

An Initiation into English Phonetics and Phonology for Beginning Algerian Students

مقدمة مختصرة في أساسيات الصوتيات وعلم الأصوات للطلاب الجزائريين المبتدئين

Doctoral Student Mansour DJALAL
University of Frères Mentouri, Constantine -Algeria-
djalmansour@yahoo.co.uk

Abstract

The present article underpinning aim pertains to dispelling a plethora of terminologically-baffling topics all revolving round the mega axis of phonetic and phonological jargon. It, more peculiarly, sets out to render assimilation of a vast array of key concepts prevalent in this field palpably possible for first-year Algerian English majors who are having their first foray into this academic province. The wealth of scholarly works on offer be large-scale encyclopaedic volumes or small-scale research-based articles may not perforce be in happy harmony with these learners' expectations and needs. The article is, likewise, tailored to ward off dreaded, oft-recorded rejection of the module overall content which is typically widely associated with this academic subject. Such rejection may ultimately result in hard-to-eradicate reluctance for picking up adequate grasp on the phonetic component of the spoken mode which in turn may turn out to trigger off heavy-foreign accentedness coupled with inability to readily comprehend part of the linguistic content of the curriculum of the first and subsequent scholastic years.

Keywords : *English, Phonetics, Beginners, Expectations, Rejection.*

ملخص

يهدف هذا المقال إلى توضيح عدد كبير من المواضيع المحيرة من الناحية النظرية التي تدور حول المحور الضخم لعلم الأصوات وحقل الصوتيات. وهو بالخصوص، مسطر لجعل استيعاب مجموعة واسعة من المفاهيم الرئيسية السائدة في هذا المجال ممكنا للطلاب الجزائريين المبتدئين الذين يجتاحون لأول مرة هذه المقاطعة الأكاديمية. قد لا تكون ثروة الأعمال العلمية المتوفرة، سواء كانت أحجام موسوعية واسعة النطاق أو مقالات مبنية على الأبحاث الصغيرة، منسجمة مع توقعات هؤلاء المتعلمين واحتياجاتهم. وبالمثل، فإن هذا المقال مصمم خصيصا ليمحو الخوف المسجل غالبا من رفض محتوى هذه المادة والمرتبطة عادة على نطاق واسع بهذه الوحدة. هذا الرفض قد يؤدي في نهاية المطاف إلى صعوبة في القضاء على التردد الذي يحول دون فهم كاف للمكون الصوتي أثناء النطق الذي بدوره قد يتحول إلى ثقل في نطق اللغة الأجنبية بالإضافة إلى عدم القدرة على فهم واستساغة جزء من المحتوى اللغوي من المنهاج الدراسي للسنة الدراسية الأولى والسنوات المقبلة.

الكلمات الدالة: *الصوتيات، المبتدئين، التوقعات، الرفض.*

Introduction

Robustness and perpetual growth of a language learners' linguistic aptitude is conditioned primarily by their going through un-daunting, highly inspirational initial learning phases. Conversely, if the first foray into the learning milieu happens to be besieged by inappropriately designed language prompts and unbearably jargon-laden theoretical content, then the ordinary learner is most likely prone to stumble across ever-flowing linguistic predicaments later on in their developmental stages. There are certainly a dazzling profusion of books of different shapes and sizes that claim to cater for the needs of beginning learners. This, however, should not be erroneously construed to imply that such references will be an asset for the learners locally. What the academic community in our country seems to be missing out on is the proper localisation of the content of principally the module content of those subjects that have proven over the years to give rise to the largest number of learning barriers. Researchers, therefore, are held accountable to find cures for surmounting such problems through devising less-burdensome content to be used in tandem with primary reading materials that university students are required to read. Intentional care should, therefore, be taken to make sure that the first theoretical input to which students will be exposed must be painstakingly trimmed and narrowed down and every constituent likely to disperse the novice learners' attention be wisely removed. After all, once learners have been sufficiently empowered to embrace the new subject matter and get adequately acquainted with its rudimentary facts and terminological constitution, and clearly discern its ample contribution to their overall linguistic maturity, they will end up taking independent charges of their own learning. Wholly grounded on this assumption, the following headings will strive to steadily bring learners to wholesome familiarity with some fundamental trappings of phonetics and phonology. Adhering to this line of reasoning, we have made certain that in the current article the flow of ideas and their interrelatedness is calibrated in such a way that it will cater for the myriad needs of the novice, yet avid recipients of the theoretical content embodied in the forthcoming discussions.

