This volume brings together papers relating to the pronunciation of Semitic languages and the representation of their pronunciation in written form. The papers focus on sources representative of a period that stretches from late antiquity until the Middle Ages. A large proportion of them concern reading traditions of Biblical Hebrew, especially the vocalization notation systems used to represent them. Also discussed are orthography and the written representation of prosody.

Beyond Biblical Hebrew, there are studies concerning Punic, Biblical Aramaic, Syriac, and Arabic, as well as post-biblical traditions of Hebrew such as piyyuṭ and medieval Hebrew poetry. There were many parallels and interactions between these various language traditions and the volume demonstrates that important insights can be gained from such a wide range of perspectives across different historical periods.

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Cover image: Detail from a bilingual Latin-Punic inscription at the theatre at Lepcis Magna, IRT 321 (accessed from https://it.wikipedia.org/wiki/File:Inscription_Theatre_Lepcis_Magna_Libya.JPG). Leaf of a Syriac prayer book with Western vocalization signs (source: Wikimedia Commons). Leaf of an Abbasid-era Qurʾān (vv. 64.11–12) with red, yellow, and green vocalization dots (source: Wikimedia Commons). Genizah fragment of the Hebrew Bible (Gen. 11–12, Cambridge University Library T-S A1.56; courtesy of the Syndics of Cambridge University Library). Genizah fragment of a Karaite transcription of the Hebrew Bible in Arabic script (Num. 14.22–24, 40–42, Cambridge University Library T-S Ar. 52.242; courtesy of the Syndics of Cambridge University Library). Greek transcription of the Hebrew for Ps. 22.2a in Matthew 27.46 as found in Codex Bezae (fol. 99v; courtesy of the Syndics of Cambridge University Library).

Cover design: Anna Ga...
This volume brings together papers relating to the pronunciation of Semitic languages and the representation of their pronunciation in written form. Most of the papers originated as presentations at a series of workshops on Semitic vocalisation traditions held in Cambridge between 2016 and 2018. To these have been added other contributions from scholars who are active in this general field of research.

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There were many parallels and interactions between these various language traditions and the volume demonstrates that important insights can be gained from such a wide range of perspectives across different historical periods. It was in the early Islamic period (eighth–tenth centuries CE) that the written vocalisation notation systems of Semitic languages were developed. These included the vocalisation systems of Syriac, Arabic, and Hebrew, which were created to represent the oral reading traditions of sacred texts. This was a major intellectual achievement, which came about through the interchange of knowledge and ideas across the different religious communities of the Middle East (see the paper by Posegay in this volume). It also reflects a
pivotal change in society in the region at this period whereby oral traditions of all types began to be textualized in written form.

The medieval vocalisation systems are important sources for reconstructing the Semitic reading traditions that were current in the Middle Ages. In recent research these reconstructions have been enhanced by other medieval sources, such as transcriptions of reading traditions in different scripts and phonetic descriptions of the traditions.

The medieval vocalisation sign systems and the various reading traditions they represented exhibit considerable diversity. Some of this diversity has only recently come to light and is the subject of several of the papers in the volume (e.g., the papers by Arrant, Attia, Outhwaite, Khan, and Phillips). The sacred reading traditions, moreover, were complex skeins of pronunciation, musical cantillation, and interpretation, which interacted with each other in various ways. This is shown in DeCaen and Dresher’s contribution on the Tiberian Hebrew accentuation system and in Habib’s paper on the exegetical dimension of the Tiberian Hebrew reading tradition. A further dimension of diversity is found in the reading traditions reflected in medieval poetry, as shown by Delgado’s paper on medieval Hebrew poetic metrical systems and Rand’s on the pronunciation reflected by rhyme schemes of Hebrew liturgical poetry.

The reading traditions reflected by the medieval vocalisation systems were oral traditions that had deep historical roots in late antiquity and beyond, as shown, for example, by the papers of Hornkohl, Molin, and Myers. In a number of respects, however, diachronic changes took place in the reading traditions of late
antiquity, as shown in particular in the papers by Kantor and Suchard.

The medieval written vocalisation sign systems were in some respects a further cycle in the development of vowel notation through the use of vowel letters in Semitic scripts in periods before vocalisation by means of diacritics. Of importance for the theme of the volume, therefore, is the paper by Crellin and Tamponi on the representation of vowels in Neo-Punic.

In what follows we offer summaries of the papers in order to furnish readers with an overview of the contents of the volume.

