Week 4 – Answers

**Pronunciation - Segmentals**

Celce-Murcia et al. (2010) Chapter 3, pp.50-112
Celce-Murcia et al. (2010) Chapter 4, pp.113-162

Celce-Murcia et al. (2010) Chapter 3
This is a long and rather heavy chapter that can be divided into two major parts. The first part covers the ways in which consonants are produced. The second part focuses on teaching ideas in relation to English consonant sounds. The authors reveal their overall approach to pronunciation as evidenced as well by the first two questions here and this seems to conceive of pronunciation as something like grammar in its most traditional conceptualization. On this view, English pronunciation (like grammar) can be reduced to a set of rules/facts about each sound or systems of sounds that need to be learned (memorized, really) by the learners before they go to try and produce the sounds. Extending this, it is assumed that they teacher needs to be able to present this information as an informed expert – OK, maybe, but several questions remain firmly grounded in my mind: when, to what degree, and how?
Our situation in South Korea may be quite different than the ones envisioned by Celce-Murcia et al. (2010) in that our students need to learn the new alphabetic system of English orthography. It is obviously at this point that the sound systems of English are necessarily introduced and explained and this is done in connection with the English orthographic system. Thus, a complete and hopefully systematic explanation of the English consonant system is really only ever going to occur, if at all, at the very onset of English learning when the orthographic system is being presented. This means that for most of us we will be dealing with pronunciation in a more piecemeal, retroactive manner based on student needs as evidenced by actual production coupled with goals. This is the reality of pronunciation teaching that seems to be overlooked even in books with a stated pedagogical propensity.
As I mentioned we need to teach sound through sound and not with a high reliance in symbol, whether that be the IPA or English orthography. Another important point to make that is generally is that the teaching of sounds is best combined with vocabulary learning. Sounds are combined and patterned in meaningful ways on lexical items (words). This is how people store and use sounds. Teaching rules of sounds and expecting students to be able to apply these across lexical items seems like a painful and problematic way of dealing with sound. Much of what we read and discussed in class is to be used by teachers on a case-by-case basic as a way of providing feedback and focused guidance to students on the way they produce sounds in context. They need to lexical representations first before instruction on sound really will take effect.

1. What are some of the ways one can present the English consonant system to Korean students?
The question here is whether teachers ever really need to ‘present’ the system to students. As mentioned briefly above, this assumes that it is helpful for pronunciation to be dealt with as an entity unto itself separately from other areas of language. We would also then need to consider when we would undertake to teach/present the system of English pronunciation. Logic would dictate early on, but it is not at all certain that we need to present the consonant system. As an alternative, as mentioned above, we can also deal with pronunciation in a retroactive way, dealing with pronunciation issues as they arise out of instances of language use. Teaching is very much about sequencing or deciding in what order or when things are to
dealt with. From this follows the concern of how things are approached. Aside from this major concern, there are also some other concerns we have regarding the teaching of pronunciation.

The IPA

Celce-Murcia et al. (2010) advocate dealing with pronunciation quite overtly. This entails first and foremost what the teacher decides to do about the IPA (International Phonetic Alphabet). You can go to the site to get a hold of a handy IPA chart for all sounds (http://weston.ruter.net/projects/ipa-chart/view/keyboard/). As we have mentioned in class, I personally, would not bother the students with learning the IPA even though the phoneme to grapheme correspondence in English is quite low, especially as compared to other languages employing an alphabetic writing system. Yes, the IPA can help in getting students to develop an all-important awareness of sounds and sound systems, for segments anyway, but it can also interfere with processing and adds a rather heavy cognitive load which may be unnecessary. After all, the IPA is only used to help people better conceptualize phonemes. It does not any functionally representative linguistic value like an orthographic system. In addition, there are other ways to raise student awareness of segments without the IPA. The other tricky thing about the IPA or any such system is that there are many variants floating around that can cause a lot of confusion in addition to the confusion caused by clashes with the regular orthographic system of English.