1. A Brief Overview of the Scope of Phonetics and Phonology

This part will elucidate to the readers the scope of each of the two intimately related fields into a portion of whose realm the remainder of the article will take the readers. A word of caution should be sounded at this very juncture, however; it is pivotal that a thorough understanding of the scope of both fields is arrived at for the simple reason that as discussions progress and intensify, readers may not find it easy nor wholesome to read on as the words phonetics and phonology will abound.

1.1 The Thematic Scope of Phonetics

Phonetics is the scientific study of the speech sounds that the human speech organs are capable of producing and are equally meaningful in a language or languages. That is, phoneticians carry out very intricate and detailed experiments in order to provide a full description of speech sounds that we utter and perceive and play significant roles in our day-to-day use of language. Random sounds which escape the vocal tract are, hence, not investigated by phonetics. Phoneticians concern themselves with the sounds that combine together to form words and other larger stretches of language, not the sounds that do not get into the lexical make-up of language. Beginning learners should not, therefore, be lead astray by the example-giving conventions adopted by most English authorities in the field of phonetics. Such writers mostly use English examples for illustrative purposes. This, nonetheless, should not be misconstrued to have the wrong implication that phonetics concerns itself solely with English sounds. In fact, it is up to the phonetician to decide on which speech sounds of which language to study. In books such as those of Chomsky and Halle (1968), Kreidler (2004) or Roach (2009) the linguistic code under investigation is English. Arabic phoneticians will furnish accounts on the articulatory and acoustic properties of Arabic speech sounds.

An English language learner is required to have at their disposal adequate grasp on the phonetic features of all English speech sounds the language repertoire encompasses. After all, if any void in such aptitude exists, the learner, when becoming

a teacher himself/herself, will encounter hugely insurmountable difficulties. Such challenges become all the more acute when instructing their middle school or secondary school learners about the physical properties of English sounds, phonetic symbols and a whole host of other related topics. No such instruction is feasible without proper mastery of the tools and devices furnished by articulatory phonetics. Being able to spell out the anatomy and physiology of the various speech-producing organs (insights thereof are abundantly available in discussions about articulatory phonetics) will indubitably enable the teacher to go about their duty in a successful manner.

Phoneticians are exclusively interested in three main aspects of speech sounds:

- I. How they are produced at the level of the speech-producing apparatus;
- II. The physical and acoustic properties that they acquire after they leave the speakers' speech organs; and
- III. How the produced sounds are perceived by the listeners' ears and other parts of their auditory and perceptual mechanism, including the ear and the chain of nerves connecting up the ear to the brain.

Phonetics, thereby, could be viewed as a tiny camera that secretly follows the speech sound ever since it embarks upon its journey from the speakers' articulatory organs up until its termination juncture, the listeners' auditory organs. The tiny camera tries to provide us with a full account, accurate along with fine-grained and clear descriptions of the various traits of the speech sounds during their journey.

The spoken mode of language is unquestionably all too multi-faceted and wide-scoped that there are two complementary fields of inquiry that make of spoken language their area of expertise. We have heretofore looked in brief at one of the two, namely phonetics. In what follows a pithy account as to the scope of the second field, phonology, is dwelt upon.

