CHAPTER EIGHT
READERS, EDITORS, AND TYPESETTERS

In this chapter I address a number of issues alluded to in previous chapters that have not received attention in past work on Hebraicization or the adaptation of scripts (and certainly not in connection with Judeo-Portuguese): the notions of *native* and *foreign* in relation to writing systems, the editorial process(es) of transforming Hebraicized material and making it *accessible* to other audiences, and the adaptation of Roman-letter (computer) keyboards to generate Hebrew-letter text. Each of these is inspired by practical, "consciousness-raising" concerns in my own work – from finding myself explaining that despite the Hebrew script the language of these texts is not Hebrew, to interacting with software that in many ways recapitulates for the computer age part of the process that generated Hebraicized writing systems and other adaptations of scripts.

1. CONVENTIONALITY IN THE WRITTEN FORM

Orthographic variation, be it synchronic or diachronic, is the stuff of historical linguistics. As noted in the first chapter, the earliest writing in the vast majority of languages was produced through the adaptation of a pre-existing set of graphemes – or, viewed alternatively, through the adaptation of spoken forms into the mould of a pre-existing script (and a selected set of conventions). This process might entail some degree of *ad hoc* convention, i.e. sound-to-symbol mappings not manifested in the writing system that inspired the adaptation (because the writer's language contains sounds not present in

the source language, or vice-versa). By extending this view to the adaptation as a whole, it can seem natural to assume that these first written forms must be influenced primarily by spoken language – that is, that they convey (or attempt to convey) the sounds of the language as perceived or produced by the writer at the time of composition. Consider, however, the following excerpt from an e-mail message sent to me by a native English speaker who had recently been studying the Yiddish language:

(1) zai mir a moychel ... Meyn yiddish is azoi shlecht
Sorry ... my Yiddish is pretty bad

As noted elsewhere, Yiddish is at present the only language other than Hebrew with a (semi)standardized, (semi)institutionalized Hebrew-letter orthography. This set of conventions constitutes the only adaptation of Hebrew script to persist as an autonomous written norm (in the same sense that English and French represent autonomous Roman-letter norms). While Yiddish orthography may be marked by competing conventions, it is not marked by competing scripts.

The writer of the above message thus had to make a number of choices about how to supersede the customary spelling of Yiddish, given the "new" set of Roman characters. This task may be facilitated or hampered by the fact the writer is aware, to varying degrees, of pre-existing conventions for representing other closely-related languages in this script (namely English, her native language, and German, which her Romanized Yiddish might inadvertently resemble). What, then, is one to make of the variation in the vowel spelling in *zai* 'please' and *meyn* 'my', both of which are written/pronounced with the same vowel letter/sound in the modern

classroom Yiddish that this writer was learning? What, for that matter, might a twenty-fifth-century philologist infer about late twentieth-century Yiddish if confronted by this variation? These questions point to the more general and fundamental problem suggested in chapter 3, which any historically-oriented linguistic study must address, namely what variation (if any) is implied at other levels of the language by variation on the orthographic plane.

1.1. Native and foreign scripts

Since the author of the above e-mail message had elsewhere in her writing adopted <ai> as a preferred spelling for the /aj/ diphthong, it is the <ey> variant that should be accounted for. This allograph can be seen as a combination of influence from the <y> in her native English *my*, and the <e> in the German cognate *mein* (and the digraph for /aj/ in its orthography in general).[1] Note that this choice could not have been based on analogy with the standard Hebrew-letter spelling מײַן <myyn>, in which the vowel is represented by two identical letters and (usually) a sublinear diacritic. Notice also that the writer did not analogize from any of the conventional English spellings for so-called "long *i*": the most common spelling already exists as <mine> and in the context of the sentence would stand out as an unmotivated borrowing (and a grammatically incorrect one at that), while the putative models for <mign> (*sign, benign)* – let alone <mighn> (*might?)* or <myne> (*tyne? lyme?)* – are orthographically marginal. Neither the standard Hebrew-letter matrix nor the salient Roman-letter models tells the whole story. This

[1] Although the writer had not studied German per se, this is one of the salient points of written German vis-à-vis English, which an English speaker is likely to have encountered through unnativized spellings such as *Klein, -meister,* and *zeitgeist* that occur in written English.

writer's Yiddish-language adaptation of Roman script betrays an indifference toward the dominant spelling and a fusion of competing conventions.

Even more instructive is a multilingual dialogue from an October, 1999 article in the Yiddish *Forverts*. Written under that newspaper's editorial guidelines for Yiddish spelling (which, it should be noted, vary slightly from one writer to the next), the dialogue contains words and phrases excerpted from a Tel Aviv conversation in Polish, Russian, French, Spanish, Italian, as well as English, such as the following:

(2) דעטס אָלרייט ... דעטס נאַט ניו
dets olrayt ... dets nat nyu
'that's alright ... that's not new'

It is well-known that because they lack a voiced dental fricative phoneme in their native languages, many Jews born in Eastern Europe realize the voiced fricative /ð/ of English, which is spelled uniquely by <th> in the modern orthography, as a stop [d]. The Yiddish speakers in this dialogue could well have realized the English word *that's* as something akin to [dɛts]. Hence their pronunciation is nicely indicated in the Yiddish spelling by the initial ד, the Hebrew letter *d*.

However, the impulse to assume that the writer of the article intended to convey a *Yinglish*-like [dɛts] pronunciation is conditioned by more than just the presence of the letter ד. Because the article does not present the word in its conventional spelling (let alone in its conventional alphabet), it is somehow easier to presume that it offers a phonetically more candid representation – and does so intentionally – than it would in its convention-laden "native" spelling. This presumption is, for better or for worse, supported by the fact

that the inferred [d] pronunciation coincides with a plausible realization of the utterance represented. This account also follows in spite of the fact that the voiced dental fricative [ð] of the native English pronunciation has more in common phonologically with the sound most often associated with <d> (a voiced dental stop) than it does with either the voiceless dental stop or voiceless glottal fricative, the sounds that English speakers would assign to the individual symbols in the digraph <th>.

Indeed, the power of <th> as the unique modern English spelling for [ð] seems to preclude any other graphy from bearing an equally-conventional English reading. That power is reinforced in this case because the units of the <th> digraph are "native" to the set of characters normally used to spell English, while ד is taken from a "foreign" system. If the dialogue were presented in a French-language magazine, printed in a Roman typeface, then a reader capable of producing [ð] might well read the <th> digraph as such, despite the fact that it normally indicates [t] in French words (where neither /ð/ nor /θ/ occurs in the standard language). Is it similarly possible for the Yiddish writer to expect her readers to flout the conventional sound-symbol mapping in Yiddish – in other words, to read ד as [ð], and thus דעטס as the Yiddish-alphabet spelling for an anglophone-like [ðæts]?

1.2. Orthography is not transcription

The preceding question hinges on whether the utterance from the *Forverts* article in (2) was intended in the first place to represent that of a native or non-native English speaker, and whether the writer meant to provide her sample of Hebraicized English as a *transcription* or *transliteration* (cf. chapter 2 § 3). As such it raises an important methodological point. As

argued above, neither the Roman- nor the Hebrew-letter spelling of [ð] is phonetically transparent or phonologically precise: both are orthographic approximations. Yet it would be less conventional for a writer to supplement the graphic inventory by borrowing or inventing a new character for a sound not conventionally represented by the available graphemes.[2] Instead, one would expect her to exploit the existing sound-symbol mapping conventions in more or less predictable ways. The reader can thus expect the writer to imply a new approximation in such cases, just as the writer would not normally expect her reader to have to infer the value of an imported or invented character.

