

Language complexity in historical

perspective: the enduring tropes of natural growth and abnormal contact

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2 ABSTRACT

3 Focusing on the work of John McWhorter and, to a lesser extent, Peter Trudgill, this paper
4 critically examines some common themes in language complexity research from the perspective of
5 intellectual history. The present-day conception that increase in language complexity is somehow
6 a “natural” process which is disturbed under the “abnormal” circumstances of language contact
7 is shown to be a recapitulation of essentially Romantic ideas that go back to the beginnings of
8 disciplinary linguistics. A similar genealogy is demonstrated for the related notion that grammatical
9 complexity is a kind of “ornament” on language, surplus to the needs of “basic communication”.
10 The paper closes by examining the implications of these ideas for linguistic scholarship.

11 **Keywords:** language complexity, language contact, intellectual history, history of linguistics, language classification, comparative-
12 historical linguistics, Romanticism, German idealism

1 INTRODUCTION

13 Linguistics as an academic discipline was born in the nineteenth century. Since that time, linguistics has
14 expanded in empirical scope and undergone repeated conceptual renewals. Despite these developments,
15 however, there is a widespread tendency among linguists to return to premises and prejudices first acquired
16 in the formative years of their field. One area in which this atavistic impulse is particularly visible is
17 recent discussions of “language complexity”. The ranking of languages according to their supposed level
18 of grammatical elaboration was a mainstay of early disciplinary linguistics. In the second half of the
19 nineteenth century, the popularity of this pursuit gradually declined, until it fell into definitive disrepute
20 around the middle of the twentieth century. But the 1980s saw a resurgence of interest in such questions,
21 which has continued to the present day (for a sketch of this history, see Joseph and Newmeyer 2012).

22 Recent writings on language complexity not only revive old questions, but in their contours recapitulate
23 many features of the nineteenth-century debates. In this paper, we examine some recent contributions to
24 language complexity research and compare them to their nineteenth-century predecessors to reveal the
25 continuities and parallels. We ask what underlying beliefs, whether articulated explicitly or maintained
26 subconsciously, may have driven past and present scholars to arrive at such similar positions.

27 The discussion of present-day views of language complexity in this paper focuses on the writings of John
28 McWhorter (in particular McWhorter 2001; McWhorter 2007), although the work of other contemporary
29 scholars – such as Peter Trudgill (Trudgill 1989; Trudgill 2009; Trudgill 2011) – is also addressed at several

30 points. McWhorter receives such great attention because, among current accounts of language complexity,
31 his is the most comprehensive. It must be noted that even though this paper is frequently probing and
32 critical in tone it is not intended to be polemical.

33 We begin in section 2 below with an exposition of McWhorter's theory of language complexity,
34 concentrating on the way in which he characterizes complexity and the explanatory factors to which
35 he appeals. Sections 3 to 5 are then dedicated to illustrating the parallels between contemporary and
36 historical accounts: section 3 treats the "growth" of language complexity, section 4 its "decline", and
37 section 5 the idea that grammatical complexity is a kind of "ornament". Finally, section 6 offers some
38 hypotheses on why these parallels are maintained and what implications they may have for linguistic
39 research.

2 NATURAL COMPLEXITY, ABNORMAL TRANSMISSION

40 The germ out of which McWhorter's work on language complexity has grown is his notion of the "Creole
41 Prototype" (presented, among other places, in McWhorter 1998; McWhorter 2001; McWhorter 2005), a set
42 of synchronically identifiable structural properties that supposedly define creole languages as a typological
43 class. From his earliest presentations onwards, McWhorter has argued that "the world's simplest grammars
44 are creole grammars" (the title of his 2001 paper) and that this alleged simplicity arises from a "break
45 in transmission" through pidginization that has occurred in the recent history of creole languages. As
46 McWhorter (2001, 126) himself points out, his proposal for a creole prototype reiterates a theme familiar
47 in creolistics in which creoles are seen as languages stripped down to the bare linguistic essentials.

48 The effort to describe creoles as a typological class has received considerable pushback. DeGraff (2001;
49 2003), for example, decries what he calls "creole exceptionalism", the idea that "creole languages – thus
50 creole speakers – are deeply special, with genealogical and structural properties that are fundamentally
51 distinct from their non-creole counterparts" (DeGraff, 2001, 228). A necessary implication of this view,
52 according to DeGraff, is that creoles are degenerate languages and represent a reversion to a putative
53 primitive state. By contrast, DeGraff (*ibid.*) argues that creoles are the product of ordinary linguistic
54 processes and, as such, are structurally indistinguishable from all other languages. What delimits creoles as
55 a category are merely the specific socio-historical circumstances under which they have emerged.

56 While DeGraff denies any special typological status to creoles and considers them fully normal,
57 McWhorter attempts to rescue his argument by extending the scope of the abnormal. In more recent
58 work, McWhorter (2007, 268) introduces the category of "Non-hybrid Conventionalized Second Language"
59 (NCSL). This category – which includes such languages as English, Malay, Mandarin and Modern Arabic –
60 represents languages that are "significantly less complex [...] than their sisters" as a result of "significant
61 non-native acquisition in their histories" (*ibid.*). That is, NCSLs supposedly exhibit simpler grammars than
62 the languages to which they are most closely related.

63 In a nutshell, McWhorter (2007, 4–5; 2011, 1–2) argues that the "natural" course of language development
64 is to continually accrete complexity in grammar. In "normal" language transmission, in which the language
65 is learned by children as a first language, this complexity is passed down intact from generation to
66 generation, and expanded upon with each generation. In "abnormal" transmission, by contrast, this
67 complexity is attenuated. Abnormal transmission occurs when there is an influx of adult learners into
68 the speech community who are unable to master the grammatical nuances of the language: the adults'
69 failure to properly command the grammar leads to its simplification. Creoles – which, on McWhorter's
70 understanding, have emerged from pidgins – represent the most extreme case, in which at one point the
71 vast majority of language learners were adults. As a result, creole grammar is the most reduced. NCSLs are

72 an intermediate case, where there was a still a high degree of adult language acquisition, but less so than in
73 the pidginization scenario. As such, NCSLs display a mid-range reduction in linguistic complexity.

