

# Towards an Evolutional Chain of English Dictionary Paradigms from the Linguistic Perspective

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**Abstract:** This paper aims to unfold, by tracing the evolutional thread of English dictionaries from their earliest roots to present state from the linguistic perspective, a coherent and complete picture of how English dictionary making develops from its archetype to the prescriptive, the historical, the descriptive and finally to the cognitive form. It builds up an integrated chain of English dictionary paradigms and demonstrates how English lexicography develops into its modern form through inheritance, innovation and self-perfection.

**Keywords:** ENGLISH LEXICOGRAPHY, DICTIONARY PARADIGMS, ARCHETYPE, LATIN TRADITION, PRESCRIPTIVISM, DESCRIPTIVISM, DIACHRONISM, COGNITIVISM

**Opsomming:** Op weg na 'n evolusionêre reeks Engelse woordeboekparadigmas vanuit 'n linguistiese perspektief. In hierdie artikel word gepoog om 'n koherente en volledige prentjie te skets van hoe Engelse woordeboekmaak ontwikkel het vanaf argetipe tot preskriptiewe, historiese, deskriptiewe en uiteindelik kognitiewe vorm deur die evolusionêre "draad" van Engelse woordeboeke vanaf hul oorsprong tot die huidige stand vanuit 'n linguistiese perspektief na te spoor. 'n Geïntegreerde reeks Engelse woordeboekparadigmas neem vorm aan en daar word gedemonstreer hoe die Engelse leksikografie deur nalatenskap, vernuwing en self-vervolmaking tot die moderne vorm ontwikkel het.

**Sleutelwoorde:** ENGELSE LEKSIKOGRAFIE, WOORDEBOEKPARADIGMAS, ARGETIPE, LATYNSE TRADISIE, PRESKRIPTIWITEIT, DESKRIPTIWITEIT, DIACHRONISME, KOGNITIVISME

## 0. Introduction

English dictionaries can be traced back to the glossaries in the 7th and 8th centuries, and the theoretical roots of English lexicography grew out of Latin dictionary traditions and prescriptivism. Signs of prescriptivism were already discernible in early English dictionary compilation. Latin lexicographical traditions exerted gradual and yet profound influence upon prescriptivism, which became firmly established with the publication of Samuel Johnson's (1709–1784) *A Dictionary of the English Language* (1755).

Towards the late part of the 18th century, historical comparative linguis-

tics came into vogue in the linguistic circles of Europe. Through its evolution in the 19th and the early 20th century, a set of historical linguistic principles, along with comparative methods and internal reconstruction and explorations of word origins from phonological, morphological and semantic aspects, evolved into the historical dictionary paradigm, which was amply taken advantage of in *The Oxford English Dictionary* (1884–1933).

Language description was widely recognized as the mainstream approach of the 20th-century linguistic research, and descriptivism triggered off revolutionary changes in notions, principles, methodological and theoretical formulation directly related to dictionary making. Compilers started to adapt themselves to changes in the trends of linguistic study and turn their dictionaries into language recorders and describers rather than authorities and arbitrators. Descriptivism became an established practice in Philip Babcock Gove's (1902–1972) *Webster's Third New International Dictionary of the English Language*, Unabridged (1961).

Dictionary compilation used to be separated from dictionary use and language cognition, and dictionary compilation and research are bound to be seriously defective without taking the user perspective into consideration. *Longman Dictionary of Contemporary English* (1978) ushered in a new era of cognitivism characterized by unique focuses on users and seamless integration of dictionary design and dictionary use, dictionary function and language cognition, and dictionary making and electronic technology, highlighted by *The WordNet* online.

The concept of "paradigm" was introduced into lexicographical studies only decades ago, referring to a model, pattern or a set of principles for dictionary design, compilation and research. This paper attempts to explore the historical trajectory of English dictionary paradigms from the linguistic perspective with a view to revealing the interactive mechanisms and the historical inheritance between the evolution of English dictionary paradigms and the progress of linguistic theories, particularly modern linguistics.

## 1. The archetype of English dictionary paradigms

A general survey of the origins of world lexicographical culture manifests two discernible sources of development. One is the collection and accumulation of annotations and notes left on the margins and between lines of ancient classic works by the so-called authorities or social elites, such as monks, missionaries, priests and schoolmasters, and the other is the glossaries compiled collectively by people with expertise to meet special needs of religious preaching, literacy education, national assimilation, and military occupation.

These glossaries and vocabularies are found in ancient Chinese, Latin, Greek and Sanskrit. They were compiled, revised, enlarged or augmented over time into larger and more comprehensive volumes. Early works were made either monolingually or bilingually from annotations and explanatory notes collected from various classic works. On rare occasions they might be collec-

tions of such annotations and notes from only one work, and their entries are arranged in the sequence of their appearance in the text, rather than on the alphabetical or thematic basis. The historical literature demonstrates that English dictionary paradigms originated from explanatory notes and textual researches in the classic works of the Old English period.

The practice of providing annotations in the history of English lexicographical culture can be traced back to the prehistoric Celtic and Germanic languages. Those pioneers who provided such marginal notes or glosses to words, particularly rarely used hard words, were priests and then schoolmasters (Murray 1900; Krache 1975). "And these beginnings themselves, although the English Dictionary of to-day is lineally developed from them, were neither Dictionaries, nor even English" (Murray 1900: 7). However, they turn out to be extremely valuable to modern philologists, as they are a record of words and expressions that could appear in no other sources than Old English, Old Irish and old Germanic languages.