Listening – Phoneme Discrimination

In approaches to the teaching of pronunciation controlled listening is seen as being very important as a way of effectively distinguishing phonemes. The important question here is not whether listening is necessary for production and phoneme discrimination, it certainly is but whether speaking (pronunciation practice good for listening as regards phoneme discrimination. Based on the motor model of speech processing (Liberman & Mattingly, 1985) it would seem for L2 learners that pronunciation practice would improve phoneme discrimination much more than listening practice, even focused listening with minimal pairs, alone. The motor model basically states listening to language involves the same mechanisms as producing speech. There is a fundamental connection between sound discrimination and articulation. In a very general sense this means that we listen as we speak and vice versa. For L2 learners this means they initially listen to the TL, hear the phonemes/sounds of the TL, using the articulatory gestures of the L1. Lots of listening, even focused listening alone may not change this, but focused articulatory practice should have an affect both on the way they pronounce/articulate, but also listen. Empirical support for this comes from the McGurk effect (http://www.youtube.com/watch?v=ypd5xtGdGw).

2. In what order would you teach the different sounds?

As we discussed last week, there are ordering considerations that come from the observations related to the phonemic structure of the L1, universals of language, and markedness. But in most instances of teaching these concerns are only useful when we are, again, presenting pronunciation as a separate system or at the onset of English instruction. The wording of the question is purposefully tricky in that I am not sure it is possible to teach pronunciation in so far as what we present might not be learned at all. This is because pronunciation has a very important performative aspect.

Another general aspect of pronunciation and phonemes is their high level of variability, both phonemic and allophonic. Bearing this in mind it is often thought better to move from more prototypical to less prototypical variants. Allophonic variation in phonemes is context dependent. This means, in linguistic terms, that the phoneme is conditioned by the environment around it. When looking at allophones we can see which ones have the widest distribution and those are probably the ones we want to teach initially. But widest distribution we mean all at different locations within a structure in which similar sounds appear. It is generally quite easy for non-experts to be able to tell this simply because experts have already done it for you. When we look at a broad transcription it consists of only the more prototypical allophones. A funny variation will be marked in more narrow transcriptions. Of course, the teacher will also have to have a
good ear and feel for these different things.

3. How can you best deal with phonemic variability?
It should be clear that there is a lot of variability in the phonemic systems of English both cross-
dialectically (Based on what we read for the winter reading (Kirkpatrick, 2007)) and within the speech of a
single speaker (allophonically). Bearing this in mind, it might be helpful to think of sounds as being
somewhat like the keys on a keyboard. Your finger can push a specific key anywhere (in the center, at any
dge or corner) and the intended letter will appear. As discussed above, allophonic variation is one of the
main areas in the study of phonology, but there are also other types of variability that we also need to look
at. There is also cross-dialectical variability and that is why we need to have a general idea of the overall
scene of English as shown in Kirkpatrick (2007).

4. How does environment constrain consonants and how can we deal with that in the classroom?
Sounds vary in many ways but one of the most easily noticed is based on position in a word, that is,
whether the sound occurs at onset, medially or at the end (coda). There are also very strong co-articulation
effects seen across sounds. This means that the quality of the preceding or following sound effects the
quality of what's in between. The actual sound or articulation of a particular sound is determined by its
context and there is a high degree of variability. Sounds may entirely disappear. They may be greatly
reduced in length. The position of the tongue may change moving forwards or backwards or higher and
lower depending on what the conditioning environment is. Sounds may also change their manner of
articulation so they can better fit in with the sounds around them. And this is the tricky part. Although we
stated earlier in this class the pronunciation is a closed system in that there's a very limited number of
actual phonemes in English their variability is immense and there's no way that we're going to be able to
teach these things to our students through sets of rules. Yes we can give a few tips and some general
observations but the best way to have students be up to deal with this is with exposure and practice (with
feedback).