74 McWhorter devotes considerable effort to devising rigorous metrics for complexity, and arrives at three
75 main parameters: “overspecification”, “structural elaboration” and “irregularity” (see McWhorter 2007,
76 21–35; McWhorter 2011, 2–3). Overspecification refers to the demands grammars place on speakers to
77 spell out various distinctions, such as number and gender marking on nouns, tense, aspect and mood
78 marking on verbs, and so on. Structural elaboration refers to how descriptively tractable a language is: this
79 metric is essentially a tally of the number of basic units and rules that a grammarian would have to posit
80 in order to write a description of the language. Irregularity is a measure of the exceptions and anomalies
81 that defy orderly rules and must simply be listed separately. McWhorter’s claim is that creoles will always
82 score lowest on these measures, NCSLs will sit somewhere in the middle, and “normal” languages will
83 achieve high scores on all of these points.

84 McWhorter’s view of complexity is a product of the grammarian’s gaze: the linguistic features he
85 targets are the phonology, morphology and syntax described in the average reference grammar. To his
86 credit, McWhorter (2007, 52–55) acknowledges that there may be dimensions to complexity beyond
87 those recorded in traditional grammars, such as pragmatic effects and modulating devices like intonation.
88 However, McWhorter (2007, 53) maintains that the structural properties he identifies represent “concrete
89 complexity”. These are allegedly aspects of language which are difficult for adult learners to master under
90 any circumstances and which are measurably susceptible to reduction in contact situations.¹

91 Running through McWhorter’s account of complexity is the notion that the grammatical features he
92 highlights are somehow “unnecessary to communication” (see McWhorter 2001, 161; McWhorter 2007,
93 4–5 *et passim*). Exactly what “communication” consists in and what the minimum requirements may be to
94 achieve it are questions he leaves unexamined (cf. DeGraff 2001, 242–244). The underlying idea seems to
95 be that language complexity, as he has defined it, is a kind of “ornament” (a term that appears – also in
96 the derived form “ornamental” – in the abstract to McWhorter 2001 and throughout McWhorter 2005) on
97 language, an unnecessary decoration maintained by tradition but quickly abandoned when communicative
98 exigencies demand it.

99 Let us put aside questions of the validity and appropriateness of McWhorter’s metrics and interrogate
100 instead the assumptions that underlie his conception of language complexity.² As was indicated above,
101 his model is predicated on the tension between “natural” complexity and “interruptions” that disturb it.
102 Mustering his biological metaphors, McWhorter (2007, 15) describes the relationship in the following way:
103 “The human grammar is a fecund weed, like grass. Languages like English, Persian, and Mandarin Chinese
104 are mowed lawns, indicative of an interruption in natural proliferation.”

105 The languages McWhorter names here, and which he treats in chapter-length case studies in his 2007
106 monograph, are exemplars of his NCSL category. Each has supposedly suffered an “interruption” through
107 an episode of “abnormal transmission” at some point in their respective histories, where the speech
108 community was overwhelmed with adult learners. But the degree of interruption was less “abnormal”
109 than in the histories of creole languages, which have passed through a pidgin stage – with universal adult
110 learning – and exhibit a correspondingly greater loss of complexity. On McWhorter’s account, this kind of

¹ See Bisang (2015) for an attempt to capture “hidden complexity”, aspects of linguistic complexity beyond the “overt” formal complexity treated by McWhorter and others.

² For detailed discussion of some of the problems involved in measuring putative complexity across languages, see John Joseph’s contribution to this volume.

111 transmission should be considered “abnormal” because it is “less common” in the context of all languages
112 spoken in the world:

113 I openly assert that creoles are the product of a process of language transmission that is most definitely
114 *abnormal*. I designate creoles’ development as abnormal because the sociohistorical nature of their
115 timeline is much less common than the timeline of thousands of other languages worldwide. That
116 is, their development was not *the norm*. However, this book has been devoted to arguing that the
117 development of many noncreole languages, including the one I am writing in which is my native
118 language, was also abnormal. The development of both English and Haitian Creole was abnormal –
119 and fascinatingly so. (McWhorter, 2007, 274)

120 McWhorter is at pains to insist that his use of “abnormal” should not be understood as a slur or in any
121 way derogatory. In a note to the paragraph quoted above, he writes:

122 I will assume that the sentence “creoles are the product of a process of language transmission that
123 is most definitely *abnormal*” will not be cited in isolation as a demonstration of dismissive attitudes
124 toward creole languages, with an implication that the sentence did not occur within a careful exposition
125 of a case for the claim, including the subsumption within it of languages like English. (McWhorter,
126 2007, 282, n. 2)

127 But why does McWhorter choose the terms “natural”, “interruption”, “normal” and “abnormal” to
128 characterize the phenomena he investigates? These are seemingly loaded terms: the opposition of “abnormal”
129 and “interruption” to “normal” and “natural” inevitably conjures a picture of deviancy in a world striving
130 for order.

131 The immediate source for McWhorter’s usage would seem to be “normal” and “abnormal” transmission
132 as outlined by Thomason and Kaufman (1988), a book McWhorter cites across his writings on language
133 complexity (e.g., McWhorter 2005; McWhorter 2007; McWhorter 2011). In Thomason and Kaufman’s
134 model, “normal historical development” occurs under conditions of “normal transmission”, where a
135 language is passed down from the elder generation to children. Normal development consists in gradual
136 change brought about by “drift” – that is, diachronic tendencies arising from internal imbalances in the
137 linguistic system – as well as “interference” to varying degrees from neighboring dialects and languages.
138 “Abnormal transmission” is supposed to occur in such situations as pidginization, abrupt creolization, and
139 massive borrowing. In these cases, the linguistic system of the languages will have inevitably broken down
140 (see Thomason and Kaufman 1988, 9–12, 211–213).

