, René de Saussure’s work on morphology develops a rather fuller and more explicit theory of word structure than just a commitment to a morpheme-like view, and a number of more specific points that arise in this theory also have importance for this area today.

3.1 Binary branching

One aspect of this theory is a limitation on the internal complexity of words to binary branching structure: “Lorsqu’un mot composé contient plus de deux éléments, son analyse peut toujours être ramenée à celle de plusieurs mots ne contenant chacun que deux éléments.” (1919: 13)

Such a principle is presented as a substantive component of the theory of morphology by a number of writers.

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11“When a compound word contains more than two elements, its analysis can always be reduced to that of several words each containing only two elements.” In the remainder of this section, references to de Saussure (1911) and de Saussure (1919) will be given simply as “1911” or “1919” with page reference.
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(Aronoff 1976; Booij 1977; Lieber 1980; Scalise 1984), who offer arguments in favor of a binary-branching analysis of words that might be presumed to have ternary or other structure.

René shows that the way in which a multi-element word is analyzed (with flat structure or with one or another of alternative possible binary branching structures) makes a difference: thus, he argues that international should be analyzed as [[inter nation] al] ‘[that which is [between nations]]’ and not as [inter [nation al]]. The reason for treating the word in this way is to provide an appropriate basis for the meaning of the complex form, since he sees semantic structure as directly represented in the morphological analysis.

René’s semantically based analysis might be seen as at variance with the structure apparently motivated by form alone. In the word international in English,\(^\text{12}\) the suffix -al is apparently more closely related to the stem nation than is the prefix inter-: cyclic analyses and their variants treat -al as a “level I” or stem-level affix, while inter- is a “level II” (or III) or word-level affix, which would seem to require the structure [inter [nation al]], contrary to René’s account. For a somewhat more obvious example, consider the reading of English criminal lawyer as ‘practitioner of criminal law’, where the semantics seems to motivate [[criminal law] (y)er], while the form would seem to require [criminal [law (y)er]].

“Bracketing paradoxes” of this sort received a great deal of attention in the morphological and phonological literature of the 1980s (e.g. Williams 1981; Pesetsky 1985; Spencer 1988) and later. It is clear, however, that this issue could never arise for René, since he is quite clear that semantic considerations alone are relevant to word structure: “[l]a signification de tout mot composé résulte alors directement de l’analyse de son contenu, et non de la manière dont on suppose ce mot dérivé d’un autre” (1919: 27)\(^\text{13}\). Things could hardly be otherwise, since, as will be discussed below, phonological considerations of the sort that give rise to the conflict posed by “bracketing paradoxes” form no part of his theory, in which morphological structure is conceived in exclusively semantic terms.

3.2 Category, headedness and the difference between words and phrases

Internal branching is by no means all there is to the internal structure of words on René’s theory. He makes it clear (1911ff.) that each of the atoms contained in

\(^{12}\)The same issue does not arise as obviously in French.

\(^{13}\)“The meaning of every compound word thus results directly from the analysis of its content, and not from the manner in which we suppose this word to be derived from another.”

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a complex word is assigned to a major word class: noun, verb or adjective, depending on its semantics. Thus, -iste in violoniste is a noun because it designates a person; -able in louable ‘commendable’ is an adjective, because it contains a qualifying idea; and -is- in moderniser and -ifi- in béatifier are verbs, because they contain a dynamic idea.

Atoms can also impose restrictions on the structures into which they enter based on these word classes. In an interesting passage (1911: 36–37), René argues that the word couronnement ‘coronation’ appears to contain only the atoms couronne ‘crown’ and -ment, but there must also be an additional verbal atom (represented here by the medial -e-, reduced from the infinitive ending -er), because nominalizing atoms such as -ment “ne sont employés qu’après des atomes verbaux, comme les atomes ité, esse ne le sont qu’après des atomes adjectifs.”

The categorial identity of a complex structure is determined by that of its constituent elements. Here René enunciates an important basic principle of word structure: “L’espèce grammaticale d’un mot est déterminée par son dernier élément; ainsi, Schreib’tisch est un substantif, parce que Tisch est un substantif.”

This is of course the same as what Williams (1981) would propose (along with Selkirk 1982) as the “Right Hand Head Rule”, a supposedly general principle of word structure, at least for English and French.

Just as the literature of the 1980s recognized the existence of exceptions to the Right Hand Head Rule, René notes that there are words like timbre-poste [stamp-postage] ‘postage stamp’ and assurance-vieillesse [insurance-old age] ‘old age insurance’ where the element that should be seen as the head from a semantic point of view is the leftmost, not the rightmost constituent. Accordingly, when words of this type are pluralized (as e.g. timbres-poste ‘postage stamps’) the plural marker appears inside the compound, on the first element.

