Writing

Theory and History of the Technology of Civilization

Barry B. Powell

WILEY-BLACKWELL
A John Wiley & Sons, Ltd., Publication

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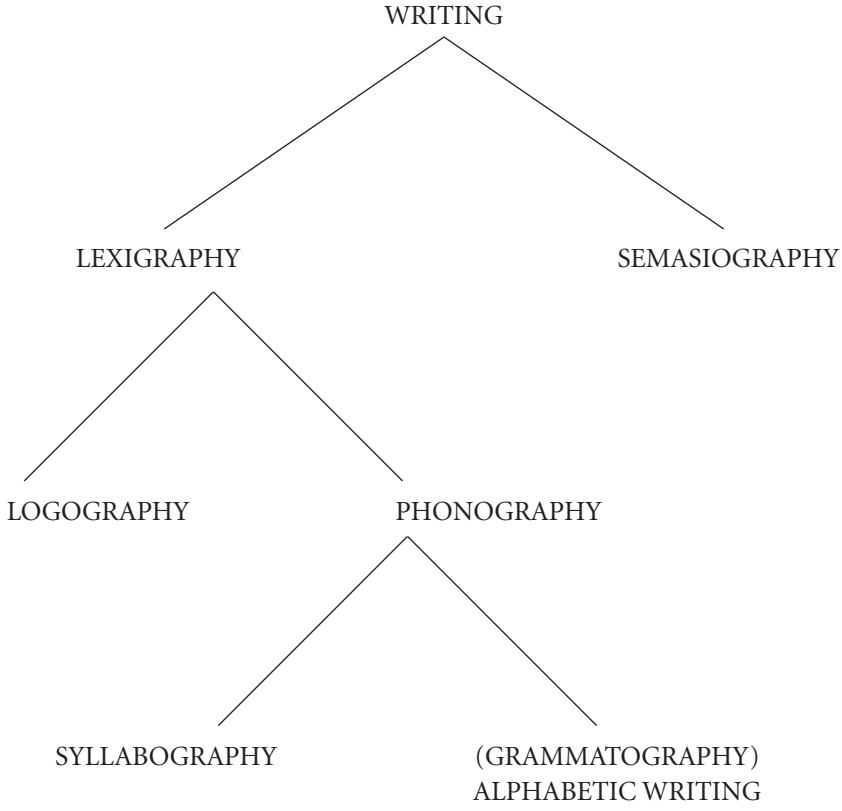

THE CATEGORIES OF WRITING

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To Emmett L. Bennett, Jr.
colleague, friend, teacher

I'll make you love scribedom more than your mother!
I will place its beauties before you.
It's the greatest of all callings.
There is nothing like it in the land!

from *Satire on the Trades* (or *Instructions of Dua-Khety*), c.1800 BC

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Preface

I hope this book may serve as a brief introduction to an immense, tangled, and obscure topic. Writing can be defined and understood, but only with the help of a careful organization of categories and terms. I know of no other humanistic topic more distorted through the careless use of categories and terms, so that things "everyone knows" are illusions. The professionals, too, offer us neologisms, buzzwords, and terms that attempt a fatal precision. For example, in one of the best books on writing in the last several years (S. D. Houston, ed., *The First Writing: Script Invention as History and Process*, Cambridge, 2004), a series of essays on the origins of writing, the reader will struggle with "glottography," "cipherability," "morphophonic," "alphasyllabaries," "consonantaries," "logophonic," "logophonemic," "logoconsonantal," "phonological heterography," "taxograms," "semasiologographic," "graphotactical," "numero-ideographic," "phonophoric," "ethnogenetic" – as well as the usual *bête noire* "pictograms" and "ideograms." Is writing really so complex, or esoteric? The study of the history of writing is the study of the explosion of illusions, and such jargon has stood as the greatest obstacle to understanding. Yet we cannot understand the historical past without understanding the technology that made possible our knowledge of it. This book should be of interest to anyone who wishes to come to grips with the question, What happened in the human past?

I have dedicated this book to my friend and colleague Emmett L. Bennett, Jr., but would also like to thank him here for the countless insights into the history of writing he has given me over the years, and the collection of examples that illustrate these insights.

I should also like to thank John Bennet for reading the entire manuscript and saving me from many errors, both of fact and interpretation. I am deeply grateful to him for his help. His hand appears on nearly every

page, but I reserve to my own responsibility all remaining failings of both kinds.