141 It could perhaps be argued that Thomason and Kaufman’s use of “normal” and “abnormal” is not
142 necessarily pejorative because the terms are employed within a defined theoretical framework. The aim of
143 their 1988 book is to establish the limits of the comparative method and the family tree model. “Normal”
144 transmission results in changes that can be successfully traced using the comparative method to arrive
145 at “genetic” relationships between languages, while “abnormal” transmission results in “nongenetic
146 development”, which is intractable for the comparative method. Within this closed system there is therefore
147 a theory-internal justification for the labels “normal” and “abnormal”: “normal” is what accords with the
148 family tree model and “abnormal” what does not (but see DeGraff 2001, 241–242, n. 22, for a critique).

149 But McWhorter is one step removed from the comparative concerns of Thomason and Kaufman and, as
150 such, cannot directly appeal to the internal logic of their theory. His notion of “normal” and “abnormal”
151 transmission pertains only to his arguments for language complexity: “normal” is that which preserves

152 complexity, as he defines it, “abnormal” that which destroys it. The connection of his notions of normality
153 to complexity is in fact at odds with Thomason and Kaufman (1988, 46–47), who reject the possibility
154 that any direct structural correlates of “abnormal transmission” – or even of milder “interference” – can be
155 identified.

156 Not only do Thomason and Kaufman believe that it is impossible to predict the course of contact-induced
157 change, they also deny any absolute metric of complexity. While they acknowledge that some linguistic
158 features may be considered more “marked” and therefore less “natural” in a cross-linguistic sense, they
159 insist that language change, even change stimulated by contact, does not always tend toward less marked
160 forms. Indeed, they subscribe to the traditional structuralist notion that, because each language is a system
161 of interacting sub-systems, it is often difficult to quantify the overall complexity of a language: changes
162 that may serve to simplify one aspect of a language will invariably cause complexification in another
163 sub-component of that language (see Thomason and Kaufman 1988, chap. 2).

164 In the passage quoted above, McWhorter (2007, 274) justifies his use of “abnormal” with the claim that
165 the “sociohistorical nature of [the creole and NCSL] timeline is much less common than the timeline of
166 thousands of other languages worldwide”. Quite apart from the notoriously difficult problem of identifying
167 discrete “languages”, which McWhorter does not even address, he offers this argument in the absence of
168 any statistical data quantifying the world’s languages and their respective socio-historical circumstances.³ If,
169 on the other hand, McWhorter’s unit of comparison is the kind of speech community to which most human
170 language speakers around the world are exposed, then his notion of “normal” becomes self-defeating: it is
171 precisely those contact varieties with the greatest number of speakers that are the most abnormal on his
172 definition.

173 But there are hints that McWhorter’s notions of “natural” and “abnormal” have deeper roots and perpetuate
174 much older ideas. According to McWhorter (2007, 13), the socio-cultural circumstances engendering
175 the “abnormal transmission” that destroys “natural” complexity have emerged only after the development
176 of agriculture in the “post-Neolithic revolution”. Stone Age hunter-gatherers are therefore taken to be
177 somehow in a pristine state of nature, while the fateful technology of agriculture has led us into the
178 abnormality of modern contact. These two threads of his story – “natural” complexity and “abnormal”
179 contact – have clear antecedents in the early history of disciplinary linguistics.

3 LINGUISTIC PERFECTION

180 Although couched in rather different terms from present-day discussions, the notion that increasing
181 complexity in some way represents the natural course of development in human language is an idea deeply
182 ingrained in the linguistics of the early to mid-nineteenth century. In this period, the focus lay for the most
183 part on morphology and its putative links to language evolution (see Morpurgo Davies 1975).

184 For the early comparative-historical grammarians, it was the similarities in the rich inflectional forms
185 across the classical languages of Europe and India, with their shared convolutions and irregularities, that
186 inspired the comparative project and served as its chief source of evidence. Friedrich Schlegel (1772–1829),
187 whose writings are often attributed a central role in inaugurating comparative-historical grammar (see
188 Morpurgo Davies 1998, chap. 3), saw inflection as the prerogative of Indo-European languages (Schlegel,

³ All large-scale linguistic databases are faced with the problem of securing a scientifically valid and statistically representative sample of the world’s languages. The compilers of the *World Atlas of Language Structures* (WALS), for example, point out this difficulty and acknowledge that their sample is not entirely satisfactory, limited as it is by what language descriptions are available to them and what aspects of each language these descriptions treat (see Comrie et al. 2013).

189 1808). Inflection makes the Indo-European languages “organic” (*organisch*) in structure, in contrast to all
190 other languages of the world, which he held to be merely “mechanical” (*mechanisch*).

191 Schlegel’s distinction between the “organic” and “mechanical” was part of an extended biological
192 analogy. The so-called organic languages with their inflections were supposed to be of a kind with living
193 organisms: inflections grow out of the “living germ” (*lebendiger Keim*) of the word root, while the words of
194 “mechanical” languages are merely cobbled together out of roots and affixes and so lack any true integration.
195 In the most extreme cases, even affixes are missing and sentences are simply arrangements of bare word
196 roots (Schlegel, 1808, 50–52). The opposition Schlegel sets up between the “organic” and “mechanical”
197 draws on a conceptual pair from Immanuel Kant’s discussion of teleology, which elevates living organisms
198 to “natural purposes”. That is, living organisms exist for themselves, while the purely mechanical world is
199 subordinate to externally determined ends (see Ginsborg 2019, section 3).

200 On one level Schlegel therefore tapped into discourses popular in contemporary German philosophy
201 and the aesthetic preferences of the early Romantic movement, with its exaltation of the natural world
202 and suspicion of purely functional human invention (see Richards 2002; Morpurgo Davies 1998, 86–88).
203 The love of the “organic” lies also at the heart of the scientific justification for Schlegel’s project: his
204 comparative grammar was based explicitly on comparative anatomy (see Schlegel 1808, 28), which
205 made great advances in this period and rose to the status of a model science. The rich inflections of the
206 “organic” languages provide much better evidence to the comparativist than the loose “mechanical” forms
207 found elsewhere, which seem “like a heap of atoms, which the wind of chance can easily drive apart
208 or bring together” (*wie ein Haufen Atome, die jeder Wind des Zufalls leicht aus einander treiben oder*
209 *zusammenführen kann*; Schlegel 1808, 51).