For the convenience of preaching and teaching scriptures, smart monks and schoolmasters started to collect the explanatory notes from between the lines and margins of the text into "glossariums" or glossaries. This is the first distant source of English lexicography. Another early source is the classified glossaries or vocabulary lists that were made for the purpose of Latin learning and teaching and for the convenience of memorizing Latin words and, in most cases, provide explanations of word meanings in English or dialectal vernaculars. They signify the inception of English dictionary paradigms.

The beginnings of English dictionaries "lie far back in times almost prehistoric" (Murray 1900: 7), and no textual research can justify the exact dates of the appearance of the earliest glossaries. However, the fountain-heads of English lexicography can undoubtedly be traced back to the early Anglo-Saxon times, "to a time somewhere between 600 and 700 A.D., and probably to an age not long posterior to the introduction of Christianity in the south of England at the end of the sixth century" (Murray 1900: 13). At the turn of the 7th and 8th century, collections of Latin hard words explained in simpler Latin or Old English began to appear, and the earliest extant one, the *Leiden Glossary*, which was made c. 800 in the Abbey of Saint Gall on the basis of earlier Anglo-Saxon exemplars, comes down to us in the form of manuscripts copied in the 9th century (Murray 1900: 12-13; Green 1996: 55).

The *Leiden Glossary* contains 48 *glossae collectae* (or chapters), and each chapter is prefixed with the title of the text from which the lemma are taken, and the lemmata are arranged in the sequence of their appearance in the text. "Most of the glosses are in Latin, though 250 of them are in Old English." They not only "explain terms from texts used in the classroom", thus a "record of their classroom teaching", but give evidence of the impressive holdings of the Canterbury library (none of which remains) and the reading interests of Anglo-Saxon churchmen" as well (Wikipedia, Leiden Glossary entry; Sauer 2009: 34).

It can be assumed that this glossary was of valuable help to those who

learned how to read and spell when used alongside with the texts but would be substantially discounted in value when used separately. It is not hard to imagine the great inconvenience in looking up lemmata. Users will have to go through the whole glossary in order to find one lemma, and sometimes, repeated searches will have to be made. It is perhaps worth mentioning that the last part of the glossary is a short collection of ancient vocabulary, animal names and terms for other things. The significance of this last part lies in that it is itself a miscellany of words and terms, that it is encyclopedic in nature, and more importantly, that it is the archetype of most of the later glossaries and vocabularies in terms of lemmata collection and their thematic classification.

Alphabetization can be traced back to a glossary of difficult words in Homer's works compiled by Zenodotus (c. 325–c. 234 B.C.) (Collison 1982: 26), but it came into use in English glossaries at quite a late time. The use of the *Leiden Glossary* as a reference tool would have been substantially facilitated if its lemmata had been put into alphabetical order. So, when reproductions of this and other glossaries were made later with augmentations from other sources, all the lemmata beginning with the same letter were extracted and listed together so that the first-letter order was implemented. Improvements were found in *The Epinal Glossary*, *The Corpus Glossary*, and *The Erfurt Glossary*. By about 725, when *The Corpus Glossary* was compiled, the alphabetical principle was advanced to second-letter order (Wells 1973: 13), so that the first 95 lemmata began in Ab- and what followed began in Ac-, and so on. The alphabetical principle began to take precedence over the thematic principle. In an anonymous 10th-century glossary in the British Museum, the alphabetization of some lemma was carried as far as the third letter.

Just as almost all lexicographical cultures in the world originate from explanations of hard words and expressions, so English lexicography started from the practice of providing explanations for hard Latin words and expressions, primarily the annotations of hard Latin words by simple or easier Latin words, and occasionally by Old English vocabulary. Consequently, the frequency of Old English words in early glossaries is extremely low, e.g. only 10% of the word count in *The Epinal Glossary*. But that rose to a considerable level when *The Corpus Glossary* came into existence. Subsequently, no matter how lemmata were arranged, Latin gradually gave way to Old English as the defining language. By the 11th century, almost every Latin lemma was provided with one explanatory English equivalent, and even several equivalents in some cases. Those are the earliest beginnings of Latin–English lexicography, marking the emergence of the English bilingual dictionary paradigm and paving way for the flourishing of Latin–English and English–Latin lexicography.

The lemmata in early glossaries are all Latin, with Latin definitions and explanations. Only when there are no proper Latin words are words and expressions of Old English and vernaculars used for defining and explaining Latin lemmata. By nature, they are merely simple monolingual vocabulary lists, with definitions or explanations only occasionally written in languages other than Latin. English bilingual lexicography started to reach its first climax

with the rise of the Renaissance in the 12th century, so the development of English monolingual lexicography was hampered to some extent.

However, thanks to the developed paradigm and referential values established by such English bilingual dictionaries as *Thesaurus Linguae Romanae et Britannicae* (1565) by Thomas Cooper (c.1517–1594) and *Dictionarium Linguae Latinae et Anglicanae* (1587) by Thomas Thomas (1553–1588), the monolingual *A Table Alphabeticall*, which was written by Robert Cawdrey (c.1538–c.1640), manifests well-conceived configurations concerning its macrostructure and microstructure at its appearance in 1604. It is the first collection of its kind and is recognized as the first English monolingual dictionary with its structural organization resembling that of modern dictionaries to a greater extent than ever before. That can be considered the origin of the paradigm for English monolingual dictionaries.