Trying to decide which of the English consonant sounds is the hardest to learn and which are the hardest
to teach is usually done in relation to two main concepts, that of the L1 and markedness. There are a
couple of things, however to note. The first of these concerns centers on the learners. No predictions are
going to make about any aspect of the language learning process, no matter how principled, are absolute.
There will always be people who have different problems. Researches often speak in generalities, but
teachers need to deal with individuals and individuals show remarkable variation (Marslen-Wilson, 2001).
Before we begin our discussion of consonant sounds it is important to also realize that when we address
the issue of consonant sounds we really need to think about systems. When thinking about sounds it is
not only the sounds themselves we need to consider but also how they are associated with and
differentiated from other sounds. So, for example, understanding and using English /p/ means also
understanding its relationship with, at least, /b/. This is a consideration, a reality really, that is often
overlooked in the teaching of pronunciation. Certainly researchers and teachers look at features of a
pronunciation system such as voicing, but they often do not analyze the whole system as such. We need
to develop not only representations for individual sounds but also contrastive concepts for how sounds
differ. This is the basic idea of a contrastive approach to pronunciation.

As mentioned above, problem areas can be predicted (since teachers are comfortable with this)
based on differences in the systems between the Target Language (TL) and the learner's L1, tempered as
well by markedness. This means that the teacher can benefit by knowing the L1(s) of the learners and
also a little bit about the theory of markedness. To this we can add ELF, which is discussed further
below.

To a certain extent there are overlaps regarding the difficulty of learning and teaching but there
are also differences. TL sounds that do not exist and have no close equivalent in the L1 may be hard to
teach, as they do not have a simple point of reference that the teacher can work from, but they might not be the hardest to learn. Some students anyway, pick up these sounds early because of their novelty or salience. They notice them because they are new and therefore interesting. Such would be the case of the dreaded interdental fricatives /θ/ and /ð/ . Although some people struggle with them due to their marked nature, they also seem to be quite learnable due to their novelty, but they are hard to teach. Actually harder to learn but easier to teach are the L2 sounds that are similar to, but not the same as sounds found in the L1. The typical example for Koreans and many East Asians is that of the /r/ and /l/ pair. Both these sounds occur in Korean speech in regular patterns, but they are allophones of the same phoneme, not distinct phonemes. As a result it can be very hard to get Koreans to notice the difference, because they are used to not bothering. So, for the teacher they are quite easy to teach, but they are hard for learners to master. Another example for Koreans would be the voiced fricatives /ʒ/ and /z/. Koreans tend to link these to the very common affricate /dʒ/ and it can be very hard to get them to distinguish them despite the relative ease of teaching.

Looking at features of the English consonant system, the one that jumps out at us is the feature of voicing. In theory, voicing should be easy for Korean as voicing is a common among Korean consonants but it remains a difficult feature to control in certain phonemes. Again, these are phonemes that are similar but not the same as in Korean. There are other aspects of consonants that are systematic in nature but also difficult for Koreans to master. This has to do with the distribution of certain sounds. As we mentioned in class, the English nasal system is quite easy for Koreans because the sounds are the same as are their distribution. But other sounds which seem easy in initial position like /dʒ/ are quite hard to deal with in syllable final position. So really, we need to try to deal with consonants in all their positions ands in all their guises.

It is surely true that the consonants are also highly variable. This variability can be in the way the sounds are made over all but also based on position. We need to approximate a certain norm in making sounds but there is always a way of doing things differently.

Celce-Murcia et al. (2010), Chapter 4

There are several different ways in which we can distinguish vowels in English. Again, this involves looking at the system of English vowels systematically and trying to approach the variations based on the systematic nature. In some ways I think the way Rogerson–Ravell (2011) has dealt with this bit–by–bit is somewhat useful, if somewhat painstaking. However, this approach is confusing and also fails to show us the big picture of what the cardinal vowels in standard English are. Based on this, I think it is actually more helpful to start with just brief look at all the vowel sounds and then start trying to differentiate them according to different systems. In this way we have an idea of what the sounds are at first and then we can start trying to come to better terms with them.

The first major thing that we probably want to look at because this is something that relates to all the different vowel sounds is that of place of articulation (POA). The difficulty that we face here with this chapter is that clearly Rogerson–Ravell (2011) is describing the Standard RP vowel System and this is going to vary quite a bit different from the American system. We can see that in Rogerson–Ravell (2011) no distinction is made between cardinal vowels and all sorts of diphthongs. This makes it seem like English has a HUGE number of vowels and this is problematic. Just to explain, cardinal vowels are the main vowels within the language. All other vowel sounds will somehow be adaptations of or somehow related to these cardinal vowels, as we shall see.
Standard English has 11 cardinal vowels. Moving around the mouth based on POA, these are i, ɪ, e, ɛ, æ, ɔ, ʊ, o, and ə. There are other vowel sounds of course, but all these other vowel sounds are somehow connected with these cardinal vowels. It is therefore very important that people when learning English are first and foremost able to distinguish these vowels from each other. That is the place to start.