210 The dichotomy between “organic” and “mechanical” languages set up by Schlegel was soon challenged
211 by proponents of the “agglutination theory”, which held that morphological classes are not absolute but
212 rather arise diachronically. According to this theory, inflectional forms originally began as separate words
213 that gradually became more closely bound to word roots, first as affixes and then finally as inflections. A
214 key source for this doctrine is Franz Bopp’s (1791–1867) account of the emergence of Indo-European
215 verb endings (e.g. Bopp 1816, 147–151), although it should be noted that Bopp’s account was directed
216 toward the analysis of Indo-European verb forms and was not intended as a contribution to typology (see
217 Morpurgo Davies 1998, 133–135; Jespersen 1922, 54–56).

218 The recasting of agglutination theory in a typological mold revolved around a particular reading,
219 widespread in the nineteenth century, of the work of Wilhelm von Humboldt (1767–1835). Humboldt (1998
220 [1836], 151) maintained that there is an “idea of perfection in language” (*Idee der Sprachvollendung*), a
221 telos that the “language-forming force in humanity” (*die sprachbildende Kraft in der Menschheit*) strives
222 to achieve. Language is not just a passive medium of expression, but the “forming organ of thought”
223 (*das bildende Organ des Gedanken*; Humboldt 1998 [1836], 180). The development of linguistic forms
224 represents the dialectic interplay between thought and language as each shapes the other (see Trabant 1986;
225 Trabant 2012, chap. 8).

226 According to Humboldt (1843 [1822], 282–283, 296–283; cf. Humboldt 1998 [1836], 281–283; see also
227 Trabant 2012, 143–147), it is possible to identify distinct stages of development as languages move toward
228 perfection. At the lowest stage of development, concepts find representation in the linguistic form, but the
229 relations between the concepts are only implied through the ad hoc use of word order or the improvised
230 repurposing of words with a full denotational meaning. At the second stage, word order becomes more
231 fixed and the use of specific words to express relations between concepts becomes conventionalized. At

232 the third stage, these relational words become bound elements attached to denotational words; that is, a
233 differentiation takes place between affixes and roots. Finally, at the last stage, affixes and roots merge into
234 single words without a clear division between the parts; that is, inflection appears. Inflected words combine
235 concepts and their relations to the rest of the sentence into single integrated packages, thereby providing
236 the best representation of the underlying structure of thought.

237 Humboldt's scheme was not intended as a catalog of essentialist language types but rather an account
238 of grammatical processes that may criss-cross languages. A predominantly inflectional language, for
239 example, may still make use of word order, grammatical particles and other devices from earlier stages of
240 development. In addition, Humboldt insisted that there is no single measure of this scale of perfection: the
241 course of development of individual languages is a matter of historical contingency and is, in its details,
242 unpredictable (Humboldt, 1843 [1822], 269–270). Furthermore, despite whatever structural deficiencies
243 a language may possess, a skilled user of that language will be able to effectively express any idea in it
244 (Humboldt, 1843 [1822], 280–281).

245 However, Humboldt was widely interpreted as putting forward a deterministic scheme of language
246 evolution, the stages of which could be observed in presently existing languages (cf. Coseriu, 1972). The
247 culmination of this kind of interpretation, with a reassertion of parallels to biology, is the theory of linguistic
248 “morphology” (*Morphologie*) set out by August Schleicher (1821–1868), which offered a classification
249 of word forms in the world's languages linked to a theory of language evolution (see Schleicher 1859;
250 Schleicher 1860, 33–71).⁴

251 The evolutionary component of Schleicher's theory is often described as “Darwinian”. DeGraff (2001),
252 for one, applies this label to Schleicher's thought and work he sees following in its footsteps, including
253 McWhorter (2001). While it is true that Schleicher, toward the end of his career, attempted to align his
254 work with Darwinian doctrine (most notably in Schleicher 1863), his proposals for morphology predate
255 this connection and were in fact not entirely compatible with Darwin's views (see Alter 1999; McElvenny
256 2018a).⁵ Schleicher's thought was more directly influenced by idealist *Naturphilosophie*, in particular the
257 theory of plant and animal “morphology” advanced by Johann Wolfgang von Goethe (1749–1832), which
258 was later taken up and developed further in a “monist” mode by Ernst Haeckel (1834–1919; see Richards
259 2008, appendix 1).

260 Biological morphology aimed at describing the development of living organisms, on both an individual
261 ontogenetic level and a species-wide phylogenetic level, through the comparison of anatomical forms. In
262 the early idealist varieties of morphology, both ontogenetic and phylogenetic development were taken to be
263 driven by immanent forces within organisms. Schleicher's linguistic morphology adopted this immanent
264 conception of development to cast the gradual emergence of inflection as a natural process. Schleicher
265 (1860, 33–35) imagined that languages develop through stages from the bare roots of the isolating languages,
266 the affixes of agglutinative languages, and finally to inflectional forms.⁶ In line with his interpretation of
267 Humboldt, Schleicher (1860, 18) felt that language, as the “concept of the phonetic body of thought” (*der*
268 *Begriff* [...] *des lautlichen Leibes des Denkens*), strives to the particular “perfection” (*Vollkommenheit*)
269 manifested in inflection.

⁴ Schleicher's use of “morphology” in this sense predates the present-day generic usage of this term in which it describes all processes that take place at the word level.

⁵ DeGraff is not unaware of the complex relationships between linguistic and biological theory in this era. In a footnote, DeGraff (2001, 218, n. 4) offers a multiply hedged designation buttressed by scare quotes to label the linguistic theories of this period: “(pre-, post-, quasi-) ‘Darwinian’ linguistics”.