An overview of ancient dictionary development from the global perspective shows that, no matter how long and under what background their compilation takes, their data sources are no other than collections of glosses out of the ancient manuscripts of religious scriptures and classic works and their combination into different word lists. Explanatory notes or annotations are generally found above the words, between the lines or along the margins in ancient classic works and scriptures.

The beginnings of English dictionary making demonstrate similar patterns and paths, which were inherited by Cawdrey in his compilation of *A Table Alphabeticall*. Although he paid considerable attention to new words, inkhorn terms and bigger issues such as the nature of language, Cawdrey's initial interest was still in explaining "hard vsual English wordes" and fossilizing their spellings "for the benefit and helpe of Ladies, Gentlewomen, or other unskillful persons". Functionally, *A Table Alphabeticall* is didactic rather than descriptive.

The first edition of *A Table Alphabeticall* listed 2652 headwords. Each entry is generally no more than one line, with very simple definitions, usually written in single words or synonyms and synonymous expressions. Indications of word origins are given by means of abbreviations, such as [fr] for French (e.g. [fr] cancell, to vndoe, deface, crosse out, or teare) and (g) for Greek (e.g. throne, (g) a kings seate, or chaire of estate). In rare cases, indications of sense relations are even given, such as the use of "k" (i.e. a kind of) to suggest hyponymy (e.g. lethargie, (g) (k) a drowsie and forgetfull disease). As Cawdrey's intention is to provide meanings of hard words and codify their spellings, *A Table Alphabeticall* has a strong flavor of linguistic purism and prescriptivism. However, it signifies an important transition of English dictionary paradigm from glossaries and vocabularies to dictionaries in a somewhat modern sense and triggers off sparks of prescriptivism in English lexicography.

## 2. The prescriptive paradigm of English lexicography

Linguistics can be divided from a functional perspective into traditional linguis-

tics (typically traditional grammar), descriptive linguistics (typically descriptive grammar), encoding linguistics (typically transformational generative grammar), decoding linguistics (typically systemic functional grammar), etc. This functional approach is of more lexicographical significance in providing rich lexicographical implications. English lexicography has its theoretical beginnings in the prescriptivism of traditional linguistics.

Prescriptivism is established on the assumption that like all other things, language use should be conducted in the "correct" way. Classic linguists claim that rules should be made for the best or the "most correct" use of language. Prescriptive grammar is based on their views of the best language usage rather than on the description of actual language use. It adopts such criteria as purity, logic, historical and literary superiority to pass judgment upon the best language use and make norms for it. Any deviation from or violation of language norms is treated as language decay and corruption, and should be avoided, purified and put right in the light of logic and literary supremacy, just to prevent linguistic pollution and decay.

Research by British scholars in the 1980s show that English prescriptivism goes back to one of the Middle English varieties called Chancery English, the official written English that developed at the Court of Chancery, was used in administrative documents instead of French after about 1430 and eventually became the base for spelling regularization (e.g. gaf/gave rather than yaf, such rather than swich, theyre/their rather than hir). Chancery English marked the beginnings of a national standard of English spelling, vocabulary and grammar. By the 15th century, printing technology came from China to Europe and was introduced to Britain by William Caxton (c.1415/1422–1492) in 1476. The grammar and spellings Caxton adopted are mainly derived from Chancery English and became the foundation for purifying and codifying English spellings, which are the earliest traces of prescriptivism in the evolution of the English language.

Prescriptivism presented itself in the Old English period in the form of linguistic purism (also known as linguistic protectionism). This linguistic ideology assumes that decay or corruption will take place in a language when deviations occur from ideal language norms, or contacts occur between two languages so that linguistic similarities are produced, and that whatever modifications take place will have to be prevented, purified, and remedied. This fad of linguistic purism was widespread during the reign of Louis VIII le Lion (1187–1226) in France and is still observable in the reform of the writing systems characterized by lexical, orthographic, morphological, syntactic, and phonetic purism.

Linguistic purism is often labeled as "conservative", but it is often accepted as part of language policies of those governments that intend to conduct linguistic reforms, for it demonstrates innovativeness in the formulation of linguistic standards. Modern linguists tend to adopt a critical attitude towards the prescriptive approach to language and emphasize the importance of describing

the actual use of language and the necessity of recognizing the social variations of language in explaining language use. Over the past three decades, however, interest has been resumed in objectively reassessing prescriptivism from the socio-cultural dimensions (see Milroy and Milroy 1985; Bartsch 1987). Modern linguists have started to clear up misunderstandings and attempted to identify the positive effects of prescriptivism upon language study.

Modern linguistics shows that the right use of language does not merely mean grammatical correctness or compliance to the norms and standards followed by the majority of well-educated members in a speech community. There is much more to that. "Generally, notions of correctness are not developed for their own sake, but are developed and employed only when they are really necessary" (Bartsch 1987: 10). Bartsch (1987) distinguishes six types of correctness in language: correctness of the basic means of expression, correctness of lexical items, correctness of syntactic form, correctness of texts, semantic correctness and pragmatic correctness. The former three types fall into the formal category, and the latter fall into the functional category. Linguistic correctness has traditionally paid almost exclusive attention to the formal aspects.

The formal-category prescriptivism only flickered in the early English dictionary compilation and did not become a constant principle that ran through the whole dictionary making. No systematic methodology was formed in that process, though compilers were, to more or less extent, working under the influence of the strong prescriptive flavor stemming from Latin grammar. It was not until Samuel Johnson published *The Plan of an English Dictionary* in 1747 that the prescriptive principles for English dictionary making were systematically identified and fully expounded. By 1755, when Johnson's Dictionary met its readership, such principles were firmly established and continued to dominate English dictionary making for nearly 200 years.