This methodological point is also relevant to the philologist working five centuries hence. Even if all Roman-letter records of English were lost by the twenty-fifth century, leaving our philologist with a corpus of only Hebrew-letter writing, he would not necessarily have a poor record of twentieth-century English. Knowing something of the limits imposed by previous conventions on each grapheme, a good deal can be determined through a fairly simple process of triangulation. Taking ד to indicate a sound with at least the features [+voice] and [+dental], and <th> to signal at the very least a [+continuant] sound (having already inferred, of course, that it stood for a single phonological segment), the combined hypotheses yield the correct underlying phoneme.[3] At the same time, knowing that ד has been used for a historical /d/ elsewhere, and that the native English sound it seems to spell is

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[2] It is not unprecedented, of course: Old English writers borrowed <ð> itself from the Old Norse writing system.

[3] In fact, both Hebrew ד and Latin <d> have well-attested uses as symbols for [ð], since both have stood for a /d/ that underwent a similar process of lenition. In Hebrew this value survives in the traditional pronunciation of some Sephardic and Eastern communities; in "Latin" it survives in the standard orthography of Modern Spanish itself.

/ð/, the philologist can assume a new and historically well-motivated sound-to-symbol correspondence (which he can test in the rest of the corpus), where ד ambiguously represents two English phonemes – just like its conventionalized twentieth-century counterpart <th>.

By the same token, when dealing with Portuguese written in Hebrew script five centuries prior, the philologist cannot always assume that the grapheme-to-phoneme correspondences between the Hebrew letters and Portuguese sounds necessarily parallel or coincide with the correspondences of the Roman-letter orthography, or that the Hebrew letters representing the phonological and morphological segments of Portuguese do so in a one-to-one fashion. Difficult cases could, of course, be resolved by triangulating with other phonological evidence, contemporary Roman-letter usage, or other Hebrew-letter patterns. But it is plainly the case that not every graphic variation in an orthographic system will represent a phonetic or phonological variant, or that the absence of graphic variation will imply phonological uniformity. The *ad hoc* conventions that characterize an individual writer's adaptation of script, however inconsistently they apply, are conventions nonetheless, and may appear to be *ad hoc* only in the modern absence of a larger more instructive corpus.

1.3. Transcription as pseudo-spelling

Nevertheless, a spelling system that departs radically in its basic graphic form from the traditional one – by using a set of graphemes unrelated to the traditional ones – cannot but differ in its portrayal of the language. Numerous cases could be cited in which the conventions of a relatively standardized orthography were adopted by a given writer as a quasi-phonetic transcription

for another language, or applied in a more official capacity as an orthography proper.[4] This is certainly the basis for efforts (often by non-specialists) to transcend orthography by "spelling phonetically," i.e. to disambiguate a spoken form using the conventions of a standardized orthography. For instance, when I am asked by an anglophone to indicate the "correct" (or better yet "ideal") pronunciation of my name, my usual choice is <deh-vin>, even though there are no graphically-nativized English words in which /ɛ/ is spelled with <eh>,[5] and no literate English writer is likely to use this digraph in guessing the formal spelling of any word. As a written syllable it is grapho-tactically acceptable only in the service of disambiguating some aspect of the formal spelling.[6]

In a more intriguing case, when Greenlaw (2002) tries to capture the aural impression of Bob Dylan's vocal performance in a song from his *Nashville Skyline* album, she writes a series of nonwords that are nonetheless grapho-tactically acceptable – that is, readable:

(3) untilla brake odayee… lemmy ceeyer maikim sermiyul[7]
Until the break of day, let me see you make him smile.

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[4] To cite one characterized by both phenomena: for most of its history the orthography of Manx Gaelic was an Irish-based system, until it was transcribed by writers of Early Modern English, at which point the conventions of the latter revealed phonetic information that had been obscured by the historical spelling (W. Harbert, p.c.).

[5] The <i> in the second syllable is necessary because in the context of "phonetic spelling," some orthographic conventions are in fact suspended; thus to maintain the <o> would create the misleading impression that the correct pronunciation of the second syllable was in fact [vɔn].

[6] Note that the ambiguity resolved by the <h> is not necessarily related to vowel quality but rather to stress position (which is certainly a practical concern for those of us named <Devon>, given those who go by [dəvɔ́n]).

[7] Greenlaw prefaces her transcription by stating (with a wry smile, no doubt) that "I knew all the words to *Nashville Skyline* before I knew what they meant," adding that "singing along was much harder than it should have been" (2002: 73).

Note that only one of these "words" actually corresponds to an existing spelling – and it is the wrong homophone at that, because the effect Greenlaw is aiming for requires that none of the words correspond to the "correct" spelling. "Readability" clearly implies rather different things in the context of transcription and of orthography.

Neither the Dylan lyric nor the transcription of my name represents the product of normal writing by literate adults, because literate adults do not normally write simply to represent their speech graphically (just as they do not speak in order to represent their writing orally). The primary purpose of orthography is not to represent spoken language but to conventionalize the graphical transfer of meaning, and there is no obvious reason to expect a fifteenth-century Portuguese Jewish writer to have behaved otherwise. The twenty-fifth-century philologist of Hebraicized English must consider that the language of his text, despite its glaringly nonstandard appearance, may be none other than standard twentieth-century English. Similarly, as discussed in chapter 3, the twenty-first-century philologist of Hebraicized Portuguese must be prepared to admit that the only nonstandard feature of his texts is the mode of writing itself. Indeed, rather than verifiable insight into the spoken language of their fifteenth-century writers, what may be more conspicuous in these medieval texts are the attitudes of post-fifteenth-century readers, as revealed by the form in which they are presented by their editors to other post-medieval readers.

2. Representation and Accessibility

Beyond the audience initially envisioned by the writers of Judeo-Portuguese, among those who might take an interest in the medieval

Portuguese texts presented in the previous chapters would be Jewish historians, Romance linguists, even general readers of Portuguese. There is, moreover, a good chance that in any of those groups there will be some readers for whom the Hebrew letters are the sole but, for better or for worse, impenetrable barrier to accessing the substance of the text. Indeed this is the "problem" that confronts any non-specialized reader of Hebraicized material, an issue that has been discussed extensively in relation to Old Yiddish texts. Though the adaptation of Hebrew script to this Jewish form of Middle High German flourished in later centuries, and though it comprises a much larger and better-studied corpus, the earliest Yiddish writing very much resembles our Judeo-Portuguese in its lack of obvious Judaic character beyond its alphabet. As a consequence, perhaps, amidst the many studies of Old Yiddish manuscripts, Frakes (1989: 110) notes a "ubiquitous litany of . . . scholars, which rises in a multilingual choral refrain, calling for texts to be *accessible*, *zugänglich,* or *tsutritlekh.*" Although the amount of previous scholarship on Hebraicized Portuguese writing (not to mention the size of the corpus itself) has precluded a similar litany, the issue has a similar resonance.

For many a thoughtful and educated Western audience, literate in one or more Roman-letter orthographies, it could prove difficult to read any material in Hebrew script, let alone material a reader might otherwise expect to recognize as a Romance language. The process of editing Hebraicized texts – the major activity behind my work – is in many ways a recapitulation of the process by which the "interested reader" goes about accessing the text. It is in this sense that, as in Old Yiddish studies, one might call for the Portuguese-language material expressed in Hebrew script to be rendered more *accessible* to the interested audience. This does, of course, carry the implication that this

audience may be unable or unwilling to make the script accessible for themselves. Frakes (1989: 186), for his part, adamantly asserts that editorial calls for accessibility on these grounds are gratuitous and patronizing:

> The premise that medieval Germanists have no access to Old Yiddish texts due to an alien alphabet is as provincial as it is insulting: whoever can deal with the myriad linguistic and paleographical problems of Old and Middle High German manuscripts ... can this person, so trained, not also learn the Hebrew alphabet, *if s/he* has an interest in Old Yiddish texts?