⁶ Schleicher struck a very modern note, however, in distinguishing between the typology of languages and their genealogical relatedness. Schleicher (1859, 37–38; 1860, 26) said that languages can belong to different morphological classes and still be related in a genealogical sense.

270 As the survey presented in this section shows, the central premise of McWhorter’s theory that increase
271 in complexity is a “natural” tendency in language recapitulates in many ways nineteenth-century ideas
272 that fetishized inflectional morphology as the natural endpoint of language development. Schlegel, at the
273 very beginning of the century, imagined that only those languages with inflection are “organic”; that is,
274 only inflecting languages are true organisms, “natural purposes” in a Kantian sense, in contrast to all
275 others, which are merely “mechanical”. Schleicher, reinforcing the biological analogy and tying it to his
276 interpretation of Humbolt, saw the development of inflection as the product of a natural striving towards
277 “perfection” (*Vollendung, Vollkommenheit*) in language.

278 The nineteenth century’s almost exclusive focus on inflection is not foreign to McWhorter. While current
279 discussions of complexity, including McWhorter’s, draw in other aspects of language – such as phonology,
280 lexicon, semantics and pragmatics – morphology, and in particular inflectional morphology, continues
281 to loom large. McWhorter (2007, 35–45) puts some effort into justifying the role inflection plays in his
282 account of complexity. He insists that the attention he devotes to inflection is not mere Eurocentrism or, on
283 the other hand, exoticization of this feature on the part of a speaker of Modern English, a language that
284 has largely retreated from inflection. He maintains rather that inflection is indeed a linguistic feature that
285 can be shown objectively to manifest the three dimensions of complexity – overspecification, structural
286 elaboration and irregularity – that he identifies.

287 In McWhorter’s appeals to the “natural” growth of complexity in languages we therefore hear echoes of
288 nineteenth-century ideas about the evolution of language as encapsulated in the morphological typologies of
289 the period. The historical parallels continue if we compare McWhorter’s account of the loss of complexity
290 in “abnormal” cases of language contact with nineteenth-century views on the decline of inflection.

4 CORRUPTING CONTACT

291 Even though the nineteenth-century linguistic imagination was dominated by the idea that the growth of
292 inflection represented a natural tendency in language, scholars in this period were still very much aware of
293 the loss of inflection and increasing reliance on periphrastic and syntactic constructions attested in many
294 modern European languages – above all the Romance and Germanic vernaculars – when compared with
295 their classical ancestors. This development was usually described in terms of the change from “synthetic”
296 classical languages to “analytic” modern vernaculars. This usage was widespread, but one of the earliest
297 oppositions of the two terms in this context would seem to be in an 1818 essay of August Wilhelm Schlegel
298 (1767–1845), the elder brother of Friedrich Schlegel (on the connections of these terms to philosophical
299 discourse, see McElvenny 2017; McElvenny 2018b, 67–87). A frequently invoked cause of the move
300 toward analyticity was the influence of contact between peoples, presenting us with another striking parallel
301 between nineteenth-century and present-day thought on questions of language complexity.

302 Once again, Schleicher, inspired by a particular reading of Humboldt, provides an excellent example of
303 these views. Humboldt himself did not believe in any directionality in the development of linguistic forms,
304 or even that diachronic changes such as the apparent loss of inflection in modern European vernaculars
305 represent a reconfiguration of the fundamental organizational principles of their grammars (see Di Cesare
306 in Humboldt 1998 [1836], 81–85; Trabant 1990, chap. 6). But he did imagine two distinct periods in the
307 evolution of language. In the first of these, the “sound-creating drive of language” (*lautschaffender Trieb*
308 *der Sprache*) creates new grammatical forms in accordance with the structural principles of the language.
309 In the second period, this drive declines and speakers’ energy is directed away from the creation of new
310 forms and instead toward the reshaping and repurposing of existing forms (Humboldt, 1998 [1836], 279).

311 Schleicher tied the apparent rise of synthetic forms in classical languages followed by the shift to
312 analytic structures in their modern descendants to Humboldt's two evolutionary periods. He posited a
313 "pre-historic period" (*vorhistorische Periode*) in which the grammatical forms of languages – and the
314 allegedly intertwined cognitive capacities of their speakers – grow along the continuum of isolating to
315 inflectional, and a "historical period" (*historische Periode*) in which languages degenerate from synthetic
316 to analytic (Schleicher, 1860, 37). According to Schleicher, the degree to which a language degenerates in
317 the historical period is directly proportional to how involved its speakers are in history:

318 It is even possible to prove objectively that history and language development stand in an inverse
319 relation to one another. The richer and grander the history, the faster the degeneration of language; the
320 poorer, slower and more sluggish the history, the more faithfully preserved is the language. (Schleicher,
321 1860, 35)⁷

322 A key measure of a people's involvement in history is the degree of contact they have with other peoples
323 (cf. DeGraff 2001, 219, n. 5). "Great historical movements," Schleicher (1860, 36) states, "cause particularly
324 striking changes in language" (*Große geschichtliche Bewegungen haben nämlich besonders auffallende*
325 *Veränderungen der Sprache im Gefolge*). As an example of such a historical movement, Schleicher names
326 the *Völkerwanderung*, the usual German designation for the great migrations and "barbarian" invasions of
327 the Roman Empire in Late Antiquity.

328 For Schleicher, the reshaping of languages in this way was largely a matter of internal developments (*von*
329 *innen heraus*) set off by the "impulse" (*Anstoß*) of historical movements, and not the result of borrowing
330 between languages (Schleicher, 1860, 36). In this respect, Schleicher again builds on themes in Humboldt's
331 writings: Humboldt denied that the modern Romance vernaculars had emerged from a mixture of Latin
332 with Germanic dialects – as had been argued by August Wilhelm Schlegel (1818), among others – and
333 indeed denied that the Romance vernaculars were different in their fundamental structural principles from
334 Latin. However, Humboldt did claim that the observable changes in the outer grammatical forms of the
335 Romance vernaculars were spurred on by societal and cultural change resulting from the immigration
336 of foreign peoples into Roman territories (see Trabant 1990, 128–134). Both Humboldt and Schleicher
337 therefore point to intercultural contact as a trigger of language change.