Prescriptivism stems from Latin grammar and has been exerting influence upon language education, textbook writing, and dictionary compilation for hundreds of years. Prior to Randolph Quirk et al.'s publication of *A Comprehensive Grammar of the English Language* (1985), almost all books of English grammar were prescriptive in nature. They are still popular to some extent with English learners, particularly with non-English speaking learners. It is unrealistic to get rid of the influence of prescriptivism overnight, and from the perspective of dictionary making, it is inevitable that all dictionaries are to certain extent infused with prescriptive coloring in their making, which is not merely restricted to spelling, because dictionary users tend to regard dictionaries as authorities in their consultation. That explains why prescriptivism was widely accepted and became the dominating principle after its introduction into English dictionary making.

### **3. The historical paradigm of English lexicography**

The historical paradigm of English lexicography is derived from studies of

word origins, with its most distant source being traced to the Roman philologist Lucius Aelius Stilo Praeconinus of Lanuvium (152–74 B.C.). "Influenced by the Stoic philosophy, Praeconinus was interested in grammar and etymology, writing numerous articles on these subjects and eventually producing a glossary" (Collison 1982: 27). In 43 B.C., Marcus Terentius Varro (116–27 B.C.), "the first important Roman grammarian" and Praeconinus' pupil, published *De lingua Latina*, which "comprised twenty-five books", with separate sections discussing "the origin of words" and "the derivation of words from other words", but "his etymological conclusions were rather more inspired than logically argued" (Collison 1982: 27). In about 430, an Alexandrian teacher called Orion compiled an etymological dictionary, which set an example for several later compilations of a similar kind.

By the 7th century, Isidorus Hispalensis (also known as St. Isidore of Seville, c.560–636), a Spanish scholar, began to compile a noteworthy encyclopedic dictionary — *Originum; seu Etymologiarum libri XX* (twenty books of origins or etymologies), "a book designed as a wide-ranging *vade mecum* by which the newly converted people of Spain might gain access to every aspect of their new, Catholic faith" (Green 1996: 48). The first, among the "twenty books", is in fact an etymological dictionary with alphabetically-arranged headwords. Though it contains many errors and mistakes, many of its elements, particularly its efforts in explorations of word origins, were incorporated into the dictionaries of later years, such as *Catholicon Anglicum*, Hugo's *Derivationes*, Richard Huloet's *Abecedarium Anglico Latinum* (1552), to varying degrees. In 847, Harbanus Maurus (c.776–856) compiled, with numerous adoptions from Isidore's "twenty books", *Opus de universo; sive, De sermonum proprietate*, with one volume devoted to etymologies, a glossary written in much the same style as Isidore's first book.

In the mid-9th century, a glossary of an encyclopedic nature *Etymologicum genuinum* was compiled in Greek, and its author is assumed to be a respectable Greek scholar called Photius (c.825–886). This work itself, again with heavy absorptions and adaptations from his predecessors Herodian, George Choeroboscus, Methodius, Orion, and Theognostus, became a source of borrowings by numerous other works, such as *Etymologicum Magnum*, *Etymologicum Gudianum*, and *Etymologicum Symeonis*. Photius is recognized as the father of Greek etymology. By the 10th century, *Sanas Cormaic* (or *Sanas Chormaic*, also known as Cormac's Glossary) appeared, ascribable to Cormac úa Cuilennáin (?–908), an early Irish glossary of over 1400 Irish words with etymologies as well as synonymous explanations or definitions written in simple Irish or Latin. In addition to its observations in old Irish words and expressions, it is a good record of early words of Irish origin and early studies in Irish etymologies.

In the Western world, the practice of providing etymological information in a dictionary started in the middle of the 17th century when Thomas Blount (1618–1679) published *Glossographia* (1656). Blount is one of the earliest lexicographers who attempted to provide etymological information in a systematic fashion.

This practice continued in Nathaniel Bailey's (?–1742) *The Universal Etymological English Dictionary* (1721), which "was the first English dictionary to treat etymology with consistent purpose and seriousness" and "is credited with having established etymology as 'one of the requisites of any reputable dictionary'" (Landau 1989: 99). "Bailey listed not only the immediate source of the English word (etymon), but often earlier forms in other languages ... then a novelty". He "was working a century before the great advances in Germanic philology", so it is not surprising that "many of his etymologies appear wildly speculative from our vantage point" (Landau 1989: 46).

Lexicographers' etymological explorations created necessary conditions for the establishment of historical comparative linguistics, which in turn laid a theoretical foundation needed for the making of historical dictionaries. Historical comparative linguistics finds its earliest traces in Rasmus Kristian Rask's (1787–1832) pioneering work of the 19th century, which brought forth two of his major publications — *Introduction to the Grammar of the Icelandic and other Ancient Northern Languages* (1811) and *Anglo-Saxon Grammar* (1817). His works catalyzed the sprouts of comparative Indo-European grammar and clearly delineated relations of origins between Indo-European languages.