1.2 The Thematic Scope of Phonology

Phonology is, likewise, concerned with the study of speech sounds; however, unlike phonetics, phonology is interested not in the articulatory, acoustic and auditory features of sounds. Rather, it is concerned

with the investigation of the functionality of every single speech sound in a language or set of languages. Any phonological study aim is the scrutiny and the laying down of descriptive frameworks all revolving around the features of sounds as constituent elements of words and larger linguistic chunks. Phonology studies, then, the sound pattern of language (McCully, 2009, p.10; Lodge, 2009, p. 08-11). It studies, by way of example, which combinations of sounds are possible in a given linguistic code, which sounds can occur at the beginnings of words, which can in the middle, and which at the end. Another aspect of sounds phonology strives to account for pertains to which sounds play distinctive roles and which are non-distinctive. This last sentence may not make much sense; however, nothing daunted. We will revisit the notion raised herein in a while and further clarity will emerge as the subsequent discussion unfolds.

It is by virtue of studies conducted in English phonology that we now know that the following speech sounds never occur in word-final positions in English words: /h/, /y/ and /r/ (Cruttenden, 2014, p. 261-63). No known English word terminates in one of these sounds. This, nonetheless, does not imply that one is not remotely bound to stumble across words not adhering to this rule. Languages, living languages, borrow from one another for filling up lexical slots inherent in them, thereby rendering themselves more useable and warding off any communicative failures their users might experience. Such a recurrent process may, in effect, result in the emergence in the lexical repertoire of any given language of words which do not conform to the phonotactic patterns of that language. That is why it is borderline impossible for phonologists to vouch for the absolute thoroughness of their descriptive framework as regards which phonemic patterns are permissible in a given language and which are not. Foreign learners are encouraged to have at their disposal enough knowledge of such rules and constraints so that their interlanguage phonology (a phonological system that is still in constant growth and that holds the properties of both their mother tongue and the target language they are in the process of acquisition) will become-as time wears on-more in conformity with the native norms.

We will go back now to the point made in the foregoing paragraph: why is the /r/ present in the cluster of consonants listed above. Some learners are now saying that this is untrue: we are certain that we heard many highly native speakers pronounce it in words, such as **bird, father, lure** and in a profusion of others. The people who could be heard repeatedly use pronunciations at odds with the one described herein do not use this educated British accent. They probably use American, Canadian, Scottish, Irish or some other uneducated British accents, to enumerate just a few.

2. Spelling-Pronunciation Partial Concurrence

One of the many trappings the English tongue is most notorious for is the lack of balance between sounds and letters. This absence of absolute concurrence is one of the confusing aspects of the English language. A hugely vital piece of advice we would confide to beginning learners, is that they should make sure when they meet a given word for the first time in their reading, they should not blindly fall back on the linguistic knowledge already internalised; learning by means of analogy is perilous and catastrophic. The only remedy for this routine difficulty we can prescribe is affordable; whenever a novel word is encountered for the first time irrespective of how certain the learner is of the potential accuracy of their pronunciation, consulting the dictionary for help is the best way out of this. It might sound a lot of work at first blush, but as learners compel themselves to practise this as often as the need arises, they will as time wears on start to discern how helpful this easy gesture could be in their on-going learning experience. Accordingly, they will realise the necessary contributions regular dictionary usage could bring to learners' ultimate success and how much it alleviates their learning tension all along the phases that they go through.

3. The Smallest Distinctive Unit of Phonology

Any phonological study has as its starting point to find out all the sounds that a given linguistic system possesses. Put in strictly phonological terms, it strives to identify all the phonemes of the code under scrutiny. A phoneme is simply the smallest unit of phonology which serves to distinguish meanings (Gimson, 1970, p. 46; Jones, 1950, p. 39; Roach, 2002, p. 57).

Put differently, a phoneme is a speech sound which functions to change the meanings of words. For example, /k/ and /l/ enjoy the status of phonemes in the English consonantal inventory. The reason is very conspicuous: if we use /l/ instead of /k/ in **kick**, we would generate a completely different word with an utterly divergent meaning: **lick**. The same holds true for /k/ and /m/ in the words **mat** and **cat**. Does not the usage of /k/ instead of /m/ bring about a word that has a totally different identity? Another equally legitimate insightful analogy could be drawn between the phoneme and the letter. Take the Roman alphabet as an example. It is said to incorporate twenty six letters. It is by virtue of the obvious fact that if we use one letter instead of another, we generate different words. The following pairs of words are differentiated by virtue of the existence of different letters therein: **pin, bin**; **beep, weep**; **toy, boy**; **bet, bit**; **slap, slip**. (The letters setting members of each pair apart are bolded).