To annotate a book such as this properly would require massive documentation that would detract from the synthesis I propose. I have therefore reserved remarks about bibliography to a section in the back.

Photos and translations not otherwise credited are my own. I have included basic maps with many chapters, because where things happened is as important as when. In the text I have highlighted places on the maps by means of small capitals. The reader may find the glossary at the back of the book useful in keeping straight the bewildering terminology of writing.

Chronology

9000 BC

Widespread use of **geometric tokens** throughout Near East, c.8500 BC

Appearance of **complex tokens**, c.4500–3400 BC

4000 BC

Round clay **bullae** that enclose tokens, impressed with cylinder seals, c.3500–3400 BC

Protocuneiform numerical flat clay tablets, sealed or unsealed, with impressions of three-dimensional tokens or imitations of token shapes by means of a stylus, c.3400–3300 BC; first logograms with numbers c.3300 BC

ProtoElamite writing, c.3300(?)–3000 BC

Egyptian hieroglyphic writing, Pharaonic civilization emerges, c.3250 BC

3000 BC ***EARLY BRONZE AGE***

Tokens disappear, c.3000 BC

Sumerian cities flourish in Mesopotamia, c.2800–2340 BC

Texts in Sumerian cuneiform that reflect order of words in speech; similar development in Egypt, c.2800–2400 BC

Minoan civilization flourishes in Crete, c.2500–1450 BC

Akkadian Empire in Mesopotamia, c.2334–2220 BC; **Akkadian cuneiform**

Linear Elamite writing, c.2150 BC

Third Dynasty of Ur, c.2120–2000 BC

"**Cretan hieroglyphs**," c.2100 BC–c.1700 BC

2000 BC ***MIDDLE BRONZE AGE***

Arrival of Indo-European Greeks in Balkan Peninsula, c.2000 BC

Babylon's ascendance under Hammurabi, c.1810–1750 BC; **Old**

Babylonian cuneiform
Old Assyrian cuneiform, c.1800 BC
Cretan Linear A, c.1800 BC–1450 BC

1600 BC ***LATE BRONZE AGE***
Hittite Empire rules in Anatolia, c.1600–1200 BC; **Hittite cuneiform; "Luvian hieroglyphs"**

1500 BC West Semitic syllabic writing invented, c.1500(?) BC
Destruction of Cretan palaces, c.1450 BC
Destruction of the rebuilt Cnossus, c.1375 BC
Amarna tablets in **Middle Babylonian cuneiform**, c.1350 BC
Trojan War occurs, c.1250(?) BC
Destruction of Ugarit, c.1200 BC
Chinese script first attested in the Shang Dynasty on oracle bones, c.1200 BC

1100 BC ***IRON AGE*** begins with destruction of Mycenaean cities in Greece and other sites in the Levant
Earliest **Mesoamerican "writing,"** from Olmec territory, c.1140–400 BC

1000 BC Greek colonies are settled in Asia Minor, c.1000 BC
NeoAssyrian cuneiform, c.1000–600 BC
NeoBabylonian cuneiform, c.1000–500 BC

900 BC NeoHittite cities flourish in northern Syria, c.900–700 BC
Earliest "Isthmian" writing, c.900 BC (?)

800 BC ***GREEK ARCHAIC PERIOD*** begins with invention of the **Greek alphabet**, c.800 BC
Iliad and the *Odyssey*, attributed to Homer, are written down, c.800–775 BC
Greek colonies in southern Italy and Sicily, c.800–600 BC
Olympic Games begin, 776 BC
Hesiod's *Theogony* is written down, c.775–700(?) BC
Rome, allegedly, is founded, 753 BC

600 BC Formation of Hebrew Pentateuch (first "five books" of Bible) during Babylonian Captivity of the Hebrews, 586–538 BC
Cyrus the Great of Persia, c.600–529 BC
"Zapotec" writing from the valley of Oaxaca in Mexico, c.600–400 BC
Expulsion of the Etruscan dynasty at Rome and the foundation of the "Roman Republic," 510 BC

500 BC **Late Babylonian cuneiform**, c.500 BC–AD 75
Behistun inscriptions (**Old Persian cuneiform, Late Babylonian cuneiform, Elamite cuneiform**), c.500 BC
CLASSICAL PERIOD begins with end of Persian Wars, 480 BC
Herodotus, c.484–420 BC
Thucydides, c.470–400 BC
Plato, c.427–347 BC