Studies of medieval Yiddish may lack the pre-defined readership or the "national" tradition of scholarship that could be said to exist for medieval Portuguese. Thus the audience for Old Yiddish texts must in some case be, in effect, invented by an editor in order to justify his editorial principles and practices, and indeed his very act of editing the text. It is also for that reason – because editors do transcribe, translate, and transliterate in the name of accessibility – that Frakes motivates his own study of ideology in the editing of Old Yiddish texts. Because editors differ in how they present the assumptions they bring to the editing process (often for ideological reasons discussed below), it is essential for the reader to be alert to what information is added to or omitted from the original text, and for what reason, with each step in the process of making such texts discernible to the audience defined by the editor. In the next section, I examine in more detail the levels of interpretation required to make the Hebrew-letter Portuguese texts presented in chapters 4-6 accessible to my own "interested audience."

2.1. Facsimile

The Hebraicized English fragment in § 1.1 underwent at least three implicit transformations: from printed Hebrew characters in a newspaper to a corresponding set of "Western" characters, through a quasi-phonetic transcription in Roman script (cf. § 1.2), to conventional modern English spelling. Yet only these last two steps were depicted on the page. To illustrate in more detail the decisions that inform this process in the case of Hebraicized Portuguese, I have excerpted a facsimile of the first Portuguese sentence in the Bodleian Passover text (see chapter 6 § 2). This photo-like image serves as the unadulterated starting point for the interpretation involved in "accessibilizing" the material:

Figure 8-1. ***Facsimile of Bodleian ms. Can. Or. 108 f. 227r.***

This is Judeo-Portuguese *au naturel* in its handwritten cursive script (albeit enlarged from the original's pocket-size writing). It should be clear that only a reader with a very particular set of skills would engage this material "as is." Indeed, even as someone possessing that set of skills, I have not generally worked directly from facsimiles, preferring instead to reproduce the text for my own reference according to the process discussed in the following sections.

2.2. Transcription

The most basic step in editing any manuscript is to render the handwritten text in a reader-friendly typeface that closely imitates the scribe's

lettering style. Since the cursive script of the Portuguese passages in the Bodleian manuscript is itself less widely-used than the square script,[8] however, it is normal practice to render it in the more familiar typeface from the outset. For better or for worse this process is normally labeled *transcription*, which in this sense is distinct from the notion of *transcription* discussed in the previous section (and in ch. 2 § 3) as a phonetic approximation using the orthography of another written language. In the present context, transcription is the transformation from one script to another within the same matrix, where in spite of the mediating agent of a printing mechanism the scripts can be construed as different "hands" (or fonts) in the same writing system. Transcription in this case produces the "level 1" fragment below:

(4) *Level 1: Transcription*

קוֹמוֹ שָׁאִירִין דֵי בִּיתֹ הַכְּנֶסֶתֹ דִירַן

Even though this transformation has in principle passed over the first step of presenting the text in a cursive-like typeface, transcription of this nature can be relatively innocuous, largely akin to rendering a Roman-letter medieval manuscript into a more modern typeface. Yet there are inevitably internal conventions of the original that cannot be easily preserved in the transfer (abbreviations, ligatures, etc.). In the Portuguese excerpt above, I have resolved at least one graphic peculiarity, namely the scribe's placement of the letter י *y* "inside" the preceding ר *r*, ד *d*, or כ *b*. This convention, very much

[8] That is, in modern printing and, consequently, in philological studies. Though I could implicate myself in this modern bias by citing my own Hebrew education (in which we rarely worked with *Rashi* script), this would only underscore the utility of transforming the facsimile into an affiliated script that is more accessible to potential readers.

characteristic of the hand in this Bodleian manuscript, can cause a רי *ry* sequence to be quite easily misread as a non-final ה *h* – which is what led Salomon (1980) in his edition to misinterpret the second Portuguese word as **saih^{a}n* rather than *sairen* 'leave'.[9] Thus despite the fact that it may be presented as a trivial, objective, or pre-interpretive process, even the ostensibly mechanical task of transcription involves an exercise of judgment and editorial power.

2.3. Transliteration

It is the next step, *Romanization* (a variety of *transliteration*, as defined in chapter 2) that is more easily recognized as ideologically loaded, a process understood by editors and readers as more than a matter of simply reversing the direction of the script.[10] Wellisch (1978: 31) states the objective of transliteration as being "in principle, a one-to-one transformation, in which one character of the source script is converted into one (and only one) specific character of the target script." As such it would seem to be a mechanical process of substitution, one that might not even require the transliterator to be more than passingly familiar with each set of graphemes and their possible sound values, or at least their conventional equivalences. Nevertheless, the clash between the predominant conventions of alphabets in Romance and *abjads* (alphabets lacking vowel letters) in Semitic leads to the two very

[9] In fact, since Salomon's edition proceeds directly to normalization (see § 2.4 below) from the facsimile, it was only by consulting the manuscript that I could discover this error. On the other hand, my own reverse misreading of a non-final ה as רי in the Cambridge medical recipe initially caused me to misidentify the one Hebrew word in that text, בהמה *behema* 'animal'.

[10] Hary (1996), presumably following the practice of other editors, actually does preserve the right-to-left orientation in the first stage of his transliteration. For reasons that should be obvious, however, I have not presented any Roman-letter text in a right-to-left orientation nor even accounted for my decision to forego this step.

different methods of transliteration – and hence representation to the Roman-literate reader – discussed below.

2.3.1. Skeletal transliteration

Given that many of its texts were and continue to be written in consonantal scripts, it has been practice in Semitic philology to provide transliterations that include only Roman-script consonants. In other words, each letter or alphabetic segment of the original script is replaced on a one-to-one basis by a phonetically-similar Roman consonant. I refer to this as *skeletal* transliteration, to indicate that only the basic graphemic frame of the script has been identified and transferred:

(5) *Level 2a: Skeletal transliteration*

qwmw šʾyryn d:y b:yṯ hk:nsṯ dyrn

This transliteration is an historically accurate one, in that the Hebrew alphabet emerged from a tradition in which the original letters themselves had only consonantal values. The non-alphabetic (but non-vocalic) characters in the original, such as the *dagesh* and *rafeh,* may also be indicated in this transliteration, using symbols that are commonly found in Roman-letter writing (e.g. colon, underscore, etc.) but that do not obscure the letter's basic identity.

In rendering the Hebrew graphs as characters more familiar and conventional to readers of Roman-letter orthographies, the resulting text preserves the distribution of graphs in the original. It is for this reason, for example, that the colon is used to represent the *dagesh* in the ד of the third

word; though its absence in the first letter of the final word could indicate the variant pronunciation as a fricative [ð], the fact that a single grapheme has been used for both is given priority over inserting any phonological interpretation into the transliteration. By the same token, the final ת with *rafeh* in the Hebrew compound for 'synagogue' (the fourth and fifth words) is rendered as <t> with an underscore[11] rather than <θ>, in deference to the letter's etymological (and perhaps phonetic) identity as /t/. In this transliteration, therefore, faithfulness to the scribe's use of one and the same letter in each instance is paramount.[12]

Despite its graphical faithfulness, however, the skeletal transliteration is in a very real sense quite *in*accessible to any reader of a Roman-letter writing system, since no conventional Roman-letter orthography completely omits letters to represent vowels. There is a striking incongruence between, on the one hand, the historical accuracy of considering the Hebrew letters only for their consonantal value, and on the other, the fact that in Hebraicized orthographies several letters plainly serve as the analogues of Roman vowel-letters. This incongruence is apparent in the very first word: given a relevant set of conventions for associating sounds with these Roman letters (or even for recognizing words as ideographic units), very little is revealed to a naïve reader of any Romance language about the word spelled <qwmw>.