4. Allophonic Variants

Speech sounds, or phonemes, are not pronounced similarly in all phonological environments by different speakers, or even by the selfsame speakers in different conditions for different purposes or under different physical and/or psychological statuses. It is an indisputable trait of sounds that they acquire different, not radically different, identities for a variety of factors, whether they be linguistic, emotional social or otherwise. That is why it is believed by many phoneticians that a single phoneme should not be viewed as one single sound. Rather, the argument runs, it should be viewed as an umbrella heading, a cover label, of a whole sound family.

Let us consider some examples. A very salient one that readily springs to mind is the phoneme /l/. In native speakers' parole they do not pronounce this sound in the same way wherever it figures in an utterance (a unit of spoken language that ranges in size from a single word to a fully-fledged sentence). In word-initial positions and when preceded or/and followed by vowels, they produce what is called a clear /l/; in word or sentence final positions or when followed by other consonants, they produce a dark /l/.

The two pronunciations of this phoneme are labelled its **allophonic variants** or simply **allophones** of the phoneme /l/. The dark and clear /l/ are merely variants of this phoneme because they inherently do not have any power to bring about differences between words, the /l/ in **lap** or **lick** is rendered **clear** or **dark**, the words' lexical significance will not be altered. Nonetheless, using the dark in lieu of the clear (which is the accurate, native pronunciation) will impart a foreign taste, as it were, to the accent of the speaker.

To render the idea of allophonic variant far easier to grasp, it seems prudent that we take immediate recourse to the learners' first academic language, Modern Standard Arabic. The /l/ phoneme in this educated variety of Arabic seems to behave similarly to its English counterpart; it has the same allophones both the clear and the dark. Notwithstanding this area of convergence between the two languages, the conditions that govern which variant to use are different in each language, but the same maxim is functional, i.e. it is the predominantly the phonological environment that dictates which allophonic realisation is permissible.

5. Minimal Pairs

We will now introduce another equally prevalent notion that is inextricably related to the phoneme: minimal pairs. What does **minimal pair** denote and why is it considered vital to imbed in this brief introduction to some key notions within the general framework of phonetics and phonology? A minimal pair refers to a pair of words the constituents of which are made different from one another by one, and only one, phoneme. The pairs, **pit, bit; set, wet; hit, fit; book, look; see, bee; think, wink, etc.** are just illustrative examples. It is readily perceptible that members of each pair are different from one another because of only one phoneme. Is not book different from look because of the fact that the first phoneme is the /b/ in book, whereas in look it is /k/. Irrespective of this one difference the two words would be identical. This procedure, that is minimal pairs analysis, is deployed by phonologists to establish the phonemes used in the sound inventory of a hitherto unstudied language (languages that have never been studied,

predominantly those without any writing system).

6. Segmental Phonology

What we have discussed so far as topics within the general scope of phonology constitute, in fact, only one broad branch of phonology, **segmental phonology**. It is called segmental because it is exclusively concerned with the systematic study of individual sounds (Chalker and Weiner, 1994, p. 353). The adjective segmental is derived from the noun segment which simply means a speech sound, either phoneme or allophone. The other broad branch of phonology is termed suprasegmental phonology.

7. Suprasegmental Phonology

It bears this name because it studies aspects of spoken language extending beyond the level of individual sounds. It studies, more clearly, the properties of sounds in combination. It is this branch which studies, stress and intonation, amongst other things. A learner who is truthfully keen to get to familiarity with the plethora of insight offered by this area of phonological studies will not be entitled to do so unless they have amassed sufficiently empowering grasp on the most basic notions within segmental phonology. This is crucial because most discussions about the properties of units encompassing more than one sound take for granted that the reader's receptive skills are mature enough to get exposed to such discussions. Based on this premise, beginning learners are called upon not to venture into launching explorations of this field before they have established for themselves solid foundations of the various constituents delineated by segmental phonology.