400 BC
Aristotle, c.384–322 BC
Alexander the Great conquers the Persian Empire, founds Alexandria 336–323 BC
HELLENISTIC PERIOD begins with death of Alexander in 323 BC

300 BC
Earliest Mayan writing, c.250 BC
Mouseion founded by Ptolemy II, ruled 285–246 BC

200 BC
Ptolemy V carves the Rosetta Stone, 196 BC
ROMAN PERIOD begins when Greece becomes Roman province, 146

100 BC
Diodorus of Sicily, c.80–20 BC
Vergil, 70–19 BC
Augustus defeats Antony and Cleopatra at battle of Actium and annexes Egypt, 30 BC
Augustus Caesar reigns, 27 BC–AD 14

Year 0
Last Mesopotamian cuneiform, AD 75

AD 200 Classic Maya Period, c. AD 250 until AD 900
Plotinus, a NeoPlatonist Greek philosopher writes that the hieroglyphs are allegories, c. AD 250
Coptic phase of pharaonic Egyptian recorded in modified Greek alphabet called **Coptic script**, c. third century AD

AD 300
Last hieroglyphs inscribed at Philae near Aswan, AD 396

AD 400 European ***MEDIEVAL PERIOD*** begins with fall of Rome in AD 476
Hieroglyphics, by Horapollo (?), c. fifth century AD

AD 1500	
	Hernán Cortés lands in Mexico, AD 1519
AD 1600	Mesoamerican writing disappears, c. AD 1600
	Travelers' reports bring information about cuneiform to Europe
AD 1700	***MODERN PERIOD***
	Rosetta stone found in Egypt, AD 1799
AD 1800	
	Jean François Champollion deciphers Egyptian hieroglyphs, AD 1822
	Henry Rawlinson and others decipher Mesopotamian cuneiform, c. AD 1850
AD 1900	
	Michael Ventris deciphers Linear B, AD 1952
	Yuri Knorosov establishes the phonetic basis of some Mayan signs, AD 1952

Introduction: A Difficult Topic, Little Studied, Poorly Understood

It is not hard to see that writing is the single most important technology in human life, yet it is not easy to study or to think about. Nonetheless we use it almost every minute of our lives. Naturally, many handbooks attempt to explain this extraordinary technology, some of good quality, but most suffer from a recurring blindness about what writing is, where it comes from, and how it functions in relationship to speech. All scientific speculation on the history of writing, without exception, is conducted by alphabet-users, including the present study, which gives a bias to our questions and to what we take as answers. Many historians of writing do not read nonalphabetic scripts or have a casual acquaintance with them. The alphabet-using historians of writing make prejudgments that harm our understanding.

In this book I will struggle against such prejudgments by providing a scientific nomenclature for understanding writing built on a coherent model of the different internal structures that govern all writing. I want to explicate this nomenclature and this model (**see diagram facing the title page**) through the study of the history of writing in the ancient Mediterranean, China, and Mesoamerica. This book is not, then, a description of the endless variety of external form in the history of writing, for which good studies exist, but an examination through historical examples of the internal structural principles that govern all writing. By proceeding in this fashion through a dark forest filled with dragons, I hope to slay several and clear away some popular confusions:

- the illusion that the *purpose*, *origin*, and *function* of writing is to represent speech
- the common supposition that writing comes from pictures
- the misapprehension that writing necessarily evolves toward the goal of finer phonetic representation

A Chaos of Terms

In no sense is the history of writing a discipline with niches in universities filled by experts. Those who write about the history of writing come from different directions and bring with them the expectations of their own disciplines. Linguists occasionally write such books because they feel that "language" is their province and that writing is somehow language. They are unrealistic about the quality of the phonetic information encoded in systems of writing, and their explanations too often ignore the social and historical forces behind change in systems of writing. Archaeologists sometimes work directly with unfamiliar ancient scripts, but they are rarely trained philologists. Perhaps philologists are in the best position to study the history of writing, if they have learned a nonalphabetic script, because they have wrestled most with the problem of deriving meaning from symbols. Thus the Polish-American Assyriologist I. J. Gelb (1907–85), who worked at the University of Chicago and contributed to the decipherment of "Luvian hieroglyphs," wrote the most important analysis of writing in the twentieth century and laid the foundations for the modern scientific study of writing. His famous book *A Study of Writing: The Foundations of Grammatology* appeared first in 1952 (revised in 1963). Gelb was wrong in details, but he understood that the history of writing exists, with discoverable underlying principles, as in all historical study. His outline of those principles stands today, and I refer to them often in this book.

