Jennifer Watson

On some recent claims in phonological theory
F. W. Householder, Jr.

“So the following discussion can be blamed only on my obtuseness or perhaps pique, not on animosity.” (442)

The beginning of the article, and possibly the most interesting section, deals particularly with philosophical points on which Householder disagrees with Chomsky and Halle. He first addresses Chomsky’s “Three Adequacies,” as presented at the Ninth International Congress of Linguists (1964):

1. A grammar that aims for observational adequacy is concerned merely to give an account of the primary data (e.g., the corpus)…
2. A grammar that aims for descriptive adequacy is concerned to give a correct account of the linguistic intuition of the native speaker…
3. A linguistic theory that aims for explanatory adequacy… aims to provide a principled basis, independent of any particular language, for the selection of the descriptively adequate grammar of each language.

Householder likes only the first of these:

“As these are expressed here, only number one ‘observational adequacy’ is intelligible (at least to me), and the gratuitous ‘merely’ in that definition shows the animosity which Chomsky feels toward this principle.” (443)

Householder is very careful to note that his reaction to these adequacies is as formulated by Chomsky, so it seems almost a willful misreading when Chomsky and Halle note in their appendix:

“…[H]e takes Chomsky to task for viewing observational adequacy as uninteresting. In the next paragraph Householder goes over the same ground again, this time however, coming to the conclusion that observational adequacy ‘is surely not an acceptable goal to any linguist’; i.e., precisely the view that in the preceding paragraph he found so unacceptable when expressed by Chomsky.”

In fact, Householder objects both to Chomsky’s definition and dismissal of observational adequacy, and it is Chomsky’s narrow formulation that spurs Householder to remark:

“The definitions are followed by some examples which make them somewhat clearer; it turns out that observational adequacy means that the grammar gives back the data and no more. This is surely not an acceptable goal to any linguist, even though Chomsky ascribes it to (all?) ‘post-Bloomfieldian’ Americans and to ‘the London School of Firth.’” (443)

Concerning the second, “descriptive adequacy,” Householder remarks:

“I find the word ‘correct’ here particularly puzzling, and regard the ‘linguistic intuitions of the native speaker’ as extremely valuable heuristically, but too shift and variable (both from speaker to speaker and from moment to moment) to be of any critical value.” (443)
And the third:
“I am more inclined to the view that two inconsistent and irreconcilable descriptions of a language may each convey some important ‘intuition’ about the language which cannot be conveyed by the other, nor both by any third. I do not think we should assume that there is always one point of vantage from which we can equally well see the front and the back, the inside and the outside, the left and the right. Maybe there is, but I’m against assuming this.” (444)

The question is, then, can there be said to be an objective “truth” at the abstract level of a linguist’s analysis? Chomsky and Halle certainly think so, as the second “adequacy” in particular rests on a speaker’s intuitions and cognition – therefore, there must be one real way that speakers learn, rather than several accurate ways linguists have of describing phonological phenomena.

“If the comment we have singled out for emphasis, in the passage from his article quoted above, reflects his actual views, he believes that there is no truth to be discovered. If the optimal description of a language consists of two mutually inconsistent parts, then this description cannot be proposed as a significant and verifiable assumption concerning the language—that is, no claim to empirical truth can be made for the description that is presented, and no evidence can conceivably be relevant for or against what the linguist does.” (463)

Householder’s second philosophical point of contention is an argument he finds implicit in Halle (1964):

“No symbol-system may be judged economical unless it is always the case that the more general statement, when expressed in it, is the shorter.” (444)

Chomsky and Halle vehemently deny this:

“We are as ignorant and surprised as Householder as to the sources of this completely absurd principle. We are able to find nothing in Halle (1962 [37]) and 1964b) that could lead any reader to conclude that such an absurd principle was being advocated, either explicitly or implicitly. In fact, the principle is a complete invention of Householder’s.”

Halle’s argument (1964: 381-2) puts forth the idea that the shortest description is necessarily the simplest. The advantage of feature notation lies in that it allows a more general description (that is, the more useful description, “preferred” by Halle) to be shorter than one using alphabetic phoneme symbols. While Halle never explicitly states this (a fact Householder is up front about), it seems to be a clear implication even if unintended.

“It follows, therefore, that if we wish to operate with the simplicity criterion that has been proposed here, we must regard phonological segments as complexes of properties… It is, of course, conceivable that a simplicity criterion may be formulated that yields the proper results even when segments are represented as indivisible entities. The burden of proof, however, is clearly on those who reject the view that segments are complexes of phonetic properties.” (382)

It is also notable that Halle manages to claim the burden of proof lies on those who would challenge his theory of feature matrices; he must consider his own proof of the naturalness of the classes created using feature descriptions conclusive. Finally, Householder notes in his appendix:

“…[T]he question of the relative economy of features and phonemes was not discussed by Halle; many people incorrectly assume that Halle claims to have proved feature notation to be more economical than phoneme notation.”
The final philosophical point touched on by Householder is perhaps the most truly “philosophical” one:

“This is the assertion made by Chomsky and Halle that ordinary alphabetic symbols used by a linguist (old-fashioned phonemes or Chomsky’s systematic phonemes or phones) are to be regarded as arbitrary ad hoc symbols substituted conventionally for certain complexes of distinctive features, and utterly without status themselves, i.e., belonging neither to the terminal alphabet (the phonological primes, which must now be features only) nor to the non-terminal alphabet (like such symbols as NP or Comp in the syntactic component).” (447)

Householder muses:

“The question then is, can substance be dispensed with? Or rather, perhaps, should substance be dispensed with? Are all names covert descriptions? Can a thing be distinguished from the totality of its properties? A phoneme is a thing, in this sense, while a feature is a property or set (class, group in a non-technical sense) of things.” (447)

Chomsky and Halle’s reply is short and somewhat defensive, and seems to miss Householder’s point:

“The only possible explanation that he can concoct is that we are entangled in some sort of phenomenalist metaphysics, and therefore believe that physical objects are really sets of properties. We omit completely any discussion of this digression.” (471)

Throughout the article, Chomsky and Halle repeatedly decline to address any points they can dismiss as irrelevant, to the point where this almost seems a comic refrain. I was tempted to keep a running tally of points they refused to discuss (as opposed to points they simply neglected to address). Back to the argument at hand, Householder’s points seem worthwhile to consider:

“From this viewpoint (which certainly has much to justify it) an instance of /p/ is real, whereas “voicelessness” is a conventional name for the class… and cannot occur except insofar as one of its class members occurs.”

“So I must give up the attempt; I can see neither any philosophical justification for regarding ‘phonemes’ as status-less abbreviations, nor the motive for desiring such a principle, but I can see many reasons for not desiring it, from the viewpoints of ease of use, clarity, and effective economy.” (448)

“Let us take a brief further look at the morphophonemic use of features, and at other ways of writing morphophonemic rules and of eliminating redundancies in morph structure… The symbols that are needed here are those indicating classes of phonemes which co-occur, do not co-occur, commute, condition various changes, condition resistance to various changes, and so on.” (449)

Householder points out that classes specified in terms of features are not always natural, and fail to capture some generalizations which are easy enough to express without taking them into account. Chomsky and Halle take great offense to the brisk run-through:

“Since one cannot refute a serious theory by a ‘rapid check of… rules,’ or by mentioning ‘one set of rules’ (which may be the wrong set) we shall not discuss these examples. We cannot resist
observing that such unwillingness to deal with linguistic data ill becomes one who takes it upon
himself to lecture others on their disregard for facts.” (475)

They do, however, address Householder’s last example:

“We could say: ‘For the purposes of these rules ‘i, e, æ’ constitutes a single non-terminal symbol,
representing the class whose members are i, e, and æ,’ if we wish to avoid the unnecessary nuisance
of creating special symbols to be used only once or twice for very small classes. This is certainly
handy for such classes as English ‘i, æ, [turned v], a’ (the vowels which are grammatical before [ŋ]),
where the feature specification is {[–consonantal +compact], [+diffuse –grave].” (450)

This is dismissed by Chomsky and Halle by ascribing instances of the vowel in sung to phonetics
rather than phonology – the vowel is underlyingly /u/, and only surfaces otherwise as a result of the
environment, which Chomsky and Halle propose is ___ CC#. Natural classes can only be
considered at the phonological level, and so Householder’s example can be discounted. However,
Householder presses the phonetics argument, returning to Chomsky’s concept of “descriptive
adequacy” and the possible cognitive processes of speakers in perceiving the difference between
[rayðɔ] and [raːyðɔ] (that is, between writer and rider):

“If it is perceptible distinctive length, like that found in some dialects between (say) Pa’d and pod,
then we have an oddity in our ‘descriptive adequacy,’ that the same speakers perceive a difference in
two inconsistent ways. But obviously no speaker does perceive it as length.” (452)

There can easily be found a number of phonetic differences, but if we are considering a speaker’s
intuitions and production as a guide to the “correct” grammar, which must be the pertinent ones?
Householder notes one of the curious aspects of Halle’s (1964) analysis of Middle English vowel
shifts, keeping /a/ distinct from /æ/ despite identical phonetic realizations:

“Halle (1962: 71 [392]) achieves the remarkable position of specifying distinctions which are
present (apparently) only in the brains of speakers.” (452)

Some of the choicer bits from Chomsky and Halle’s conclusion (481), because I couldn’t resist:

“Householder’s first conclusion is this: ‘Halle appears to offer a demonstration that feature matrix
notation is more economical than phonemic notation. This is seen to be clearly false.’ What is false
is that anyone has even attempted this absurdity.”
“This third conclusion is that we have given no argument to justify the incorporation of morpheme
structure rules in the grammar. This conclusion is based entirely on a complete and thorough
misinterpretation of what we say about evaluation procedures, and is therefore worthless.”
“His seventh conclusion is that Halle seems to overlook the distinction between systematic
phonemics and systematic phonetics (though Chomsky is not guilty of this oversight)... By the same
logic, he can show that Chomsky overlooks the existence of Elizabethan English (though Halle
seems aware of it), and that both of us overlook the existence of elephants.”