8. The Speech-Producing Apparatus

We pointed out when looking at phonetics above that amongst the aspects of speech which is the theme of major concern to phoneticians are articulatory features of sounds. First and foremost, it would not be wise to get into talking about articulatory trappings of sounds and using illusive terms such as palato-alveolar, uvular, glottal and so forth without first gaining a general overview of the organs responsible for the task of generating the fascinatingly big and varied number of speech sounds that homo sapiens are endowed to yield

with relative ease. Those organs in our bodies which are responsible for speech production are labelled **speech organs, the speech producing apparatus**, or alternatively **articulators**. In the ensuing discussion we will be deploying the three terms synonymously, unless the argumentation calls for finer details.

Another equally important label that should be mentioned at this juncture is the **vocal tract**. This is a name that is used to refer to the articulators and the passage way through which air moves, which are located above the larynx, to be looked at below. Additionally, as we will address in what follows (as comprehensively as space and purposes behind the writing of this article make feasible) the organs that are immediately concerned with imparting to the speech sounds their individual traits that set them apart, we will herein look at the first two phases air goes through before it starts accumulating properties and turning into speech sounds. Because speech is, as is often referred to, modified breathing. Prior to embarking upon its effortful journey towards procuring a recognizably speech sound identity, air has first to be generated. The first organ to talk about, then, whenever speech sounds are discussed is **the lungs** because they are the producers of air indispensable for sound production. Lungs, then, provide the other upper organs with the air which they later turn in an intricate number of ways into speech sounds. However, the lungs are not of themselves involved in this process. This is the basic reason why lungs are not amongst the articulators to be looked at shortly below.

We first inhale air into the lungs through our noses and/or mouths. Before it reaches the lungs, the rib cage has to be pushed upwards and outwards thanks to some muscles attached to them. The raising of the rib cage will leave sufficient space in the chest for the lungs to take in the inhaled air. Afterwards, and for the air to be sent back again into the upper organs (this time to be used for sound production), the rib cage will be brought into its former position. The lowering of the rib-cage will push the lungs downwards, by which process the inhaled air is forced out of them into the trachea (Roach, 2009).

The trachea is the anatomical name given to the

tube-shaped organ made of cartilages that is lying immediately above the lungs through which air passes before it reaches the larynx (which could be viewed as the air-hosting chamber where the first modifications to the inhaled airstream may take place). The trachea is also used for taking the inhaled air into the lungs after it has gone through the larynx.

The speech producing apparatus is made up of a number of organs each of which is typically responsible together with at least another organ for the production of a given speech sound or sounds. Together with another organ is hugely important here: hardly ever at all can we produce one sound using one and only one speech organ. For a given sound to be pronounced, two or more organs have to articulate against one another (Roach, 2009).

For ease of explanation, we would split the speech organs, as is done in some phonetics books (by no means all), into two clear-cut sets: active articulators and passive articulators.

8.1 The Active Articulators

As the name might denote, the label refers to the speech organs which are capable of moving and assuming different positions while sounds are being produced (Odgen, 2009). They can legitimately be labelled mobile articulators. They are the following: the tongue, the lower lip, the lower teeth, the lower jaw, the soft palate, and the vocal folds.

The tongue: is by far the most mobile and equally the most versatile of all articulators. Its agility and versatility is borne witness to by the fact that it is involved in the production of almost all speech sounds be they of a vocalic nature or of a consonantal nature. Its vital importance in the worlds' languages is also plain in the fact that in many languages, English, Arabic and French included, the same word, tongue, is used to refer to both language and organ. To take English as an illustration, we can equally accurately say the Anglo-Saxon tongue or the Anglo-Saxon language. The tongue's irreplaceable status in the sound-production process is, however, not remotely visible in the speech-organ-derived terms used to refer to the various classes of consonants. This reality

will become all the more readily understandable as the following discussion unfolds.