Frakes (1989: 144) discusses a similar example and calls the transliteration of Old Yiddish קוניק *king* as <qwniq> a "monstrosity," claiming

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[11] I use the underscore rather than, for example, a more graphically-imitative macron for ease of typography (it is available as a screen character) as well as legibility (underlining is probably more conventional for the target audience and clashes less with the <t>'s existing horizontal stroke).

[12] As in my own practice described in chapter 3, the purely allographic alternation involving the final-position forms ך *k*, ם *m*, ן *n*, ף *p*, and ץ *ṣ*) is never preserved in transliteration.

that it does more to alienate interested readers than to make the words accessible to them. He thus calls into question what purpose and what audience a skeletal transliteration could serve. It should be obvious, of course, that his opposition is motivated largely by a bias against "unreadable" forms, which in this case involves un-English conventions such as the vocalic <w>[13] and *u*-less <q>. In the survey of Hebraicizations in chapter 2, I resorted to skeletal transliterations in cases where my own knowledge of the target required too many guesses about vowel quality. In the case of the Judeo-Portuguese corpus, however, skeletal transliterations have served only as stepping stones in the process of providing an audience-appropriate interpretation.

2.3.2. Vocalized transliteration

Thanks to the early adoption of *matres lectionis* and later systems of *niqqud* (cf. chapter 2 § 2), the incongruence between orthographic traditions in Semitic and Romance is not absolute. Although the phonetic realization of the diacritics has varied over time and region, this system of graphs was and is rigidly maintained in any reproduction of a sacred Hebrew text,[14] and thus was at the disposal of Hebraicizing scribes. Still, the entire arsenal was rarely deployed in adaptations of the Hebrew alphabet to the writing of continuous texts, since the system of pointing afforded the scribe a richer set of distinctions than was needed in order to imitate the typical orthography of a

[13] The only Roman-letter orthography in which <w> stands for a vowel that I am aware of is Welsh; unfortunately <q> is not used in Welsh spelling.
[14] In addition to canonical texts, pointed writing is typically used in Modern Hebrew for poetry/song, children's literature, and language learning materials (whether Hebrew is the target or matrix).

Western European language. As seen in chapter 3, even in the small Judeo-Portuguese corpus, only the Passover texts make any significant use of *niqqud*.

Yet the diacritics are clearly part of the set of orthographic tools used by scribes and presumably deciphered by readers. Thus for pointed texts such as the Passover rubrics, a skeletal Romanization could be considered less informative about the writer's intentions than one which is *vocalized.* In this transliteration, each diacritic is represented by a distinct Roman-letter vowel, which may require its own diacritic such as a macron or accent mark (like the consonants in a skeletal transliteration) to indicate distinctions beyond those afforded by the five[15] Roman vowel letters:

(6) *Level 2b: Vocalized transliteration*

qomo šāʾîreyn dēy bēyt hak:eneset dîran

Although it no longer preserves the distribution of all graphs in a one-to-one relation, this transliteration strikes a greater balance between capturing the orthographic tools of the original text and providing one that is visually meaningful to a Roman-literate audience. While the skeletal transliteration effectively treats the writing system – if not the underlying language – as Semitic, the vocalized transliteration allows the reader to appreciate the Portuguese speaker's adaptation of the script in what can only be described as a more accessible manner.

Because the Judeo-Portuguese orthography already makes categorical use of vowel letters, the pointing in the Passover texts is often redundant in

[15] Although some systems of phonetic transcription make use of <y> as a strictly vocalic symbol (usually to represent high front rounded vowels), no tradition of Semitic-script transliteration that I am aware of does so.

the Portuguese portions, with some vowels indicated twice (see § 2.1.1 in chapter 3). For instance, /e/ and /i/ are regularly represented with both *niqqud* and a following י *y* (e.g. in the second word of the excerpt above, שָׁאִיְרִין <šāʾîreyn>, where the /e/ in the final syllable is spelled by both י and the *segol* under ר *r)*. The pair of diacritic+letter could in fact be said to form a vowel digraph, and transliterating every diacritic and letter as distinct graphs could yield an unusually dense text that appears too cluttered to readers of a Roman-letter orthography. It is therefore common for editors to selectively omit some distinctions indicated in the original script that are deemed redundant (e.g. length distinctions between sub-linear vowels), or to render the vowel digraphs with a single Roman character (e.g. יְ as <e> alone*).* Though it may be an ideologically separate move, this procedure in fact imposes a particular interpretation on the orthography, resulting in a written form that may not be far from the product of *normalization,* to which I turn next.

2.4. Normalization

Editors generally take one further step in (re)representing Hebrew-letter Romance texts, often doing so without revealing (or even perhaps performing) the steps described above. Since the language spelled out in the orthography is indeed Portuguese, it seems only natural, indeed helpful, to *normalize* the text – that is, to represent the material using the contemporary conventions of the dominant writing system. The linguistic character of the text, it may be claimed, can be best compared to other Portuguese writing only when it appears spelled as Portuguese ought to be (or, more insidiously, as it would have been by a non-Jewish writer), as in (7):

(7) *Level 3: Normalization*[16]

como sairen de beit hakenesset diran

As Frakes (1989) observes, this normalization is particularly valued by editors of texts written in an adaptation of Hebrew script because, as in the case of the Old Yiddish literary texts, they often believe there to be a Roman-letter (and possibly non-Jewish) source. Hence the goal, perhaps unstated, is to reconstruct the *Urtext* that underlies this adaptation.

In the case of the Portuguese Passover texts, it is extremely unlikely that the instructions in a Hebrew *maḥzor* are based on any prior Roman-letter original. Though the rubrics are canonical in content, they may not be so in form, as attested by the long tradition of vernacular annotation and translation in the (printed) Passover *haggada* (Yerushalmi 1975, Yudlov 1997). Thus to represent the Portuguese instructions in a normalized Roman-letter spelling may be to represent the language as unduly similar to non-Hebraicized or even non-Jewish Portuguese. It may deny the very originality and individuality of the linguistic act manifested by the manuscript and its writer – particularly if the different script is, in fact, basis enough for considering the text as written in a distinct variety of the language.

Worse yet, the normalization may deceptively constitute a *translation*, which Frakes claims has often been the intention of normalizing an Old Yiddish text to Middle High German or medieval texts in general (to their

[16] This level could, in fact, be subdivided into normalizations such as this one, which present a putative Roman-letter spelling of the era, and those that simply use the modern orthography as a standard. Needless to say, the two types are not always distinguishable (or, more accurately, not always distinguished by editors).

respective modern orthographies). A normalization may or may not be explicitly presented as a translation, depending upon the ideological position of the editor toward the language of the Hebrew-letter text. It is, however, common to see it presented as the basis for a "standard edition" of the text, which is then *finally* accessible to other scholars for further research (and, one would presume, to any interested reader). Frakes (1986: 186), for his part, takes a strong position with respect to this practice as motivated by the old saw of accessibility, in this case to a particular audience of scholars:

> We do not insist on presenting the medieval Germanist – who after all was not born with his/her knowledge of Gothic and Old Saxon (or even the Roman alphabet) – with laundered texts for scholarly use, so why should the Yiddishist be offered Middle High German translations of Old Yiddish texts as the "standard" editions?