Above all Gelb urged the use of a consistent and rational vocabulary in discussing the history of writing, although few follow his advice. In reading and thinking about writing we struggle with terms that have their origin in the history of study, not in the nature of the subject. For example, we just referred to "Luvian hieroglyphs" to distinguish this writing from "Hittite cuneiform," but there is nothing hieroglyphic about this writing except the casual and entirely superficial resemblance to the historically unrelated Egyptian hieroglyphs. Both scripts are iconic, that is, we can sometimes recognize in the signs objects from the everyday world – for example, a hand, a bird, or an animal – but there is no direct historical connection between the scripts and they work in different ways. Another example is the "Ugaritic cuneiform alphabet," which is unrelated to Mesopotamian cuneiform and is not an alphabet. Unfortunately, such terms have stuck, and we are stuck with them, and we are stuck constantly

explaining that this or that term is inappropriate. I will put such casual and inaccurate but common terms in "quotations."

But the misuse of three words more than any others have harmed the study of the history of writing: "pictogram," "ideogram" (or ideograph), and "alphabet." The word "pictogram" means "picture-writing," but carries with it so much imprecision that we must avoid it rigorously. The use of "pictogram" should be the hallmark of the amateur, but careless professionals go on using it. It is always tempting to call any sign that looks like something a "pictogram," implying that the message is communicated through pictures and not through the resources of speech. Underlying the use but usually unspoken is a specious theory that "writing" began as pictures, then somehow became attached to speech, yet still remained pictures. So written characters that resemble something in the world, like Egyptian hieroglyphs, are called pictograms, as if the sign stands for what they picture and not for elements of human speech or sounds of speech. We do find representations of recognizable objects in early writing, but these "pictures" can fulfill a wide range of functions. Even when such designs appear to stand for the object represented, really they stand for the word attached to the object; that is, they refer to elements of speech, and not directly to items found in the world. "Pictures" can fulfill other functions, for example, place the thing described in a category. When wishing to speak of the representational aspects of some writings, we can call these aspects "iconic".

A similar situation pertains to the word "ideogram," often used, for example, of Chinese characters or of a class of signs in Cretan Linear B. *Ideogram* should mean "idea-writing," that is, the graphic symbolization of an "idea," a Platonic, invisible, eternal, unspoken reality. At one time scholars thought that Egyptian hieroglyphs were just that. But Chinese characters never represent eternal, unspoken realities, and neither do Linear B characters. Probably "ideograms" do not exist, so it makes little sense to talk about them.

The deep problems surrounding the word "alphabet" will be the subject of a good part of this book.

Writing, Language, Speech

Writing is old, but writing attached to speech, which I will call *lexigraphic writing*, goes back only to around 3400 BC, as far as we know. That is a

rough date, as are all dates in the fourth millennium, but one we can nonetheless work with. Immense changes have taken place in the art of lexigraphic writing since that time, as one will quickly discover if setting out to learn Akkadian cuneiform. Yet such changes rarely result from evolution, except in writing's earliest stages, and were never inevitable. They came about through the accidents of history and the intercession of individual men of genius working across racial and linguistic bounds, when fresh approaches were possible. There is no certain direction that a writing must take. Because writing systems are arbitrary and conventional they do not respond to nature (whose rules of behavior are not arbitrary and not conventional), but to the inventiveness of unknown creators, who had a purpose too often hidden from us.

So improbable is it that anyone should devise a means of encoding elements of speech by means of graphic symbols that in the Old World lexigraphic writing was invented only once, in Mesopotamia, and perhaps a second time, much later, in China. But even in China the idea of "writing" must have come from Mesopotamia over the Gansu corridor north of the Himalayas, where caravan traffic was constant. China was never wholly separated from cultural developments in Mesopotamia. A separate invention did take place in Mesoamerica, providing a test case for principles distilled from the study of Near Eastern writing. We will spend one chapter on writing not attached to speech, which I call *semasiography* (after I. J. Gelb), but most of this book is about lexigraphic writing.