Rask was highly cognizant of the primary importance of phonetic laws to the identification of cognate relations and grammatical homogeneity to the persuasiveness of their verification. The core of modern approaches of comparative linguistics stems from Rask's innovative work. The 19th-century accomplishments in philology and in theoretical and practical lexicography helped to achieve complementarity when philologists devoted themselves to dictionary making, which caused fundamental changes in the calibre of dictionary compilers and marked the end of dictionary making by amateurs. Lexicographical professionals came to realize fully what an ideal dictionary should contain and what it should provide for its users. Dictionary users started to look at dictionaries and their making with critical eyes, and their valuable feedback in turn helped to heighten the standards for dictionaries and dictionary compilation. Historical comparative linguistics was by and large accepted as the mainstream of linguistic inquiries in Europe in the middle and late part of the 19th century. That stimulated academic interest in seeking for the origins of words and their languages, and the best way of achieving this end was certainly applying the historical linguistic principles to dictionary making.

In 1857, The Philological Society of London began its discussions about the feasibility of compiling a dictionary on historical principles, but it was not until 1884 that its unbound fascicles began to appear, under the name of *A New English Dictionary on Historical Principles; Founded Mainly on the Materials Collected by The Philological Society*, unofficially renamed OED in 1895. The full dictionary was republished in ten bound volumes in 1928, and five years later, the title OED fully replaced the former name in all occurrences in its reprinting as twelve volumes with a one-volume supplement. This magnificent dictionary received unprecedentedly wide and enthusiastic acclamation and produced a

long range of derivative dictionaries. A discernable thread can be identified of the inception, evolution and final establishment of the historical dictionary paradigm going from Blount to Bailey, and eventually from the *Deutsches Wörterbuch* to OED.

The historical paradigm for English lexicography extracts its theoretical underpinnings from historical comparative linguistics and historical linguistics and adopts historical principles and comparative approaches as its basic methodology. Focus is laid on the evolution and the representation of words of the same language source over different periods of time with a view to reconstructing the pronunciation, spelling, morphology, syntax and sense relations of words from the perspective of language development and exploring the evolutional traces of words over time and diachronic relatedness of linguistic variations in the light of historical literature and linguistic data. In practice, compilers endeavor to find out about the evolutional attributes and laws for word spellings and meanings and seek for the origins and evolutional patterns of word forms, sounds and meanings from phonological, morphological, syntactic, etymological and dialectal dimensions on the basis of diachronic data and grammatical relations.

The aim of the OED, as indicated on its website, is "to present in alphabetical series the words that have formed the English vocabulary from the time of the earliest records [ca. AD740] down to the present day, with all the relevant facts concerning their form, sense-history, pronunciation, and etymology. It embraces not only the standard language of literature and conversation, whether current at the moment, or obsolete, or archaic, but also the main technical vocabulary, and a large measure of dialectal usage and slang" so as to achieve the purpose of overcoming the seven "principal shortcomings" of contemporary dictionaries identified by Richard Chevenix Trench (1807–1886) (1857). Obviously, those "shortcomings of contemporary dictionaries" are all related in some way to word histories, and therefore are also principal shortcomings in the treatment of etymologies in dictionary making. An adequate awareness of the defects of etymological treatment in contemporary English dictionaries ensured the consistent, comprehensive, systematic and scientific implementation of historical principles in the making of OED, which signifies the firm establishment and full application of the historical paradigm in English dictionary making.

#### 4. The descriptive paradigm of English lexicography

The conceptualization of linguistics underwent radical changes in approaches and dimensions from the late 19th century to the early 20th century, marking a significant transformation in methodology from prescriptivism to descriptivism. The publication of Franz Boas' (1858–1942) *Handbook of American Indian Languages* (1911) marked the germination of descriptive linguistic theories, and their systematic generalization and exposition unfolded with the coming out of

Leonard Bloomfield's (1887–1949) *Language* (1933). Descriptivism, drawing on structural approaches to language, developed out of Bloomfieldian linguistics and on the supposition that description is of greater significance and importance to language pedagogy, research, and training.

Descriptive linguistics, which started to attract serious attention from linguists and language educators in the 1920s, advocates that linguistic description should be based on extensive data, both spoken and written, rather than merely on the written works of the best authors. Linguists should, according to the school of descriptive linguistics, describe the actual use of both spoken and/or written languages and should not prescribe how language should be spoken and written so that a comprehensive, systematic, objective and precise account of the actual use of specific languages over specific periods of time can be provided for certain purposes. All languages and language varieties, whether standard, sub-standard or non-standard, can fulfill communicative functions as long as they are used in speech communities. It is linguists' primary task to make a faithful record of how languages and their varieties are actually used rather than passing judgments upon whether certain uses are right or wrong. Rather than being based on logic and literary superiority, prescriptivism gives prominence to objectivity and systematicity.

Owing to the profound influence of Latin grammar, researches in English grammar and in English dictionary compilation were not able to break through the shackles of prescriptivism, until the rise of Bloomfieldian linguistics caused dramatic changes in the theoretical territories of world linguistics and methodological designing. Against this grand background, Gove's unprecedented masterwork, *Webster's Third*, "a marvelous achievement" and "a monument of scholarship and accuracy", came out in 1961 with brand-new conceptualizations of what English dictionaries should be and what approaches should be adopted to compile such dictionaries. Those concepts eradicated the deep-rooted prescriptive traditions that had been followed for hundreds of years by English dictionary makers and triggered off transformational modifications in the paradigm, notion, and methodology for English dictionary making. The innovations in notions and methodologies were so wide-ranging, so profound and so far-reaching, with no precedents being found in the history of world linguistics and lexicography, that *Webster's Third*, together with its policies of deletions and compiling styles and techniques, met with considerable criticism for its descriptive approach, thus its failure to tell users what proper English was, and its permissiveness. Great controversies were surging among American linguists, lexicographers, dictionary critics and users, and heated debates ensued so that criticisms spurred the creation of *The American Heritage Dictionary of the English Language* (1969), in which usage problems often went to a panel of expert writers for consultation and comments.