What has in fact become *in*accessible to the investigator is the original environment of the writing, which was likely not equivalent to that of Roman-letter Portuguese. In the case of a normalized Hebrew-letter text, this environment has been deliberately camouflaged, to blend in to the editor's preconceptions of the language and its (dominant) audience as Portuguese and Roman-letter-literate, preconceptions that necessarily affect the nature of any linguistic insight derived from the text. It is for this reason that I have not provided normalized transliterations for any of the Judeo-Romance material in my own editions.

As evidence that that the language, orthography, and textual material of Old Yiddish documents is not based on any Roman-letter archetype, some scholars of Old Yiddish have pointed out that one does not encounter forms that would have been produced by means of a one-by-one substitution of

Roman letters for Hebrew ones. Birnbaum (1961), for instance, constructs and then rejects a number of such unattested Hebrew-letter spellings for Germanic words (actual Yiddish forms, as given by Birnbaum, are in the right-hand column):

Table 8-1. ***Pseudo-Yiddish orthographic calques***

*יכה	*יקה	ich	איך	I'
*גרוּצֶנ	*גרֿועצענ	grüežen	גרושן	(medieval coin)
*רֶתתֶנ	*רעתתנ	retten	ריטן	

What these forms amount to, of course, are skeletal transliterations "in reverse," that is, a one-to-one replacement of the Roman graphs with Hebrew ones. Note the ways in which they flout some of the more robust conventions of Hebraicization: lack of diacritic א, tautomorphemic doubled consonants, non-final forms in final position, etc. Birnbaum's "*vav*-umlaut" for *grüežen* actually seems like a reasonable grapheme-for-grapheme adaptation, merely a point away from the standard-issue וֹ /o/ (cf. אֹ "*aleph*-umlaut" to spell /œ/ in the Hebrew-French dictionary in chapter 2 § 3.2.2.2). And yet it is entirely unattested. In fact, as Frakes argues, this exercise cannot be taken seriously, either as a way to model a writer's rendering of Roman-letter material in Hebrew script[17] or even as a refutation that this process took place at all:

[17] Even someone ignorant of the relevant systems may not produce an orthographic calque such as this. In an informal experiment several years ago, I presented a group of English speakers unfamiliar with Hebrew script with the letters א, ה, ט, and ת (and the corresponding values ʾ, *h*, *ṭ*, and *t)* and asked them to spell the word *that* (cf. § 1.1). In no instance was the ה used. Thus the immutable Roman-letter convention for English /ð/, like that for German /ç/ in *ich* in table 7-1, was not transferred to the Hebrew letters. Indeed, the only context in which I have come across such Hebraicized English calques is in handbooks such as the one discussed in chapter 2 (§ 9.3).

> If we conceive of a scribe transposing an entire Roman-alphabet, Middle High German text into a Hebrew-alphabet, Old Yiddish text, then we cannot at the same time conceive of this scribe as so ignorant of the grapho-phonemic systems of both Middle High German and Old Yiddish as to produce יקה/יכה from "'ich." (1989: 138)

The "grapho-phonemic system" cited by Frakes, that set of correspondences between the distinctive units of script and sound, is what the laity call an *alphabet.* Implicit in both Birnbaum's experiment and Frakes' dismissal, then, is the idea that writers of Old Yiddish had in mind and in practice some sort of alphabet, one that was necessarily based on a hybrid set of grapho-phonemic principles. Although neither Birnbaum nor Frakes makes explicit suggestions about the composition of this alphabet, a reasonable goal after examining the writing system of Hebraicized Portuguese would be to determine what its writers might have conceived as their own alphabet.

3. The Alphabet

Orthographic habits die hard, as writer-readers of highly standardized written languages such as English or French well know. With regard to another highly standardized written language, Wright (1982) corrected a view long held of late classical and early medieval Latin by showing that the persistence of etymological spelling need not have reflected some sort of historically-accurate pronunciation maintained by "educated speakers." Instead, he views the orthographic conservatism of the early Middle Ages as normal for a language of record like Latin, where it would have been not only tolerated but embraced by literate speakers, who would recognize the wide gap between the pronunciation they knew and the spelling they learned as

normal facets of their (single) language. In early vernacular spellings, Wright contends that "the particular sound-letter correspondences of written Romance were not in fact new, although as a consequence [of Carolingian reforms in the ninth century] the individual word spellings were" (1997: 266). Hence these forms should be interpreted by determining the writer's knowledge of what sounds in his language so conceived could be represented by what (combination of) letters, *given all the patterns that associated orthographic forms with spoken ones.*

Understanding the intention behind the adaptation of Hebrew script to Portuguese must similarly be based on knowing the contemporary conventions for the pronunciation of Hebrew *qua* Hebrew. Such knowledge is sparse, as there have been few studies of Hebrew in Portugal apart from a catalogue of lusophone Jewish writing by Raizman (1975), and the survey of Luso-Hebrew pronunciation by Garbell (1954), where the Portuguese details are subsumed under "Christian Spain." Nor is knowledge of medieval Portuguese in itself sufficient to fill this gap, since it is more than likely that readers of Hebrew could produce sounds in that language that did not occur in their vernacular.[18] Nevertheless, based on Garbell's evidence, as well as modern Sephardic traditions of Hebrew pronunciation, we can posit a rough set of symbol-to-sound correspondences associated with the Hebrew letters in the reading of Hebrew texts. In the table below, each of the Hebrew letters has at least one possible reading, while some letters have two, due either to vernacular phonology or historical change in Hebrew itself:

[18] I am in good company as a modern English speaker who can successfully produce the [x] represented by ח *ḥ* and כ *ḫ* in Modern Hebrew, despite never having to do so in my native language.

Table 8-2. ***Portuguese Hebrew pronunciation (following Garbell 1954)***

א	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ	נ	ס	ע	פ	צ	ק	ר	ש	ת
Ø	b	g	d	h	w	z	x	t	j	k	l	m	n	s	ʔ	p	ts	k	r	ʃ	t
	v	ɣ	ð	Ø						x						f				s	

Based on the material in the extant texts, a lusophone Hebrew alphabet would seem necessarily to comprise a subset of the source alphabet, since no additional letters are used, and several letters do not appear in any non-Hebrew words. Although graphemes have been imported into anglophone adaptations of Roman script in the past, and Roman allographs such as <j> and <u> have been graphemicized in many writing systems, adapters of Hebrew script do not innovate with respect to the inventory.[19] In addition, Romance-speaking adapters usually make no use of four letters representing historical Hebrew phonemes: the pharyngeal fricatives ח /ħ/ and ע /ʕ/ (voiceless and voiced respectively), which are absent from Romance phonologies, and the voiceless stops כ /k/ and ת /t/ (velar and dental respectively, both with spirant allophones), which are dropped in favour of historically-pharyngealized segments, ק *q* and ט *ṭ*. Their absence from Judeo-Romance orthographies suggests that these letters were indeed rejected in the adaptation process and hence from the writers' and readers' conception of "alphabet."

On the other hand, the final-position allographs of מ, נ, פ, and צ (and כ if it is used) are consistently deployed in all adaptations of the script, and the only graph not originating in Hebrew-language writing that is consistently

[19] As noted in chapters 2 and 3, a possible exception exists in the recommendation by the Yiddish Scientific Institute (YIVO) that *tsvey-vovn* ("double-וו") be joined at the base, forming what looks like a Roman <V> (Fishman 1977: XXIII). I have encountered this convention only sporadically in Yiddish longhand, never in print.