Because such writing is attached to speech, we need a clear description of what we mean by speech. Unfortunately scholars often use "language" when really they mean "speech," as if they were the same thing. "Language" is *a formal system of differences* and by no means restricted to vocal utterances. In the language of speech, the spoken word "water" is not the spoken word "ice" because they have different forms, to which we attach different meanings. In the language of writing, Egyptian  is not  , though, both transliterate as *sny*: the one means "two" and the other means "companion." Different meanings accompany different forms. Similarly, in the language of writing [$] means something different from [%] because they have different forms to which we assign different significations. These signs belong to the language of writing, and they refer to words, though they do not have phonetic value.

The broad category of "language" will also include Morse Code, semaphore, and American sign language, which may refer to speech, but can never be confused with it. Such forms of language as Unicode or mathematical notation do not refer to speech at all. In the study of writing we speak of the "underlying language" essential to deciphering an unknown script, so that we easily forget that writing is itself a kind of language. The confusion between "writing" and "language" is profound, ubiquitous, and disruptive, so that in a popular view Chinese "language" is the same as Chinese "writing," a confusion that turns out, oddly, to be true once we understand how little Chinese writing has to do with Chinese speech.

Lexigraphic writing is based in speech, yes, but because we know of ancient speech only through written documents, it is easy to think that we are talking about "language" or "speech" when really we are talking about graphic representations that make use of spoken lexical elements, which may constitute in themselves a kind of language, but by no means intend to preserve actual speech. The intention is to communicate information, and for this purpose a graphic system with systematic phonetic ties to speech is a tool of earth-shaking power. It is not, however, a tool for the preservation of ancient speech.

For this reason the Sumerian speech was of use to nonSumerian Semitic scribes, because the relationships between graphic symbols and symbols originating in speech had been established by ancient usage. Just so, it was logical and practical for medieval Europeans to use Latin as a basic system for understanding across the polyglot confusion of mutually unintelligible local dialects and languages. Sumerian written in cuneiform ("wedge-shaped") writing was a traditional system of signs for communicating information whether you were Sumerian or not, and as such worked well. For the same reason, during the dominance of Assyria over the Near East during the ninth to seventh centuries BC and of Persia in the sixth to fifth centuries BC, the West Semitic Aramaic script encoding lexical forms from the "Aramaic language" was used by nonAramaic-speaking scribes over an area stretching from the Mediterranean to northwest India.

For example, in Figure 0.1, from the palace at Nineveh of Tiglath Pileser III (ruled 745–727 BC), one of the most successful commanders who ever lived, a beardless eunuch on the left calls out a list of booty while the presumably Assyrian-speaking eunuch in the middle records the inventory in the contemporary Assyrian dialect by impressing cuneiform characters with a stylus into a waxed wood tablet. The presumably Assyrian-speaking

Figure 0.1 Relief of bilingual scribes, from the palace of Tiglath Pileser III at Nineveh (in modern Iraq), c.740 BC. (London, British Museum BM118882.)

eunuch scribe on the right makes a duplicate record (to prevent cheating?) by writing on a roll of papyrus or leather, certainly West Semitic Aramaic characters tied to Aramaic speech. The difference in writing medium, part of any writing tradition, accompanies a difference in script and "underlying language."

Lexigraphic writing may refer to elements of speech, but in real speech we find extraordinary local and social differences, so great among English speakers that TV interviews in a regional English are often given subtitles for the greater English-speaking audience; that is, by means of alphabetic writing the speech is reduced to a standard form. Even in the same town speakers may not understand one another across differences in class and social background, although they "speak the same language." In my own experience, once, in Alexandria, Egypt, my middle-class guide was unable to communicate with a street sweeper who may have known the location of our hotel, yet both spoke "Arabic."

Only writing, and especially alphabetic writing supported by political power and social prestige, creates the illusion that a "language" such as English