This transformation stems chiefly from the following core notions of descriptivism: all language are socially conventionalized systems rather than systems formed through natural laws; the primary step for language research is

observing what really happens when native speakers use the language and making a faithful record of how it is actually used; every language has its unique pronunciation, grammar and vocabulary, which neither logic nor generalized and idealized language can be employed for its description, not even other languages or the diachronic discourse of that language; all languages are dynamic instead of static and are in constant change as long as they are in use by their speakers. Therefore, the so-called "rules" are merely an agreement concerning their current use, and all language use is relative and not absolute. The judgment on whether language use is right or not can only be based on the actual use of language, not on the rules laid down by authorities. These notions, which are the guidelines Gove and his team adopted for compiling their monumental *Webster's Third*, have become the theoretical foundation for the descriptive paradigm of English lexicography. Ever since, the descriptive paradigm has been dominating English dictionary making and research. Descriptivism has played a leading role in the development of English lexicography and has become one of the fundamental principles of modern lexicography.

The seeds of descriptivism are deeply sown in the minds of present-day linguists and lexicographers. However, the struggle between prescriptivism and descriptivism is far from over. Neither is prescriptivism considered superfluous in language research nor is it ousted from the scene of dictionary making. Just as asserted by Lyons (1968: 43), "it should be stressed that in distinguishing between description and prescription, the linguist is not saying that there is no place for prescriptive studies of language. It is not being denied that there might be valid cultural, social or political reasons for promoting the wide acceptance of some particular language or dialect at the expense of others. In particular, there are obvious administrative and educational advantages in having a relatively unified literary standard." Lexicographers, as well as linguists, have started to assume a serious attitude toward prescriptivism, conduct earnest studies in its application to language pedagogy and dictionary making, and make objective assessments of its role in and influences upon such linguistic and lexicographical activities.

Lexicographers, in particular bilingual lexicographers, are now faced with the challenge of how to implement descriptive ideology in dictionary making while prescriptive traditions are not pulled out of the dictionary-making scene in their entirety. "In 'mainstream' linguistics of recent times scholars have generally claimed that prescription is not a central part of their discipline and even that it is irrelevant to linguistics", but "prescriptive attitudes have far-reaching consequences" (Milroy and Milroy 1985: 5) and have proved to be important and, in some cases, indispensable, such as in language testing and assessment and in dictionary compilation, for two main reasons. First, language is in constant change, with an extraordinarily strong tendency to maintain and regulate its structure, i.e. an instinct of self-maintenance and a process of standardization, which are eventually achieved through language users in response to internal needs for information structuring.

"Standardisation is motivated in the first place by various social, political and commercial needs and is promoted in various ways, including the use of the writing system, which is relatively easily standardised; but absolute standardisation of a spoken language is never achieved", and "it seems appropriate to speak more abstractly of standardisation as an ideology, and a standard language as an idea in the mind rather than a reality". "Ultimately, the desideratum is that everyone should use and understand the language in the same way with the minimum of misunderstanding and the maximum of efficiency" (Milroy and Milroy 1985: 22-23). Language standardization is one of the social functions dictionaries should strive to fulfill. That is the most fundamental starting point for launching dictionary projects and also the primary theoretical basis for the effectiveness of dictionaries and their making.

Second, descriptivism has exerted extensive and profound influence upon theoretical inquiries of language, but "the attitudes of linguists ... have little or no effect on the general public, who continue to look to dictionaries, grammars and handbooks as authorities on 'correct' usage" (Milroy and Milroy 1985: 6), for they feel a strong need for rules of "correct" usage and a great necessity of dictionaries and grammars providing such guidance. They are the most convenient authorities to rely on when they are encountered with usage problems and situational perplexities. Any dictionary that excludes judgments about right or wrong usage is doomed to meet with sharp criticism and strong condemnation from its users, especially in the context of cross-cultural communication and foreign language teaching and learning. That has a great deal to do with the deep-rooted tradition of teaching students only standard language in classrooms and testing them only according to norms of standard language.

This tradition is considered necessary and fundamental in the case of foreign language teaching. Non-native learners of a foreign language are generally taught standard foreign languages, and non-standard or informal varieties are strictly excluded from textbooks and classrooms, and therefore, in whatever cases, language learners are denied access to such varieties. Language testing and assessment policies are almost without exception made by the so-called language authorities. Any deviations from the norms or standards prescribed by them are labeled "incorrect" in language testing. The preaching of standard forms of language and the reliance of language learners upon rules of "correct" usage allow for much room for prescriptivism to linger on and to survive in dictionaries, especially in bilingual dictionaries. It can be safely prophesied that it is still a great distance for descriptivism to entirely dominate dictionary making and develop itself from a somewhat idealized model to a dictionary paradigm of fully pragmatic significance.

## 5. The cognitive paradigm of English lexicography

English lexicography underwent another significant theoretical transformation and shift of focuses in the late 1970s, when Longman broke ground in 1978.