The article by Robert Crellin and Lucia Tamponi elucidates the vowel quality and quantity of Neo-Punic and Latin from North Africa and Sardinia. An important innovation presented in the article is the investigation not only of the representation of vowels in Neo-Punic by means of matres lectionis, but also of zero-representation and its relation to representation by matres lectionis. This sheds light on the degree of sensitivity of writers of Neo-Punic inscriptions to vowel length in Latin. The examination of the representation of vowel length and vowel quality further reveals that in both North Africa and Sardinia the distinction between /i, eː/ and /u, oː/ was retained despite the merger of these phonemes in Common Romance. The authors convincingly suggest that this is due to ties between North Africa and Sardinia. The article thus adds to our understanding of the linguistic development of both Romance and Punic in North Africa and Sardinia and to the relations between those two communities.

Benjamin Kantor investigates the attestations of the wayyiqtol form in ancient Greek and Latin transcriptions of Biblical Hebrew and compares those attestations with medieval Jewish
traditions of Biblical Hebrew (Tiberian, Babylonian) and with the Samaritan tradition. It is shown that the Greek and Latin transcriptions help us understand the development of the later Jewish and Samaritan traditions. By the time of Jerome’s transcriptions (fourth/fifth century CE), the gemination following the initial *wa-* is generalised, whereas earlier, in Origen’s Secunda (circa first–third centuries CE), it is not fully developed. In the Samaritan tradition there is no trace of this kind of gemination. The article reaches the important conclusion that gemination in *way-yiqtol* is a development of the Second Temple Jewish traditions, but not the Samaritan tradition.

Peter Myers seeks to shed light on the guttural consonants of Biblical Hebrew underlying transcriptions into Greek in 2 Esdras, the Greek translation of Ezra-Nehemiah in the Septuagint. The article goes about this by examining the vowels that are used where the underlying Hebrew pronunciation would be expected to have a guttural. Myers finds a degree of systematicity in the use of specific Greek vowels for specific Hebrew guttural consonants. The examination also corroborates earlier hypotheses regarding the loss of the velar fricatives /*ḥ*/ and /*ḡ*/ in Hebrew by the time of the writing of Septuagint Ezra-Nehemiah.

Dorota Molin’s article highlights the importance of the incantation bowls in Jewish Babylonian Aramaic from the sixth–seventh centuries CE for the study of the pre-Masoretic Babylonian reading tradition of Biblical Hebrew. Biblical quotations within these bowls constitute the only direct documentation of Biblical Hebrew from Babylonia at that time. The phonetic spelling of the quotations provides much information about their pronunciation. In a series of case studies Molin shows that the
pronunciation of the quotations corresponds closely to the medieval Babylonian reading tradition. She also demonstrates that they reflect interference from the Aramaic vernacular, manifested especially in weakening of the guttural consonants, and that the writers drew from an oral tradition of the Hebrew Bible.

Benjamin Suchard treats the phenomenon of irregular reflexes of the vowels *i and *u in Biblical Hebrew and Biblical Aramaic from a novel perspective of ‘phonological adaptation’, whereby speakers of one language adapted borrowed forms to their own phonology. This process is known to be irregular. The author makes an innovative suggestion that in Biblical Hebrew and Biblical Aramaic, respectively, the irregular reflexes of the vowels *i and *u are due to the phonological adaptation of pre-Tiberian Hebrew to Aramaic phonology and of Biblical Hebrew to Palestinian Greek phonology. Such a process sheds light on general developments in the reading traditions and linguistic realities of Palestine of late antiquity.

Nick Posegay presents new data in his article on links between the various medieval vocalisation traditions of Hebrew, Syriac, and Arabic. These include the identification of overlaps in the Aramaic terminology used by Jewish Masoretes and Christian Syriac grammarians and in the phonological theories that underlie them. Posegay thus provides new evidence that the systems did not develop in isolation, but where the result of intellectual exchanges between the various religious communities.

Aaron Hornkohl examines two features in the Tiberian reading tradition of Biblical Hebrew, namely the qal construct infinitive and the 3ms possessive suffix that is attached to plural nouns and some prepositions. The article argues that although
the vocalisation in both cases is secondary relative to what is represented by the consonantal text, it is not artificial and post-biblical, but rather a relatively ancient product of the real language situation of an earlier period, namely, the Second Temple Period, if not earlier. The view that the vocalisation has such historical depth and is the result of natural linguistic development is often dismissed by biblical scholars. By examining the distribution of forms within the Tiberian Masoretic version of the Hebrew Bible and in extra-biblical sources, especially the Dead Sea Scrolls and First Temple period epigraphy, Hornkohl convincingly demonstrates that the incongruity between the vocalisation and the consonantal text is earlier than Rabbinic Hebrew (second–third centuries CE).