is a single thing, out there, bounded, defined, and capable of discovery. Writing's overarching power stabilizes speech, represses local differences, and fashions standards for thought and expression. Dante's Florentine dialect was one of hundreds of local Italic vernaculars descended from Latin, but his written *Commedia* in a fourteenth-century Florentine dialect created "the Italian language." Many books speak of the Phoenician, Hebrew, Moabite, Aramaic, and Syriac "languages" when, really, they are looking at small variations in the forms of West Semitic *writing* applied over a broad geographical area to a single speech-family that we might loosely call "Semitic," with local differences based on a similar phonology (a selection of voice sounds) and a similar inner structure. For example, in Hebrew the word for son is *bn* and in Aramaic it is *br*, but in Cambridge, Massachusetts, spirits to drink are /lika/ and in Seattle they are /likor/. Still, spoken communication takes place. The imperative "carry!" is *qabur* in the Hebrew "language," *qabor* in Syriac, *'uqbur* in Arabic and *qabar* in Ethiopic, but all are mildly different expressions from a single underlying system. The great family of Semitic languages has very many regional variations, and we are simply never sure when a dialect has slipped over into a new "language," that is, when a speaker within one system can no longer understand a speaker from another system. But twenty years of study of the holy Quran, certainly written in Arabic, will not enable the student to converse, even about simple things, with an inhabitant of Fez, Cairo, or Damascus, where everyone speaks "Arabic."

The confusion is clear in Figure 0.2, a type of chart that appears in many books on writing. The chart catalogues the transformations undergone by the West Semitic signary (in which a hypothetical but wholly unproven priority is given to Phoenician script). Such graphic variations are taken as designating the different languages of "Phoenician," "Moabite," various forms of "Aramaic," and "Hebrew." But such different "languages" are as close to one another as Quranic Arabic is to spoken Arabic in its myriad and often mutually unintelligible varieties. It is true that, schooled in the Phoenician script of 1000 BC, one will have a hard time reading "Palmyrene Aramaic" of the third century AD, the script and language used in the caravan city of Palmyra in the Syrian desert, but these are nonetheless the same script with formal differences growing over more than one thousand years. The underlying "language" has remained the same. Such charts are really a study in handwriting, or paleography, with limited importance for understanding the theory and history of writing, and they do not describe an evolution of "language."

	Early Phoenician	Moabite	Hebrew Ostraca (sixth century BC)	Early Aramaic	Late Aramaic Papyri	Palmyrene Aramaic	Monumental Nabataean Aramaic	"Square" Jewish/ Hebrew Printed
ʾ	𐤀	𐤀	𐤀	𐡀	א	𐡠	𐢇	א
b	𐤁	𐤁	𐤁	𐡁	ב	𐡡	𐢈	ב
g	𐤂	𐤂	𐤂	𐡂	ג	𐡢	𐢉	ג
d	𐤃	𐤃	𐤃	𐡃	ד	𐡣	𐢊	ד
h	𐤄	𐤄	𐤄	𐡄	ה	𐡤	𐢋	ה
w	𐤅	𐤅	𐤅	𐡅	ו	𐡥	𐢌	ו
z	𐤆	𐤆	𐤆	𐡆	ז	𐡦	𐢍	ז
ḥ	𐤇	𐤇	𐤇	𐡇	ח	𐡧	𐢎	ח
ṭ	𐤈	𐤈	𐤈	𐡈	ט	𐡨	𐢏	ט
y	𐤉	𐤉	𐤉	𐡉	י	𐡩	𐢐	י
k	𐤊	𐤊	𐤊	𐡊	כ	𐡪	𐢑	כ
l	𐤋	𐤋	𐤋	𐡋	ל	𐡫	𐢒	ל
m	𐤌	𐤌	𐤌	𐡌	מ	𐡬	𐢓	מ
n	𐤍	𐤍	𐤍	𐡍	נ	𐡭	𐢔	נ
s	𐤎	𐤎	𐤎	𐡎	ס	𐡮	𐢕	ס
ʿ	𐤏	𐤏	𐤏	𐡏	ע	𐡯	𐢖	ע
p	𐤐	𐤐	𐤐	𐡐	פ	𐡰	𐢗	פ
ṣ	𐤑	𐤑	𐤑	𐡑	צ	𐡱	𐢘	צ
q	𐤒	𐤒	𐤒	𐡒	ק	𐡲	𐢙	ק
r	𐤓	𐤓	𐤓	𐡓	ר	𐡳	𐢚	ר
š	𐤔	𐤔	𐤔	𐡔	ש	𐡴	𐢛	ש
t	𐤕	𐤕	𐤕	𐡕	ת	𐡵	𐢜	ת

Figure 0.2 Various character forms for West Semitic writing, from c.1000 BC to modern times. (After Healey, 1987, fig. 15, p. 223.)

In sum, the ambiguous correspondence of language and speech afflicts all such studies as this one, because speech, sometimes called "spoken language," certainly is a language, but not all language is speech. We will need constantly to speak of the "language" underlying systems of writing,