René’s account of these words is that they are not really compounds, but an rather abbreviated form of phrases. Within his theory, this is a principled solution, grounded in a proposed regular relation between complex words (compounds) and phrases. While the former, called by him “condensed molecules”, conform to the principle of a structural head on the right, syntactically formed phrases (called “dissociated molecules”), in contrast, have initial heads.

This structural difference is claimed to be completely systematic, and the basis of the fundamental rule invoked for the analysis of complex words: the Law of Reversal. In general, complex words have phrasal paraphrases, and vice versa. The relation between these is governed by the principle that “la dissociation

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14 “are only used after verbal atoms, just as the atoms ité, esse are only used after adjectival atoms.” (1911:37).
15 “The grammatical category of an element is determined by its final element: thus [German] Schreib’tisch ‘writing table’ is a noun because Tisch ‘table’ is a noun.” (1919: 16; cf. also 1911: 42–43)
d’une molécule condensé (ou la condensation d’une molécule dissociée) renverse l’ordre des atomes.”

This equivalence underlies a great deal of the discussion in both of the works under discussion in the present book. The procedure for deriving a word corresponding to a complex idea is to express it in syntactic (“dissociated”) form, and then reverse the order of the atoms involved to produce a corresponding “condensed” form, a compound word. Conversely, to analyze a complex word, one takes the atoms of which it is composed and reverses their order, which should yield a phrasal paraphrase (with a certain amount of unexplained footwork to provide or ignore the purely grammatical markers that may be required). Thus, German (condensed) *Schreib’tisch* ‘writing table’ corresponds to the dissociated form ‘table (for) writing’. On this basis, if e.g. *timbre-poste* ‘postage stamp’ is “really” a sort of phrase, rather than a legitimate compound, the position of its head on the left is just what we would expect.

The fundamental nature of this relation underscores the fact that for René, syntax and morphology are fundamentally distinct (but systematically related) domains within the overall theory of grammar. That is, complex words are not just syntactic constructions with some kind of phonological unity, as in some modern theories, but a systematically different structure. Morphology is not simply the syntax of small domains. On the other hand, since the relation between morphology and syntax is a resolutely synchronic one (and René was at pains on several occasions to stress that his theory was intended to be purely synchronic), the difference is not to be seen as a matter of morphology preserving the syntax of an earlier historical stage of the language, as Givón’s (1971) aphorism “today’s morphology is yesterday’s synax” would have it.

### 3.3 The principles of necessity and sufficiency

Central to René’s view of the relation between content and morphological form are two complementary principles (1919: 13):

**Principle of necessity.** In the construction of a compound word it is necessary to introduce (by means of the law of reversal) all of the simple elements (roots and affixes) necessary to evoke clearly the idea that the word is to express (in the given circumstances).

**Principle of sufficiency:** We must also, in this construction, avoid the introduction of useless pleonasms, as well as ideas foreign to the idea that we wish to express.

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16 “The dissociation of a condensed molecule (or the condensation of a dissociated molecule) reverses the order of the atoms.” (1911:35; cf. also 1919:11–12)
To accord with these two principles, a complex word constructed to express a
given complex idea should contain all and only those elements whose content is
contained therein, without duplication, superfluous elements or gaps. Of course,
it may well be the case that the linguistic resources of a given language are not
such as to make it possible to include precisely the required content: it may be
that some part of the required meaning can only be introduced in conjunction
with other, superfluous material. In that case it is necessary either to undershoot
or to overshoot what is desired: either to leave out some component of meaning
or to include some extraneous material. In this case, René invokes a Principle
of Least Effort: it is better to omit (the minimum of) content than to include
something irrelevant. Thus (1911: 103–104), to produce a word meaning “to put
a crown on the head of someone” there is no suffix in French meaning exactly
“to take an object and place it on the head of someone; the best we can do is
to add a verbalizing suffix to get couronner ‘to perform an action with a crown’.
Any other suffix including more of the required meaning would also introduce
additional, unmotivated material, so the Principle of Least Effort requires us to
be content with this.

Here and elsewhere (cf. 1919: 6, fn. 1) we see the notion of ranked, violable
constraints familiar from modern Optimality Theory (Prince & Smolensky 2004)
and related frameworks: a number of principles are enunciated, but when two
of these conflict, one is satisfied at the expense of the other. In the example just
considered, the Principle of Sufficiency is presumed to outrank the Principle of
Necessity. Elsewhere (1919: 24), with respect to the general principle that the
head of a dissociated molecule is on the left, another principle is formulated to
the effect that in structures with a prepositional element and its complement, the
prepositional element precedes. Where these two ordering principles conflict,
the regularity governing the more specific case (preposition plus complement)
outranks that governing the general case of dissociated molecules.