Joseph Habib examines the attitudes of medieval Karaite exegetes and Saadya Gaon with regard to the qere and ketiv in the Masoretic Hebrew Bible on the basis of their commentaries and Arabic translations. Habib presents clear evidence that both Saadya and various Karaite exegetes relied on qere as well as ketiv for their exegesis. He shows that the main motivation to use one or the other as the basis of interpretation is harmonization with parallel verses.

Vincent DeCaen and Elan Dresher investigate the reasons that pausal forms in Tiberian Hebrew, which are expected to occur at the end of ‘intonational phrases’, at times appear where Tiberian accents are conjunctive rather than disjunctive. They challenge an earlier opinion that such mismatches represent different traditions or stages of interpreting the biblical text, maintaining instead that these mismatches are due to limitations inherent in the Tiberian system of accents.
In his paper Kim Phillips focuses on shewa signs that are pronounced as vocalic according to the Masoretic treatises in contexts where they would normally be expected to be silent. He examines how such shewas are represented by the scribe Samuel ben Jacob, who produced the Leningrad Codex and various other codices. The examination reveals that the scribe strove for graphic economy and was not completely consistent in the strategies that he adopted to represent the vocalic nature of the shewa in these contexts across the various manuscripts.

Benjamin Outhwaite examines how deviations from the standard Tiberian tradition found in ‘Common Bibles’ from the Cairo Genizah reveal the way Biblical Hebrew was pronounced by those who produced the manuscripts. Common Bibles have to date been studied far less than other biblical manuscripts from the Cairo Genizah. The study examines five fragments. It illustrates numerous deviations in notation from the standard conventions of Tiberian vocalisation and also many features that reflect a pronunciation different from that of the standard Tiberian tradition.

Estara Arrant examines categories of Torah codices from the Cairo Genizah that have not been afforded sufficient scholarly attention, namely ‘near-model’ codices, a term coined by Arrant. The study analyses almost three hundred fragments by means of a methodology based on statistical analysis. The study shows how statistical methods can be employed to reveal sub-types of Torah fragments that share linguistic and codicological features.

Geoffrey Khan looks at imperfect performances of the prestigious Tiberian pronunciation tradition that are reflected in medieval Bible manuscripts. He proposes explanatory models for the development of such imperfect performances. Three factors are
identified: interference of a less prestigious substrate, which he identifies as the Hebrew component of Jewish vernacular Arabic; hypercorrections; and varying degrees of acquisition of the Tiberian tradition. Khan describes these various phenomena and concludes that the imperfect performances must be datable to a period when the Tiberian pronunciation tradition was still alive and was familiar, though not perfectly, to the scribes.

Élodie Attia examines the question of the relationship between early Ashkenazic Bible manuscripts and the Tiberian tradition as recorded in the earliest Tiberian manuscripts, especially the Leningrad Codex and the Damascus Pentateuch. The main Ashkenazic manuscript chosen for the study is Vat. Ebr. 14. The study challenges an earlier claim by Pérez Castro that early Ashkenazic Bible manuscripts were far removed from the Tiberian tradition in comparison with Sephardic manuscripts. Attia shows that by enlarging the corpus of Tiberian manuscripts and by including Ashkenazic manuscripts earlier than those previously studied, the relations between the two corpora appear more complex than has hitherto been believed.

José Martínez Delgado presents a detailed overview of the different models for explaining the metric system of Andalusi Hebrew poetry. The author focuses on four models, which are found in various historical documents and scholarly studies.

Michael Rand draws attention to some features in the so-called ‘Qillirian’ rhyme scheme, named after the great poet Eleazar be-Rabbi Qillir, who invented and introduced it into Hebrew piyyuṭ. In piyyuṭim with this type of rhyme, morphological elements, namely, two root consonants, form the basis of rhymes. Rand elucidates different ways in which this feature is implemented and how it may encompass both a linguistic reality and
a poetic tool. Some rhymes reflect historical phonetic changes that took place in the pronunciation of Hebrew; others constitute poetic techniques. It is shown that in some cases /a/ rhymes with /e/, which is likely to reflect a phonetic reality rooted in the speech of the poets.

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