338 The division of language evolution into pre-historic and historic periods reflects a trope of the late
339 Enlightenment and early Romanticism in which an imagined pre-historic era is contrasted to contemporary
340 civilized life. On this account, pre-historic humans – and "uncivilized" peoples today – live in an idyllic
341 state of nature, while our modern world of culture is characterized by depravity and degeneration. This
342 view is classically associated with Jean-Jacques Rousseau (1712–1778), but became so widespread as to be
343 a cliché (see Bollenbeck 2007). Schleicher's vision of pre-historic language growth and historical decline,
344 based on his reading of Humboldt, is essentially a projection of this attitude onto language.⁸

345 McWhorter's model of language contact as an engine of grammatical simplification similarly divides
346 human history into two distinct ages. As discussed in section 2 above, "abnormal transmission" that leads
347 to the destruction of "natural" linguistic complexity is taken to be a phenomenon found only in societies

⁷ Original quotation: "Es läßt sich sogar objektiv nachweisen, daß Geschichte und Sprachentwicklung in umgekehrtem Verhältnisse zu einander stehen. Je reicher und gewaltiger die Geschichte, desto rascher der Sprachverfall; je ärmer, je langsamer und träger verlaufend jene, desto treuer erhält sich die Sprache."

⁸ There is a tradition, since at least Jespersen (1922, 71–76), of describing Schleicher's conception of language growth and decline as being inspired by the philosophy of history of Georg Wilhelm Friedrich Hegel (1770–1831; cf. Koerner 1989). While Hegel most certainly influenced Schleicher's thought, he is not the sole – and perhaps not even the most significant – influence in this respect. Schleicher's pessimism is out of step with the overarching optimism of Hegel's philosophy of history and its exaltation, in its mature form, of the Prussian present (see Bollenbeck 2007, 122–133).

348 that have gone through the “post-Neolithic revolution” and developed agriculture. Among present-day
349 language complexity researchers, McWhorter is not alone in this contention: Trudgill (Trudgill 2009, 109;
350 Trudgill 2011, 169), for example, also identifies the mass adult language learning that is supposed to cause
351 simplification as “a mainly post-neolithic and indeed a mainly modern phenomenon”.

352 Trudgill (1989; 2009; 2011), who is cited by McWhorter on occasion, makes slightly more nuanced use
353 of such terms as “normal”, “abnormal” and “natural”.⁹ His writings are in fact intended as a critique of
354 the opposite assumption that the complex grammatical forms of smaller, isolated languages are somehow
355 abnormal in comparison to the grammatical sleekness of languages used in wide-scale communication.
356 Trudgill (1989, 233) claims that “high-contact linguistic situations have become much more common in
357 recent times” and that it “may therefore be increasingly likely that our views as linguists of what is normal
358 in linguistic change will be skewed towards what happens in high-contact situations, unless we are careful.”
359 This view is predicated on the belief that

360 When it comes to contact, the present is not like the past, and it is by investigating isolated languages
361 that we are most likely to gain insights into the sorts of linguistic changes that occurred in the remote
362 past. (Trudgill 1989, 236; see also Trudgill 2009, 109; Trudgill 2011, 168)

363 At this point it would be helpful to examine the fate of nineteenth-century schemes of linguistic growth
364 and decline. In the second half of that century, such schemes were largely abandoned as theoretically
365 untenable. A major factor here was the reception in linguistics of uniformitarian doctrine from geology (see
366 Christy 1983). According to uniformitarianism, the most elegant – and most valid – mode of explanation in
367 accounting for historical change is to assume the gradual action of constant forces, rather than postulating
368 distinct ages in which different principles are at play.

369 In the realm of diachronic typology, the new uniformitarian outlook led to the rejection of notions of
370 grammatical growth and decline in favor of the “spiral” view familiar from present-day grammaticalization
371 theory (see Lehmann 2015 [1982]): the image of diachronic language development as a spiral had already
372 been put forward in the late nineteenth century by Georg von der Gabelentz (1840–1893; Gabelentz 2016
373 [1891], 269), among others (see Plank 1992; McElvenny 2020). On this account, there is no unidirectional
374 progress along the scale from isolation to inflection followed by degeneration from synthetic to analytic,
375 but rather a continual process of renewal in which languages go through cycles from the synthetic to
376 the analytic pole and back again. For his part, McWhorter (2007, 19–20) does not accept the notion of
377 oscillating complexity as propagated in present-day grammaticalization theory. Grammaticalization cycles,
378 he argues, are local phenomena affecting specific forms and have no bearing on the overall complexity of a
379 grammar.

380 McWhorter and Trudgill do not deny uniformitarianism: their argument is not that languages themselves
381 pass through different ages but rather that different socio-cultural circumstances, which favor or disfavor
382 certain kinds of linguistic change, are more or less common in different periods (see Trudgill 2011, 167–169
383 on this point). Nonetheless, by imagining these circumstances as essentially a distinction between pre-
384 and post-Neolithic societies, McWhorter and Trudgill set up a difference in kind between the pre-historic
385 and modern that undermines uniformitarian principles. It might be prejudiced to assume that present-day
386 large-scale languages are normal and all others abnormal, but it is equally problematic to simply invert

⁹ Trudgill also employs Bailey’s (1982, 10–11) coinages “connatural” and “abnatural”, terms which seemed to have enjoyed some currency in the 1980s. In short, “connatural” changes are those that occur when languages are “left alone”; that is, they are meant to arise from internal pressures in the linguistic system. “Abnatural” developments arise through language contact. While Bailey insists that both kinds of change are “normal”, his conception of language contact exhibits many of the same features as the theories sketched here.