"imported" is the apostrophe. Although the absence of ח, ע, כ and ת does not imply that they do not occur in a given text (they are always preserved, of course, in Hebrew and Aramaic words), we could construct a rudimentary alphabet of Judeo-Portuguese – using that glottonym strictly on the basis of its distinct alphabet – based on this reduced set of Hebrew graphemes. The inventory in the table below represents the letters of such an alphabet and the sounds for which they would conventionally stand:

Table 8-3. ***A Judeo-Portuguese "alphabet"***

א	ב	ג	ד	ה	ו	ז	ט	י	ל	ם/מ	ן/נ	ס	ף/פ	ץ/צ	ק	ר	ש
a	b	g	d	a#	v	dz	t	i	l	m	n	s	p	s	k	r	š
Ø	v	tš		*h	o	z		e				ts	f	z			s
		dž			u			y						ts			dž

**only in Hebrew words*

This alphabet, however, has obvious limitations. For instance, it consists only of "unigraphs" (as in the Hebrew *qua* Hebrew alphabet), despite the fact that the orthography of Hebrew-letter Portuguese clearly makes use of several digraphs and trigraphs. Minervini (1999: 426), for example, states explicitly that "composed spellings" in Judeo-Spanish writing "are unknown to Hebrew orthography and were probably influenced by the writing system of the Latin alphabet." Modern English writers, for their part, are conditioned to conceiving of an alphabet without graphemes for some of the language's phonemes, i.e. without any composed alphabetic symbols. The digraph <ch>, for example, stands almost uniquely for a phonemic affricate /ʧ/ in Roman-letter English, and yet it is neither learned nor sung as a letter of the alphabet. Nor are *ch*-initial words given a separate section in (most) anglo-oriented dictionaries. Yet even in writing systems where some digraphs represent

what are often only morphophonemic alternants, these may be regarded as letters in some contexts of alphabetization.[20] Thus in determining its alphabet, the multigraphs used in Hebrew-letter Portuguese might well have been treated as alphabetic units – that is, as letters. The relevant candidates are laid out in the table below:

Table 8-4. ***Multigraphs used in the corpus***

אה	או	אי	יי	וי	וא	ליי	ניי	וו
a#	#o	#e	ey	uy	wa	ʎ	ɲ	v
	ãw	#I	ye	oy	w			
	#u							

Yet allowing consonantal but not vocalic digraphs into the alphabet would further reveal the specter of a Roman-alphabet bias, since most Western European children do not sing of vowels beyond *a, e, i, o, u* (and sometimes *y),* despite using digraphs to indicate further phonemic distinctions. Of course, I have not had access to the alphabet song recited in the Jewish schools of medieval Portugal, nor to any other artifacts of their conception of alphabet such as a dictionary or civic directory.

If our effort is to understand more fully the nature of Hebraic conventions for writing Portuguese, as well as the broader principles of orthographic adaptation to which they attest, it be might well be more instructive to match all the relevant sounds of the contemporary language with the distinctive graphs found in the corpus:

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[20] In Wales, for example, the rows of seats in a theatre are usually designated *A, B, C, CH, D, DD, E, F, FF, G, NG, H,* and so on – even though word-initial <dd> /ð/ and <ng> /ŋ/ do not occur in the lexicon (i.e. in non-derived environments) and do not get separate sections in most dictionaries.

Table 8-5. ***The consonants of Old Portuguese***

p	b	t	d	k	g	f	v	s	z	š	ž	ts	dz	tš	dž	m	n	ɲ	l	ʎ	y	r	w
פ	ב	ט	ד	ק	ג	פ׳	ב׳	ס	ז	ש	צ	צ	ז	ג׳	ג׳	מ	נ	ני	ל	לי	(י)י	ר	או
פּ	בּ		דּ		גּ	פּ	(ו)ו	שׁ		ג׳	שׂ	סׂ	צּ	גּ	גּ			נִי		לִי			
			דּ			פ	בּ	צּ		צ	ג			ש	שׂ								

As an after-the-fact schematization, this table might serve someone without prior exposure to the writing system who, for whatever reason, needed to write Old Portuguese in Hebrew script. It is, in effect, a recipe for transcription. As I have been arguing, however, the Hebraicized writing system is not primarily a transcription of Old Portuguese. Therefore, this table should *not* be viewed as portraying the process of script adaptation as it was undertaken by Judeo-Portuguese writers. In its character-to-character mapping, however, what it does evoke is a precursor to the task of script adaptation as mediated by the technology of direct-input typesetting.

4. ROMAN KEYBOARD, HEBREW SCRIPT

Whether it involves the Hebrew alphabet for non-Hebrew languages or other matrix/target pairs, script adaptation can be described (and of course schematized, as above) as a "mapping" of the graphemes of the matrix onto the phonemes of the target, or vice-versa. For the scribes and even the first printers of Hebraicized writing systems, this cognitive challenge was largely accomplished before the mechanical act of putting ink to paper. This is less true for the modern-day designers of hardware and software that equip writers who are versed in one script to produce language visible in another. The engineers of the first Hebrew-letter typewriters in the early twentieth

century (cf. figure 7.2 below) undoubtedly had to integrate their take on the "logic" of the Hebrew alphabet with existing Roman-letter keyboard layouts in such a way that allowed Hebrew and Yiddish writers (themselves probably familiar with one Roman keyboard or another) to use it with relative ease.

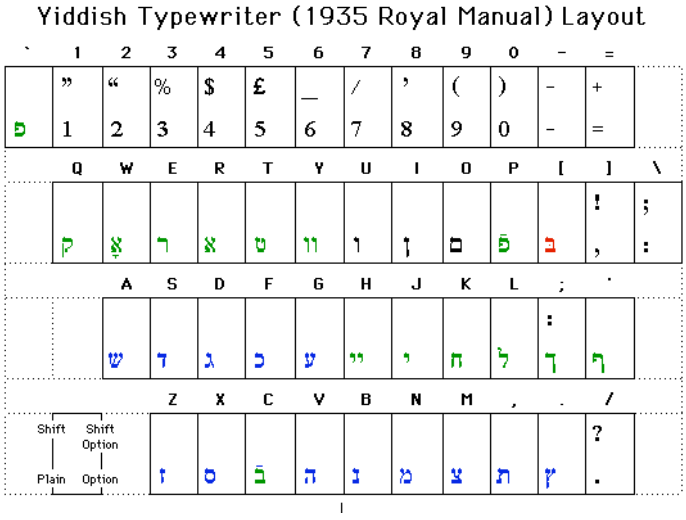

Figure 8-2. ***Early Yiddish typewriter***

The advance of typing from a mechanical hardware-based enterprise to a digital software-based one on the computer, however, enabled multiple standards to co-exist on a single machine. Yet the essential mapping task remains: the software must translate the stroke of a Roman-letter key to a non-Roman character on the screen.[21] This has proven to be a real and present issue in my own computer-based manipulations of Hebraicized texts. Working on a Macintosh, I have made use over the years of several systems

[21] Of course this does not apply to computer keyboards produced for the Israeli market, where the Hebrew letters themselves are pictured on the keys (see figure 7-3). In fact, such keyboards might raise the opposite but precisely parallel issue of mapping these Hebrew-letter keys to Roman characters on the screen.

for manipulating Hebrew-letter material, two of which reveal particular approaches to the task of script adaptation.