Tongue position (POA)
Regarding tongue position or POA, the different vowel sounds can be placed on a grid. The grid is actually quite useful because it represents the actual oral cavity (mouth) and where specific vowel sounds are articulated (approximately). The POA of vowels are defined according to two planes their relative height and relative frontness. The accompanying grid is therefore composed of several sections (High-Mind-Low) and (Front-Mid-Back). We can place the basic or what are often referred to as the cardinal vowels within sections of the grid. Doing this helps us pinpoint where specific vowel sounds are articulated in relation to each other.

This of course is a tricky business, far more tricky than with consonants, because the tongue does not actually touch anything when we articulate vowel sounds. So POA for vowels is really just an approximation. Rather than having a specific POA for a vowel, we need to try to focus our attention on how different vowel sounds relate to each other. That is we need to define them not only by knowing the POA of one vowel but also the POA of nearby vowel sounds. Thus, if we take a look at front vowels it is probably helpful to deal with the front vowels together. That is, as a group. By looking at them as a group we can hopefully get students to be able to realize not just how sound is made but how they are also related and different from each other.

Shape of Lips
The shape of the lip is part of the MOA of vowels and can be used to differentiate different vowel sounds. For consideration, this is put on a plane from round to spread. The system of English is somewhat helpful in that it tends to group these different types of features. Rounding for example, in standard American and British English only occurs on back vowels. Front vowels, for example, are differentiated by lip spread. This makes it rather easy to contrast front and back vowels due to either roundness or spread. This feature also varies from high to low. High vowels will have a stronger manifestation of the feature. High front vowels have more spread while high back vowels are more strongly rounded. As the tongue moves lower and the mouth opens wider in the articulation of vowel sounds these features become weaker. By drawing attention to the systematic nature of how these features manifest themselves we can help our students.

Tense and Lax
The tense lax distinction is also part of the MOA of vowels and is used to distinguish some vowels in English. It basically has to do with the tightness of muscles in the neck and root of the tongue, but can also relate to the lips as well. In English, moving from high to low vowels tend to systematically vary according to tense and lax. So the high front vowel /i/ is tense while its very close neighbor /ɪ/
is lax. The next one down /e/ is tense followed by another lax vowel /ɛ/ and so on. This patterning of tense and lax allows us to differentiate vowels that have similar POA. In this respect it presents a very important feature of the English vowel system.

Vowel lengthening

In the chapter, and in many other sources, the feature of vowel lengthening is mentioned. This is a very common thing when discussing the English vowel system, but I am not quite sure it’s overly helpful. There are reasons, obviously, for using length as a way of distinguishing vowels, but in the end I think it’s more confusing than helpful. Within the higher POA region many vowels are clustered together both in the front and back. The English vowel system has developed many ways of differentiating these sounds and diphthongization is one of them. Diphthongization, which leads to lengthening, is combining sounds to make them longer. So /i/ is often diphthongized into /ij/ and /e/ becomes /æt/ in many dialects. We find a similar phenomenon occurring for back vowels at the same height. There /u/ becomes /uw/ and /o/ becomes /ɔʊ/. These diphthongized versions are not different vowels than their cardinal counterparts. They are simply allophones of the same sound and it is best to approach them that way. From this view you would then claim that English does not have long and short vowels. To be perfectly honest length is not a distinguishing feature in English. The diphthongization of vowels is simply one aspect of the articulation of a particular cardinal vowel sound in some dialects.