387 this dichotomy. While Trudgill treads carefully in this area, McWhorter charges ahead to imply that
 388 non-“modern” societies are somehow still in a wholesome state of nature, that there is on the one side the
 389 noble savage and on the other the degenerate cosmopolitan.

5 ORNAMENTATION

390 McWhorter’s characterization of complexity as linguistic devices surplus to the needs of “basic
 391 communication” also repeats motifs from the nineteenth century.¹⁰ Although inflection was generally
 392 treated as the peak of grammatical evolution, the drift away from “synthesis” and toward “analysis” in
 393 modern European vernaculars was not always viewed as simple degeneration. Furthermore, languages with
 394 grammatical structures considered more complex than inflection – such as incorporation or polysynthesis –
 395 were typically seen as possessing an excess of linguistic form.

396 August Wilhelm Schlegel, in introducing the distinction between “synthetic” and “analytic” languages,
 397 was not entirely unsympathetic to the diachronic development this represented. He still assigned “first place”
 398 (*le premier rang*) to the classical synthetic languages, but he also recognized the “degree of perfection”
 399 (*degré de perfection*) which, on his estimation, the analytic languages are capable of achieving (Schlegel,
 400 1818, 15, 17). In similar fashion, Humboldt (1998 [1836], 351), despite his love of inflection, believed
 401 that analytic forms are often easier to understand and less ambiguous than their synthetic equivalents (cf.
 402 DeGraff 2001, 219, n. 5).¹¹

403 Indeed, for Humboldt and his followers, it was possible to overshoot perfection in language and end up
 404 with an awkward overabundance of grammatical complexity. Inflectional forms may produce the optimal
 405 package of concept and relation, but trying to pack any more content into the word results in bloated,
 406 confused forms. In the process of incorporation, which Humboldt (1998 [1836], 267–268) examined on the
 407 example of Nahuatl, multiple concepts are compressed into a single word, but the relations between these
 408 concepts do not find adequate expression. The grammar must resort to including additional pronominal
 409 prefixes on the verb to bring order into the sentence. On Humboldt’s estimation, these markers are so
 410 unclear that they are in fact no better than having no indication at all:

411 Sanskrit indicates each word as a constitutive part of the sentence in a very simple and natural way
 412 [through inflection]. The method of incorporation [in Nahuatl] does not do this, but rather, wherever
 413 it cannot put everything together as one, allows markers to emerge from the middle of the sentence,
 414 much like arrows, which show the direction in which the individual parts must be sought, according
 415 to their relationship to the sentence. It does not exempt us from searching and guessing, but in fact
 416 through this kind of indication throws us back into the opposite system of no indication. (Humboldt,
 417 1998 [1836], 268)¹²

418 Schleicher followed Humboldt’s judgement on this point (see Schleicher 1859, 26–27), and explored its
 419 implications for language contact. Among “peoples without history” – those imagined tribes that live in
 420 an isolated, pre-civilized state – there is often “a true proliferation of linguistic form, an unconstrained

¹⁰ There are also earlier antecedents for McWhorter’s judgements on the communicative utility of various grammatical devices. See, e.g., Kilarski (2013, 225–31) for a discussion of how the views of McWhorter and other language complexity researchers on gender/noun classes are reminiscent of those of William of Ockham (1287–1347).

¹¹ Humboldt (1998 [1836], 351) writes in the original: “[...] da allerdings diese analytische Methode die Anstrengung des Verständnisses vermindert, ja in einzelnen Fällen die Bestimmtheit da vermehrt, wo die synthetische dieselbe schwieriger erreicht.”

¹² Original quotation: “Das Sanskrit bezeichnet auf ganz einfache und natürliche Weise jedes Wort als constitutiven Theil des Satzes. Die Einverleibungsmethode thut dies nicht, sondern läßt, wo sie nicht Alles in Eins zusammenschlagen kann, aus dem Mittelpunkte des Satzes Kennzeichen, gleichsam wie Spitzen, ausgehen, die Richtungen anzuzeigen, in welchen die einzelnen Theile, ihrem Verhältniß zum Satze gemäß, gesucht werden müssen. Des Suchens und Rathens wird man nicht überhoben, vielmehr durch die bestimmte Art der Andeutung in das entgegengesetzte System der Andeutungslosigkeit zurückgeworfen.”

421 linguistic drive that creates constructions which, through their overabundance, make the exchange of ideas
 422 with foreign peoples difficult and so seem as an impediment to culture". As an example of this phenomenon,
 423 he named the "majority of the Indian languages of America" (Schleicher, 1860, 36).¹³ Schleicher (1865,
 424 28) later went so far as to contend that the "infinitely complex" languages of "American Indian tribes"
 425 rendered these tribes "unsuited to historical life" and have ultimately doomed them to extinction.¹⁴

426 Toward the end of the nineteenth century, critiques of "excessive" linguistic form were turned against
 427 inflection itself. Gabelentz observed that grammars often compel their speakers to say "much more than is
 428 necessary for understanding" (*weit mehr, als zur Verständigung nöthig ist*; Gabelentz 2016 [1891], 380),
 429 and burden them with useless formal paraphernalia. Indo-European inflection he called a "defective system"
 430 (*Defektivsystem*), which forces speakers to use a range of arbitrarily differentiated forms across different
 431 paradigms to express the same idea (Gabelentz, 2016 [1891], 421). This system is just as extravagant and
 432 clumsy as incorporation, and both – as with all grammatical profusion – are the product of an over-active
 433 *Formungstrieb*, an aesthetic drive – not a communicative or cognitive force – which expends its excess
 434 energy through language play, creating redundant linguistic forms (see McElvenny 2016).

435 Otto Jespersen (1860–1943) developed this line of thought further to argue that the move toward analytic
 436 structures in modern European vernaculars represents the striving of speakers to achieve the most efficient
 437 means of expression (see, e.g., Jespersen 1922, 323–325; Jespersen 1960 [1941]). Streamlined, flexible
 438 grammars that rely on syntax and shun morphology are more appropriate to the needs of the modern,
 439 interconnected world and are a sign of "progress in language" (the title of Jespersen 1894, his first
 440 book). Jespersen, an active participant in the contemporary international language movement, proposed
 441 taking advantage of this analytic tendency to consciously construct the optimal language for international
 442 communication in modern science, business and diplomacy (see McElvenny 2017; McElvenny 2018a,
 443 67–77).