4.1. System software vs. Stand-alone font

Under the older Macintosh OS 9 system, a "Language Kit" could enable a Hebrew-friendly word processor called Nisus Writer to reconfigure the keyboard in various ways and to display output from right to left (which a simple keyboard-to-font mapping would not necessarily accomplish[22]). The scheme by which the software maps the Roman-letter keys onto the screen as Hebrew letters is all the more direct a mapping because it is in principle independent of the language being typed, a strictly graph-to-graph correspondence. The various mappings are not entirely uniform, varying from font to font and from one keyboard layout to another. As in manual adaptations of the script, however, certain conventions are shared across the different programs, while others are in competition.

Nisus Writer makes use of two keyboard layouts installed by the Language Kit: one reproduces the layout of a standard Israeli Hebrew keyboard (see figure 7.3), while the other, named "Hebrew QWERTY", approximates the standard American layout.[23] While the Israeli layout does not seem to depend on the Roman QWERTY in any obvious way (and so has proven less than useful to this user), the Hebrew QWERTY represents a curious blend of mapping relationships, especially in comparison to other stand-alone Hebrew fonts that operate independently of the Language Kit software.

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[22] Note that although the output appears on-screen in the appropriate "direction," the mediating effect of the keyboard is such that unlike handwritten language, the input is only a *temporal* succession of keystrokes and has no inherent spatial orientation.

[23] There is also a "Hebrew AZERTY" that does the same for that European standard; a "Hebrew DVORAK" exists as well, though not as part of Apple's Language Kit.

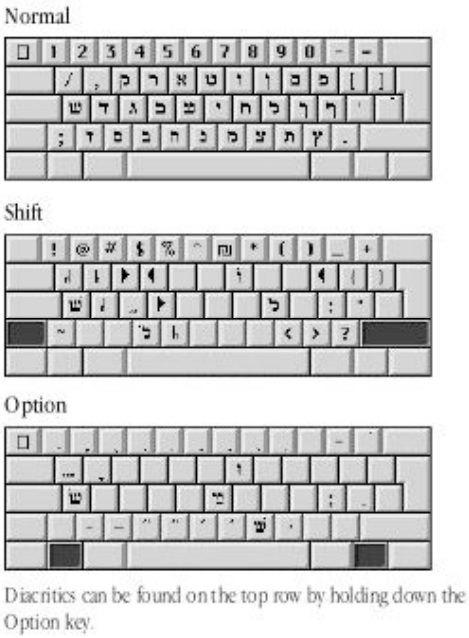

Figure 8-3. ***Israeli Hebrew keyboard layout***

Presented below is a sample of the Hebrew letters that result from hitting a given Roman key under the Hebrew QWERTY layout. I label the first category *phonetic*, since it relies only on the single common sound conventionally associated with the two letters:

Table 8-6. ***Phonetic mapping***

T[24]	→	ת *t*
S	→	ס *s*

The second category is labeled *phonological* because the Hebrew grapheme, which has stood historically for more than one sound in Hebrew itself, can be produced by typing any of the associated Roman keys:

[24] Since the characters on the keyboard are depicted only in uppercase, I have used that form in these formulas. As such they are exactly equivalent to "T → <t>" or "Shift+T → <T>."

Table 8-7. ***Phonological mappings***

K, X	→	כ *k*
O/U/V	→	ו *w*

The third category is called *iconic* because the only relation between the Hebrew letter and its Roman keystroke appears to be a graphical (perhaps historical) resemblance in form:

Table 8-8. ***Iconic mappings***

W	→	ש *š*
Y	→	ט *ṭ*

I call the last category *hybrid* because these mappings draw on a combination of "higher-level" associations between the graphemes:

Table 8-9. ***Hybrid mappings***

A	→	א *ʾ*
E	→	ע *ʿ*
C	→	צ *ṣ*
J	→	ח *ḥ*

The motivation for the equation of A and **א**, for instance, is an ancient graphical lineage is, which manifests itself most saliently in both as "first letter of the alphabet." In contrast, while the relationship between E and **ע** could be construed as vaguely iconic (and does have a historical link via Greek □), readers of Hebrew script are likely familiar with the use of this letter in Yiddish to represent the vowel /e/. For its part, the equation of C with **צ**

appeals to readers of Roman-letter writing systems in which <c> can spell the sound [ts], which is the Modern Hebrew realization of צ. It is somewhat harder to discern a relationship between J and ח that might be relevant to the target audience of users; my best guess is based on the spelling of /x/, also the Modern Hebrew reading of ח, with <j> in some orthographies (e.g. Spanish).

Several of the mappings in the Hebrew QWERTY layout contrast starkly with the stand-alone font *Ezra,*[25] produced by the Summer Institute of Linguistics. The following, for example, draw more directly on traditional transliteration practice (cf. table 2-1 in chapter 2):

Table 8-10. ***Transliteration-based mappings***

’	→	א ʾ
W	→	ו *w*
Y	→	י *y*
Q	→	ק *q*

Other mappings are based on more specific linguistic properties:

Table 8-11. ***Phonology-based mappings***

X	→	ח *ḥ*
shift-X	→	ט *ṭ*

The assignment of ח to the <X> key makes sense from a grapho-phonological point of view (cf. IPA [x], the Modern Hebrew realization of ח), and with ת *t*

[25] This is the principal font that I use with the Hebrew-*un*friendly Microsoft Word, which as yet does not enable right-to-left output, forcing the typer to spell words and enter sentences from back to front.

already assigned to the <T> key, the programmers chose to assign the historically-pharyngealized dental stop to the same key as another historical pharyngeal,[26] augmented by the *shift* key. Some "lay" associations do persist, however, such as the mapping of <V> to the historically pharyngeal (now glottal or vocalic) ע, which would appear to be based only on the vaguely iconic resemblance between the two symbols.

Indeed, many of the augmented keystrokes, i.e. those involving the *shift, ctrl, option,* or *command* ("open-apple") keys, reveal different, sometimes obscure strategies behind SIL Ezra and Hebrew QWERTY. For example, the final-form letters are produced in Ezra by holding the *option* key and typing one of the digit keys; in Hebrew QWERTY they are produced by hitting *shift*+<letter>, just as one would do to type a capital Roman letter.[27] In addition, hitting the Roman vowel letters (alone and with the *shift* key) in SIL Ezra yields the diacritics of *niqqud*, as determined by their Modern Hebrew realization. Perhaps these were considered less important for users of Hebrew QWERTY, where vowel diacritics are all produced by complex keystrokes, some of which seem to have been arbitrarily drawn from the otherwise unassigned keys – *shift*-R, for example, yields one of the sub-linear /a/ symbols, while *command*-4 yields the only sub-linear /i/. Of course, some elements of *niqqud*, such as *dagesh* or *rafeh,* have no analogue in Roman script, and so their position on the keyboard would seem justifiably arbitrary.

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[26] Hebrew QWERTY assigns ט to the <Y> key while assigning the <X> key to the sibilant ס. See tables 7.6 and 7.7 for other mappings under Hebrew QWERTY that similarly lack obvious linguistic motivation.

[27] Sampson (1985: 84) compares the use of the five final-position allographs to so-called "swash" letters in some italic fonts. Given the typesetting fact above, however, it may be more apt to compare them to the use of capital letters in written German, that is, as obligatory position-dependent allographs. In fact, since the same keystroke (*shift*-M) produces both the initial capital in, for example, <Mann> 'man' and the final form in אדם 'human', from the point of view of the keyboard mapping they do in fact serve the same function.