Diphthongs

Looking at distinctive diphthongs in English, we find that there are three. These are /aɪ/ , /ɔɪ/ , and /aʊ/. All of these rising diphthongs in that the tongue moves from a lower position to a higher position in the articulation of the sound. While this is not exactly earth shattering news it does tell us something about the vocal posturing of English and this is something we will discuss below in relation to question two. Expanding on this briefly, it seems that Koreans do not have difficulty with intelligibility related to these diphthongs and this is understandable because a combination of two sounds together makes the sound more distinctive, but one can still show strong L1 effects when producing these.

r-coloring

The issue of r-coloring is certainly the most particularly problematic aspect of the chapter in Rogerson–Ravell (2011). This is because standard British (RP) English and standard American English deal with this quite differently. In standard British English /r/ is not articulated at the end of syllables and as a result in the book Rogerson–Ravell (2011) has transcribed these as /ə/ and labelled them as diphthongs or triphthongs. In American English we call these r-colored vowels. That is vowels that have been affected by an /r/ either before or, more typically, after. Interestingly the Korean transcription of English words follows a similar approach as to what Rogerson–Ravell (2011) does here. But, since most of us are interested more in American English that British English this can be a very confusing issue. In Standard American English /r/ is pronounced overtly and in doing so
the production of /r/ affects the vowel around, thus changing the quality of the vowel. Again, for us this takes us back to the importance of cardinal vowels. The r-colored vowels are simply allophones of cardinal vowels. This means that they are not different sounds but the same sounds but with a different quality. In teaching English pronunciation it is helpful to bring the r-coloring back to the original source.

Nasality
The last feature of vowels that I suppose we should probably addresses the idea of nasality. This is important because there are many dialects of English (e.g. the North East dialects of New York, Southern New England, and Northern Pennsylvania) in which nasality is a marking feature. This simply occurs when a nasal sound is in the environment before or after a vowel. Again, like r-coloring, nasality changes the quality of a vowel making it sound different. Since it is a feature of some speakers it is probably a good idea to have students at least be able to recognize it when they hear it, but it is not a distinctive feature in English.

1. Of the different aspects of the English vowel system, which do you think is the most difficult to learn?
In my experience there are a few tricky aspects to vowels that make them quite difficult to learn. The chapter in Celce-Murcia et al. (2010) covering this does quite a good job and provides extensive information on each of these aspects, including showing us potential activities we can do with our students.

The first of these is the most obvious problematic aspect of vowels and it is that the articulators do not touch any specific areas within the vocal tract in the production of vowel sounds. Thus, it can be quite hard to get a feel for the articulation of each of the different vowel phonemes as a separate, distinct entity. Relative frontness and height are exactly that: relative. Is going to be very difficult for a learner to get a feel for a specific vowel by itself. As we have mentioned the space in our mouths between these different vowels is not very large and the boundaries between one vowel sound and its neighbor are fuzzy. These phonemes really are categories and each of these categories, as we introduced last week, allows for a range in their performance. Unlike the consonants, however, the different vowel sounds really do overlap. Maybe the best way of thinking about this is to liken it to a color chart (as shown below). Although we may be able to distinguish each color quite easily at its center, one color blends very smoothly into the next one with no clear boundaries. Vowel systems are like this as we move along the spectrum of tongue height and frontedness.
Following this, the first implication is for us to try to deal with the different vowel phonemes contrastively in groups. We can work in pairs as with the consonants, but space between vowels is small. The edge of one pair also needs to be contrasted from the next pair as well. As mentioned we probably want to deal with front vowels altogether and separately from back vowels. In standard English the two are kept quite separate from each other. Back vowels comprise a system of their own separate from other vowels and are not often fronted like they may be in many other languages or were in Old English. But we do need to deal with all that back vowels together and distinguish one from the other by teaching them together and helping our students to feel where the center of each category and their boundaries really are.

A second difficult aspect of vowel production is the tense/lax distinction. This is something that people can feel and control relatively easily but it is generally not something that learners of English are aware of. It is important that we make people aware of this distinction and give them practice in learning how to not only control it but also feel the difference in their throat and ears. The tense lax distinction is major distinguishing feature in English vowels in a way that it is not so in Korean and, therefore, plays an important role not only having our students distinguish vowels, but really understand the whole system. Luckily for us it is something which is quite physical and which is relatively easy for us to help our students get a feel for. It is also something we can see, so there are visual clues which can queue us into when sounds are tense or lax. This phenomenon therefore, seems to be quite teachable.