Learner's dictionaries, with their origins from the early 20th century and in its wake of Longman, started to mushroom in different forms and in close succession. Their thriving and prosperity pushed dictionary making and research into the era of cognitivism and brought about the perfect integration of dictionary making with language research, cognitive science, language pedagogy, electronic technology, etc.

Learner's dictionaries, also known as pedagogical dictionaries, can be classified in various ways. In the broad sense, they refer to the active-type dictionaries that target all learners of a language for the purpose of linguistic encoding, and in the narrow sense, they refer only to the active-type dictionaries intended for learners of foreign languages or second languages. Learner's dictionaries in the modern sense began to appear as early as the 1930s in the U.K., and the pioneers in this field include Harold Edward Palmer (1877–1949), Michael Philip West (1888–1973), and Albert Sydney Hornby (1898–1978). The early important works, such as *The New Method English Dictionary* (1935) by West and James G. Endicott (1898–1993), *A Grammar of English Words* (1938) by Palmer, *The Idiomatic and Syntactic English Dictionary* (1942) and *The Advanced Learner's Dictionary of Current English* (1948) by Hornby, furnished substantial foundation for the making of English learner's dictionaries and signified the shaping of the dictionary paradigm for the first-generation learner's dictionaries.

The dictionary paradigm for the first-generation learner's dictionaries has its early beginnings in *The New Method English Dictionary*, with a coverage of 23 898 headwords, inclusive of 6 171 phrases and such new words as "crossword" and "vitamin" but exclusive of technical terms and rarely used words. This dictionary is most typically characterized by its defining techniques. All definitions are written as clearly and succinctly as possible, by means of a controlled vocabulary list of 1 490 words and with polysemy explained via synonyms, synonymous expressions and citations. Pictorial illustrations are employed in cases where definitions need to be supplemented and reinforced. Numerous citations are extracted from various data sources to demonstrate the meaning and use of headwords, with due attention given to collocations and fixed usage. It is interesting to note that in the treatment of grammatical information, the compilers focus on its decoding instead of encoding function and provide only meager information items concerning the plural forms of nouns, the comparative and superlative forms of adjectives, the past and past participle forms of verbs, etc., which differs sharply from present-day learner's dictionaries with prominence given to encoding function. However, the whole landscape of grammatical treatment assumed an entirely new look when ALD came out, after continuous supplementation and refinement in Palmer's work and in Hornby's own work, particularly with regard to grammatical rules, verb patterns, grammatical collocation.

The first-generation learner's dictionaries were endowed with brand-new features that made them distinct from previous types of dictionaries. Before them, general monolingual dictionaries were basically intended for native

speakers. With the continuous expansion of the influences of the English language around the world, the special demand for English monolingual dictionaries rose in response to the needs of learners of English as a foreign language. The English teaching experiences West, Palmer and Hornby accumulated over their time overseas, their familiarity with the regularities of foreigners learning English, and their strong awareness of learners' key concerns, major problems and common errors and mistakes in using English provided them with priceless cognitive foundations and designing prerequisites for English learners' dictionary making. The theories of controlled defining vocabulary, phraseology, and pedagogical grammar, which drew serious attention from lexicographers and language educators, became the theoretical source and energy for the emergence and development of English learner's dictionaries in the early stage.

The emergence of the second-generation learner's dictionaries were marked by the publication of the second (1963) and third (1974) editions of ALD and the first edition of Longman in 1978, which ushered in a new era of dictionary making being geared to the special needs of linguistic output. By the 1980s, the third-generation learner's dictionaries were ready to make their appearance, as a result of the rapid development of modern linguistics (especially pragmatics, cognitive linguistics, applied linguistics, corpus linguistics, computational linguistics, etc.), the more in-depth studies in dictionary use and user cognition and the timely introduction of mature electronic information technology into dictionary making. The third generation was signified and represented by *The Oxford Advanced Learner's Dictionary of Current English* (Fourth Edition, 1989), *Longman* (Second Edition, 1987) and John Sinclair's *Collins Cobuild Dictionary of the English Language* (1987).

By the 1990s, English learner's dictionaries entered into an epoch of thriving and prosperity. New editions of OALD, Longman and CCD emerged one after another, and new dictionary brands, such as Cambridge and Chambers, started to squeeze into the learner's dictionary market, owing to the revolutionary tides already surging in the lexicographical circles and the irresistible temptation of high profitability and enormous market potentials. The year 1995 is of special significance in the history of English learners' dictionary making in that it witnessed the almost simultaneous coming-out of "The Big Four", i.e. the first edition of *Cambridge International English Dictionary*, as well as new editions or new reprints of OALD, Longman and CCD. Beyond the Atlantic Ocean, another "Big Four" also made their appearance on the American dictionary market, i.e. *The American Heritage Dictionary* (College Edition, 1982), *The Random House College Dictionary* (1966–1975), *Webster's New Collegiate Dictionary* (1949–1976) and *Webster's New World Dictionary of American English* (1972). English learner's dictionaries, along with the collegiate dictionaries in America, combined to forge an era of userism and the cognitive paradigm for English dictionary making.

The cognitive paradigm of English lexicography is a natural outcome of integrated developments in theorization of cognitive science, cognitive linguistics,

tics, lexicography and foreign language pedagogy. Cognitive science, which examines human mind and the way it works and analyzes the nature, tasks and functions of cognition, can trace its origins to the studies in the nature of human knowledge and the observation and thinking of human mind conducted by ancient Greek philosophers, such as Plato (427 B.C.–347 B.C.) and Aristotle (384 B.C.–322 B.C.), and to the findings in human mind explorations by René Descartes (1590–1650), Baruch de Spinoza (1632–1677) and other philosophers. It is an interdisciplinary field that incorporates accomplishments in philosophy, psychology, neuroscience, sociology, anthropology, biology, computer science, artificial intelligence, linguistics and other related disciplines, as a complete and sound understanding of human mind and its interactions with the surrounding world can only be obtained from a combination of diverse dimensions.