4.3. Transcription vs. Transliteration redux

Below is presented a full comparison of SIL Ezra (middle) vs. Hebrew QWERTY (bottom), which allows one to see the full script-adaptation strategy of the programmers. To produce the Hebrew character in the top row of the table, type the corresponding key:

Table 8-12. *Hebrew graphemes from Roman keystrokes*

א	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ	נ	ס	ע	פ	צ	ק	ר	ש	ת
‘	b	g	d	h	w	z	x	X	y	k	l	m	n	s	v	p	c	q	r	S	t
t	c	d	s	v	u	z	j	y	h	f	k	n	b	x	g	p	m	e	r	a	,

ך	ם	ן	ף	ץ	◌ְ	◌ֱ	◌ֲ	◌ֳ	◌ִ	◌ֵ	◌ֶ	◌ַ	◌ָ	◌ֹ	◌ֺ	◌ֻ	◌ּ	◌ׁ	◌ׂ	◌ׅ
¢	£	§	•	¶	A	E	a	e	I	I	u	Ã	Œ	œ	¯	Ā		K	&	
l	o	i		.														e	r		

by considering what Hebrew grapheme to assign to the available keystrokes (SIL Ezra middle, Hebrew QWERTY bottom):

Table 8-13. ***Roman keystrokes → Hebrew graphemes***

q	w	e	r	t	y	u	i	o	p		Q	W	E	R	T	Y	U	I	O	P	
ק	ו	◌ֵ	ר	ת	י	◌ִ	◌ֹ	◌ְ	פ		◌ָ	שׁ	◌ֶ	◌ֻ	◌ּ	◌ׁ	◌ַ	◌ׂ	◌ֹ	◌ׇ	
/	׳	ק	ר	◌ֱ	ט	ו	ן	ם	פ								ו				

a	s	d	f	g	h	j	k	l	;	‘	A	S	D	F	G	H	J	K	L	:	“
◌ַ	ס	ד	◌ּ	ג	ה	◌ֲ	כ	ל	;	◌ָ	◌ְ	ש	◌ֶ	◌ֹ	◌ְ	ש	◌ִ	◌ֹ	◌ְ	:	◌ֵ
ש	ד	ג	כ	ע	י	ח	ל	ך	ף		שׁ								ל		

z	x	c	v	b	n	m	,	.	/		Z	X	C	V	B	N	M	<	>	?	
ז	ח	צ	ע	ב	נ	מ	,	.	/		◌ָ	ט	◌ְ	◌ֹ	◌ֱ	ז	◌ִ	ס	פ	?	
ז	ס	ב	ה	נ	מ	צ	ת	ץ	.												

What these two sets of tables capture, in fact, is the crucial difference between *transcription* and *transliteration.* Table 7-6 begins with the matrix (i.e. Hebrew) graphemes that are cognitively useful for the purpose at hand, and uses them to represent "as best they can" items of the target (i.e. the Roman keyboard characters). The result is an arrangement of matrix graphemes that approximates the spelling of target-language forms, much like a transcription as defined in chapter 2. In table 7-7, by contrast, the starting point is the target form itself: every available unit (i.e. the entire keyboard) is assigned a character of the matrix until all those selected for use from the matrix have been mapped. The result is a one-to-one, grapheme-to-grapheme transliteration of target-language forms into an adapted-script sheath.

As the foregoing discussion illustrates, the adaptation of scripts and the contact of Hebrew script with non-Hebrew languages is not merely an

esoteric medieval phenomenon, nor is it a problem reserved for cross-linguistic bibliographers (as the uniqueness of Wellisch's book might have us believe). In many parts of the world – including our own ostensibly mono-alphabetic culture – language users may have to negotiate multiple scripts or multiple sets of conventions in all sorts of subtle ways. In this sense, many more people might be considered "multilingual" (or at least "multigraphic") than would seem given traditional definitions of the term. Of course in the grand scheme of things linguistic, computer users are still a relatively privileged few, a specially-trained group of language users. Yet the "problems" they encounter often reflect a history of linguistic interaction repeating itself, one that may highlight issues yet to surface in more conventional contexts. For that matter, as computer environments continue to encroach on and create new forms of linguistic interaction, it may be the computer-related issues that in time turn out to constitute the "conventional" contexts for writing systems in contact.

5. A FINAL THOUGHT

In the preface to his book, Wellisch (1978: vii) explains that it is not his aim to add to the literature about *how* script conversion is performed, but "to explore *why* script conversion has been performed at different times, and what *effects* it had on those who were exposed to the results." If we were to ask our Portuguese writers this question – why they adapted the Hebrew alphabet to write their Romance language and for what effect – we might get little more than a puzzled look. They might find it mysterious that the vernacular rubrics in a modern American *maḥzor* are written in a script entirely different from that of the blessings and other rituals. Since their audience

could read and perhaps write two other languages already presented in this script (Portuguese and Hebrew itself), there was in fact strong *dis*incentive to write in the Roman alphabet.

Thus a certain paradox emerges from this study. While arguing against the overall markedness of the Judeo-Portuguese corpus (i.e. that it required more effort from its writers to produce or from its readers to process than did the more conventionalized, Roman-based adaptation that normally bears the title "written Portuguese"), what has drawn me into it is its very markedness. It is worth asking again whether, in the absence of more decisive distinguishing features, the non-Roman alphabet gives these texts an entirely different linguistic identity. In other words, does the very act of writing in a non-canonical, non-traditional, or non-conventional script – let alone orthography – suggest that the writer attributes to his written language an identity distinct from what others write using the dominant script?

Recall the argument made by Wright (cf. § 3) that the conceptual division between Latin and Romance, between classical and vernacular languages, emerged precisely as a result of re-assigning a set of orthographic conventions. Wright argued that what is now known as "medieval Latin" was created when the conventional correspondence between pronunciation and spelling was expropriated by the ninth-century Carolingian reforms. As clergymen were instructed to give each letter a unique sound, Latin orthography was usurped from its role as a conventionalized sound-to-symbol mapping, and was adopted instead as, in effect, a transcription. For example, VIRGINEM would no longer be read in Gallo-Romance regions as [vyergʤə], but rather as [wirgin□m] or [virgin□m] – as though we were instructed to read modern English <through> not as [θru] but as [t^hrowg^h].

Such a move would oblige us to devise new rules to spell /θru/ and the like, creating what would likely be perceived as a "new" (written) language. For the medieval Romance readers, a new psychological distinction between Latin and vernacular was created when orthographic forms were assigned a new pronunciation, so that literate required a new set of letter-sound conventions in order to write their language. Wright claims that this new set of conventions – that is, written Romance – "was developed by skilled Latinists and not, as handbooks still tend to imply, by people who could not cope with traditional written forms" (1997: 265). Hence the real continuity of convention is to be found between the resulting vernacular spellings and the pre-reform orthography, since both of these served to represent what the writers considered simply "their language."

For their part, the lusophone Jews who left Portugal in the wake of the 1496-97 edicts could maintain and reinforce (at least for a time) their ethnic/religious identity through their vernacular, which was categorically different from those that surrounded them in their new diaspora. Previously, in Portugal itself, the Hebrew alphabet could also serve this function, as a *de facto* mark of difference. Yet rather than indicating the "partial detachment from its environment that Blau (1999), for example, sees in the use of Hebrew script by medieval Judeo-Arabic writers, the use of Hebrew script by Jewish Portuguese writers is a striking illustration of their capacity to embrace the mainstream language and culture on their own terms – a linguistic *convivência* in which they straddled the boundary between the commercial and the religious, the Portuguese and the Hebrew, the Christian and the Jewish.