444 In the same nineteenth-century tradition that offers antecedents of McWhorter's narrative of the rise and
 445 fall of language complexity, we find also prefigurations of his notion of complexity as linguistic excess.
 446 McWhorter's contention that simplification in contact situations represents the casting off of unnecessary
 447 ornament has direct counterparts in the nineteenth century, as scholars considered the emergence of modern
 448 "analytic" languages a potential sign of mental and communicative "progress".

6 CONCLUSION

449 Why do the motifs of nineteenth-century language evolution and morphological typology outlined in
 450 the previous sections – "natural" growth in complexity, simplification through "abnormal" contact, and
 451 grammatical complexity as superfluous decoration – reappear in current work on language complexity?
 452 And what do these revivals reveal about the underlying ideology of present-day linguists?

453 The citation record would suggest that there is no direct transmission of ideas from the nineteenth
 454 century to the present. Although his attention has previously been drawn to nineteenth-century precedent,
 455 McWhorter does not engage with the historical sources in any serious way. In response to DeGraff's (2001)
 456 critique of "Darwinian" linguistics past and present, examined in section 3 above, McWhorter (2007, 10–11,
 457 273) insists that his theory of language complexity has no relation to Darwinian evolution, in a passage

¹³ Original quotation: "Bei Völkern ohne Geschichte gewahren wir dagegen nicht selten ein wahres Wuchern der sprachlichen Form, einen Rand und Band überschreitenden Sprachtrieb, der Bildungen hervorruft, die durch übermäßige Fülle den Gedankenaustausch mit fremden Völkern erschweren und so als Hemmiß der Cultur erscheinen. Dieß gilt vor allem von den meisten Indianersprachen Amerikas."

¹⁴ Original quotation: "[...] dass gewisse Völker, so die Indianerstämme Nordamerikas, schon ihrer unendlich complicierten und in Formen wahrhaft wuchernden Sprachen wegen für das geschichtliche Leben ungeeignet sind und deshalb nunmehr eine Rückbildung, ja dem Untergange verfallen, [...]"

458 that makes no reference to the relevant historical sources in linguistics. The one nineteenth-century figure
459 who appears in McWhorter's (2007, 51) book is Humboldt, whose discussion of grammatical processes is
460 mentioned briefly in a rather confused fashion and without a citation to any primary or secondary sources.
461 Trudgill (e.g., 1989, 232; 2011, ix, 185–186) would seem to have a greater awareness of the antecedents,
462 although his texts are still devoid of specific references to historical sources.

463 In the absence of deep engagement with historical accounts and the intellectual world in which they
464 emerged, it would seem that these revivals represent the inheritance of an old conceptual framework
465 accompanied by its unexamined assumptions. This framework was originally assembled by nineteenth-
466 century scholars acting under the heady influence of Romanticism and idealist philosophy. From those
467 movements the nineteenth-century scholars derived biological analogies of increase in grammatical
468 complexity as a process of natural growth countered by degeneration brought about through the corrupting
469 influence of civilization.

470 In section 2, we observed on the example of Thomason and Kaufman (1988) how the family tree model
471 of language relations gives rise to a view that sees the closed speech community as “normal” and language
472 contact as “abnormal”. As we have shown in sections 3 to 5, in its earliest nineteenth-century versions
473 this model was already intertwined with ideas about the origin and purpose of grammatical structures
474 and their putative links to cognitive and socio-cultural evolution. In the intervening two centuries, ideas
475 about linguistic structure and – even more so – human evolution have moved on, but aspects of the
476 older conceptions have clearly continued a subcutaneous existence in the discipline of linguistics, only to
477 resurface in the recapitulations of recent scholarship.

478 The aim of this paper is not to discredit or demolish any scholars' work or even to endorse specific
479 alternatives (as DeGraff 2001 does in putting forward his alternative “Cartesian-uniformitarian” view).
480 Rather, this paper is intended as a plea to linguists to engage more seriously with intellectual history, in
481 particular as it relates to the history of their own discipline. There is already a vibrant genre of linguistic
482 historiography, which deserves a wider reception among practicing linguists. With respect to the issues
483 addressed in this paper, for example, language complexity researchers might derive some instruction from
484 Hutton's (1999) investigation of the political entanglements of the scholarly constructions “native speaker”
485 and “mother tongue”, or from Knobloch's (2011) exploration of the naturalizing tendencies in present-day
486 “Neo-Darwinist” linguistic discourse and their historical background.

487 The unexamined use of inherited ideas can lead us to inadvertently propagate prejudices from which we
488 would otherwise recoil. However they may hedge their claims or protest about their scientific neutrality,
489 present-day scholars who advance hypotheses about what is natural and normal in the human world, about
490 supposedly “pre- and post-Neolithic” peoples should pause to consider the origins of their ideas and the
491 implications of their proposals.

CONFLICT OF INTEREST STATEMENT

492 The authors declare that the research was conducted in the absence of any commercial or financial
493 relationships that could be construed as a potential conflict of interest.

AUTHOR CONTRIBUTIONS

494 The Author Contributions section is mandatory for all articles, including articles by sole authors. If an
495 appropriate statement is not provided on submission, a standard one will be inserted during the production
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497 to by their initials and, in doing so, all authors agree to be accountable for the content of the work. Please
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SUPPLEMENTAL DATA

504 Supplementary Material should be uploaded separately on submission, if there are Supplementary Figures,
505 please include the caption in the same file as the figure. LaTeX Supplementary Material templates can be
506 found in the Frontiers LaTeX folder.

DATA AVAILABILITY STATEMENT

507 The datasets [GENERATED/ANALYZED] for this study can be found in the [NAME OF REPOSITORY]
508 [LINK].

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