The cognitive dictionary paradigm is based on such cognitive linguistic notions: language is not a self-contained vacuum system, linguistic competence is part of human cognitive capabilities, and language description must draw inferences from cognitive processes; linguistic structure has something to do with the conceptual structure, knowledge structure, discourse function and practical experience of the humanity and uses them as motivation to frame; syntax is not a self-perfected system and intertwined with vocabulary and semantics, vocabulary, morphology and syntax are continuums constituting a semiotic body; semantics is not merely objective truth conditions but is closed associated with the subjective mind and the infinite knowledge system of humankind; dictionary making and use are socio-cultural activities that highlight the natural process of linguistic cognition and the mental representation of vocabulary acquisition.

In practice, the cognitive paradigm of English lexicography starts from the links and processes of users' linguistic cognition. It adopts cognitive approaches and examines such dimensions as formal structure, categorical structure, valence structure and distributional structure to expound headwords in the dictionary and how they are acquired by users. It attempts to decipher the flow-process diagram of cognition, explore the lexical mental representation of potential dictionary users, the cognitive process of dictionary consultation, the needs and skills of information look-up, the learning strategies of dictionary use, etc. so as to enhance the efficiency of lexical acquisition. All this entails the shift in dictionary making from compiler-centered to user-centered, from decoding-focused to encoding-focused, and from consultative look-up to productive association. English learner's dictionaries, after undergoing three generations of development, have become relatively mature and at the cutting edge of the theory and practice of world learner's lexicography.

English learner's lexicography started to sublate, from the time of its formation, the prescriptive and diachronic approaches of traditional linguistics and turned to the modern synchronic descriptive approach. It borrows ideologies from various fields, including the structural behavioral theory, the trans-

formative generative theory, the theory of cognition and communication in pragmatics, the theory of second language acquisition, and even the fashionable theories of prototypic categories and metaphor in cognitive linguistics, which are reflected to some extent in the compiling strategies of *Macmillan English Dictionary for Advanced Learners* (2002). It strictly restricts the defining vocabulary limit and the density of lexical coverage, augments the number of grammatical information items and citations that facilitate linguistic production, gives primary prominence to supplementary functions that are conducive to both encoding and decoding, including language notes, usage guides, guidewords, signposts and so on, and strengthens the role of electronic information technology and corpuses in selecting headwords, senses, controlled defining vocabulary, citations, usage explanation, and variety indication, and in revision, augmentation and supplementation. All this highlights the conspicuous characteristics of English learner's dictionaries — cutting edge, flexible, handy, easy to use, efficiency-focused and user-oriented.

*WordNet* is an online dictionary, a large and extraordinary lexical database of English that bears striking resemblance to a thesaurus, with nouns, verbs, adjectives and adverbs being grouped into 117 000 sets of cognitive synonyms (synsets) on the semantic basis. It is produced by a team of linguists, lexicographers, psychologists and computer engineers in Princeton University and is available at [www.wordnet.princeton.edu](http://www.wordnet.princeton.edu). It employs cognitive principles in its making to such an extent that each synset expresses "a distinct concept" and "is linked to other synsets by means of a small number of 'conceptual relations', 'contains a brief definition ('gloss') and, in most cases, one or more short sentences illustrating the use of the synset members". "The main relation among words in *WordNet* is synonymy". "The resulting network of meaningfully related words and concepts can be navigated with the browser" (see *WordNet* website).

*WordNet* features theoretical breakthroughs, independent compilation through research and cognitive representation of lexical consultation and acquisition. It is a perfect integration of traditional techniques of treating lexicographical information, modern online information processing technology and research findings in psychology and cognitive linguistics. Its most conspicuous innovation resides in its organization of lexical information, linguistic knowledge and the whole text according to conceptual relations, sense relations and in some cases even senses proper, rather than word forms to simulate and reflect mentally human cognition of lexical items. "*WordNet*'s structure makes it a useful tool for computational linguistics and natural language processing" (see *WordNet* website). *WordNet* has proved to be of rich theoretical implication and huge practical value to studies in computation linguistics, psycholinguistics, cognitive linguistics, mental representation of lexical acquisition, lexical teaching and learning, online database building, online lexicographical information arrangement and presentation, analysis of automatically generated text, application of artificial intelligence, and natural language processing.

## 6. Conclusion

After over 1 500 years of evolution, English has become a truly globalized language. Owing to its rapid expansion into the international community in the past centuries and the strengthened status in the international arena today, English dictionaries have consolidated their ever-increasing influences upon both theory and practice of world lexicography. In less than 500 years, English dictionaries have completed their evolution from their archetype to prescriptivism, historicism, descriptivism and then to cognitivism, which amply demonstrate the sociocultural and interdisciplinary nature of dictionary making and research, the interactive relations between language and dictionary, dictionary and culture, dictionary making and user needs, dictionary design and user research, and finally dictionary use and language pedagogy. All these combine to present the evolutionary chain of English dictionary paradigms, a complete, coherent and unified portrayal of the trace English dictionaries follow in their development up to the present times.

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