Still another problem for English vowels is that of vowel reduction. This is an important aspect of English pronunciation but one that is often overlooked by many. Really it is a matter of authenticity. It is surprising how many materials available neglect this by enunciating each phoneme individually, very slowly, and carefully as they produce streams of individual lexical items or even longer utterances. In the stream of speech unstressed vowels are generally reduced and being aware of this is important as individual lexical items in a stream of speech can and will sound very different than when they are produced individually. We have to get our students used to this, especially and at first with more authentic types of input. That is the key. To be able to deal with vowel reduction they need to be able to hear how the vowels are reduced first. Authentic listening input is essential and only after that can we expect them to start moving forward on their own production.

Finally, the last challenging part of vowels is the coloring they get from the consonants around
them and mostly that of the semivowels like liquids (/r/ and /l/) and glides (/w/ and /j/) as well as nasals (/m/, /n/ and /ŋ/). Unlike vowel reduction, which is quite a simple phenomenon in theory, coloring is much more complicated. The quality of vowels is very strongly affected by the conditioning environment and there is a large amount of variability here, too much to try to teach the system overtly. Once again, getting people to listen first and foremost is going to be an important first step.

A required aside
There are also a couple of problematic areas in relation to the system of vowels that derive not from the phonemic system of vowels itself but from the ways in which language teachers have dealt with English vowels. Of these the most confusing is that of vowel length. A large amount of teaching materials for English distinguish different vowel phonemes based on vowel length, but it is very important for us here to realize that vowel length is a conditioned phenomena and is not something which distinguishes different vowel phonemes. I would strongly suggest that teachers interested in dealing with pronunciation effectively do not use this terminology because it detracts from the actual features that are used to distinguish different vowel phonemes such as POA and MOA. As mentioned above, vowel length is something that results from co-articulation effects (and they are well described in Celce-Murcia et al. (2010)).

A second phenomenon which popped up in the class was diphthongs (and this is also related to a certain extent to the vowel length debacle). A lot of the diphthongs that people find in the materials and then go and teach are not actually diphthongs but coloring on vowels. English generally only has three diphthongs and some dialects have diphthongized versions of pure vowels. We want to be careful about how we present the vowel phonemes of the target language. Phonemes cause of meaning to develop and to change. And really the system of vowel phonemes is not that difficult if we can break things down as we are trying to do in this class. Unfortunately a lot of the materials out there, especially those related to the phonics, are not based on basic phonetic principles but on aspects related to spelling and as a result we have this huge confusion between what the actual phonemes of English are. If we provide incorrect information about English phonemes then the system is no longer systematic and that’s the danger of calling all these different colored vowels different phonemes/diphthongs. And looking only at the surface and trying to make the system simpler people are actually making it more difficult. So let’s be careful and really focus on the system as it is the way we are presenting it here.

2. What approach would you take to dealing with that particularly problematic aspect?
Of the four problem areas mentioned above, the first two of them are the result of the properties of the vowel system itself, on the individual phoneme level: one relates to POA and the other MOA. The other two are results of the system in use. Awareness, on the part of the teacher, of this major difference should also usher in differences in how the different problem areas are dealt with. Focusing on the later two it should be obvious that, since they occur in real instances of language, they should also be dealt with in the realm of language use. The text goes out of its way to lay down a lot of the specific patterns for coloring on vowels and does a good job of this, but this is not how I would suggest we approach this for students. Speech is something that has to proceed at a certain speed to be deemed effective. I am not sure that making our students consciously aware of the patterns of coloring is a useful venture, based on the severe time constraints under which real speech operates. Controlled to more free type of practice might be a way of dealing with this phenomenon. A similar approach could be suggested for the phenomenon
of vowel reduction. We can only feel vowel reduction in authentic uses of the language itself. Explaining the phenomenon is very simple and takes only a second but that does not mean that people can get a feel for how the phenomenon of vowel reduction works. They need to get a good feel both in listening through speaking practice both more controlled and then more free.

References