As a consequence of the Principle of Sufficiency, the addition of an affixal
element to a base is always required to introduce additional content, and not
just to duplicate content already present in the base: “tout suffixe doit introduire
dans le mot auquel on l’accole une idée (générale ou particulière) qui n’y était
pas contenue.”\footnote{“every suffix must introduce into the word to which it is attached an idea (general or specific) which was
not already contained in it.” (1911: 95)} This might seem trivial and obvious, but it allows René to get
some of the same results as those that fall under the heading of BLOCKING.

Famously, Aronoff (1976: 43–44) claimed that words like *gloriosity are ex-
cluded in English because of the prior existence in the lexicon of (essentially
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synonymous) glory. For René, this would follow from the fact that *gloriosity looks like it is built on glory, and the suffixes -osity would not add any content. Actually, the facts here are less than clear: various online dictionaries include gloriosity as a word of English, but assign it a meaning distinct from that of glory: thus, Merriam-Webster’s Word Central defines gloriosity as “a moment or experience of glory.” This specific example apart, though, René gives a better example (1911: 95) from French. He notes that the word *matronine is impossible in that language, because the content of the suffix -ine ‘female person’ is already included in the base matrone ‘matron, older respectable woman’. *Matronine would thus include a “useless pleonasm”, and is accordingly blocked.

The effects of the Principle of Sufficiency thus include some, but surely not all of those that have been attributed to blocking in the modern literature. Nonetheless, it does have some of the flavor of principles enforcing disjunctive operation on rules in morphology of a language.

3.4 Some limitations of René’s theory

While the sections above illustrate some of the ways in which René’s theory of word formation anticipates later views, it would not do to exaggerate the extent to which he provides an account with coverage or adequacy equivalent to those we entertain today. There are in fact some major limitations to the works presented in this book as a comprehensive view of this domain of grammar.

One severe limitation concerns the degree of empirical coverage of René’s picture. He claims that this should be universally applicable: “Les principes logiques de la formation des mots sont donc les mêmes pour toutes les langues, du moins pour toutes celles qui partent des mêmes éléments primitifs,”

18 where the limitation to languages with the same “primitive elements” simply means those that build word from roots and affixes (perhaps thereby excluding, e.g., root-and-pattern morphology of the Semitic type, which may have been familiar to him). But in fact he does not take account of any languages outside the set of very familiar ones. His examples are virtually all from French, German and English, plus a few forms from another Indo-European language, Albanian. It seems likely that he had no serious knowledge of any others, although his brother Leopold was an amateur sinologist, and Ferdinand is known to have obtained some Chinese material from him. A broader experience of the world’s languages would surely have convinced René of the need to modify or abandon some of his claims.

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18 “The logical principles of the formation of words are thus the same for all languages, or at least for all those that begin from the same primitive elements.” (1911: 4)
Another important limitation of René’s theory is the complete lack of a theory of allomorphy. He generally assumes that variation in the shape of elements is due to some unformulated principles of “euphony”, although he mentions various instances of variation in shape that cannot plausibly be attributed to the phonology. In fact, he had no interest in phonological variation, since his goal is the analysis of the content of complex words, and its relation to the basic elements of which these are composed. In terms of the traditional sub-parts of a theory of morphology, he is really only interested in morphotactics, the combination of meaningful elements and their relation to meaning.

A full theory of morphology needs to take allomorphy into account too, and this does not engage his interest. An important reason for this apparent deficit was surely the fact that René was ultimately interested in the principles of word formation in natural language as a guide to the design of artificial languages, like Esperanto – and one of the guiding principles in designing such languages is to minimize or eliminate anything like allomorphic variation, so that content and form are related in as uniform a way as possible.

4 Conclusion: “Saussurean” morphology

So how much attention should we pay to what René, or indeed either of the brothers de Saussure, has to say about morphological theory? Obviously neither of them presents us with a comprehensive theory of this area of linguistic structure. Indeed, both address morphological issues against the background of other interests.

René was interested in the morphology of natural language as forming the background to the design of an artificial language like Esperanto. The aspects of natural language morphology that engage him are just those that might come into play in this other enterprise. Ferdinand, on the other hand, was primarily occupied (at least in the Cours) with bigger issues related to more foundational distinctions: synchrony vs. diachrony, langue vs. parole, etc. Actually we can derive much more information about his views on morphology in other work devoted to the analysis of specific linguistic material.

Both brothers, though, really do have some articulated views on the subject of word formation, views that are interesting not only as a sort of historical curiosity. And it is especially interesting, it would seem, to observe that the basic difference between views of complex words grounded in the combinatorics of morphemes vs. those based on rule-governed relations is already prominent, and explicitly discussed, in their work.
References