The lower lip: is also involved in the production of many sounds. In English, for instance, it is one of the organs used for producing /m/, /p/, /f/, and so forth. It either comes in contact with the upper lip or the upper teeth. The lips are, likewise, indispensable organs for the generation of vowel sounds. Speech sounds for the generation of which the upper and lower lip articulate against one another are called bilabials. If the upper teeth come into contact with the lower lip, the resultant sound is called labio-dental.

The lower teeth: are amongst the active articulators because they can be brought into firm contact with the upper teeth or the upper lips. The lower teeth can, likewise, articulate with the tongue for the production of some sounds. Speech sounds which are generated by virtue of the upper and lower teeth getting in contact with one another are called dental. One way of retaining this term is to associate it with the dentist and his/her sole occupation: caring for, mending and extracting teeth.

The soft palate: refers to that part of the roof of the mouth, the upper surface of the mouth, which is made of soft fleshy material, hence the name. It lies immediately behind that part of the mouth roof which is a complete contrast to it because it is bony and hard, the hard palate (to be defined later). The soft palate has another name which is used a great deal in the phonetics literature, **the velum**. Whilst the soft palate is an Anglo-Saxon term, velum is a Greek label. None the less, the Anglo-Saxon name enjoys a higher density of occurrence than its Latinate counterpart. Speech sounds in the production of which the soft palate is involved are called velar sounds.

The vocal folds: in some other books an alternative name thereof is used, the vocal cords. We have opted herein to use the vocal folds because one of the authorities in the phonetics realm, Roach (2009), dubs the name as being old-fashioned. They refer to the two elastic cord-like organs that are situated in the larynx. Their elasticity enables them to be brought together and pushed apart as the lung-air reaches them. The opening that is generated when the folds are apart is

called the **glottis**. The speech sounds in the production of which the vocal folds are the sole articulators used are called glottal sounds. Their name has been derived from the opening lying between the folds when they are in a regular breathing position rather than the folds themselves.

8.2 The Passive Articulators

They bear this name because they are organs that have either very slight movements, or are utterly immobile in the process of sound production. They are, in different wordings, the part of the speech producing apparatus towards which mobile organs move or articulate against for the production of sounds. This category of sounds, then, incorporates: the upper lip, the upper teeth, the alveolar ridge and the hard palate. It is to be noted that all the passive articulators occupy the upper part of the mouth which is typically in a virtually stationary position during sound generation.

The upper lip: may articulate against the lower lip for the production of sounds like /m/, /p/.

The upper teeth: they articulate mainly against the lower teeth for the production of sounds like the ones at the beginning of *think*, *thorn*, *this* and *those*: the /t/ and /d/ sound.

The alveolar ridge (the tooth ridge): is the organ that is situated behind the upper front teeth. To make matters easier to grasp, the tooth ridge is the anatomical name given to the part of the mouth the tip of the tongue articulates against in the production of sounds, such as the ones that figure bolded in the following words: **adduce**, **attune**, **announce**. All speech sounds that are produced thanks to the coming into contact of the tongue and the alveolar ridge are labelled alveolar sounds.

The hard palate: refers to that part of the roof of the mouth which lies immediately behind the alveolar ridge. It is made of very hard bone-like material; it is a glaring contrast to its adjacent organ, the soft palate (looked at above). The only organ with which the hard palate comes into full contact or merely approximates is the tongue. Sounds in whose generation the hard palate is used are generically called palatal.

This last rubric has brought discussions on the active

and passive articulators to a close. A word of caution is in order here, however. We have not described all the components of the speech producing apparatus; we confined ourselves to the ones deployed by English speakers for the generation of the English sounds. Amongst the articulators whose description has not been incorporated into the above discussion is the pharynx. This has been the case because in English no pharyngeal sounds are produced. In a thorough description of the Arabic phonetic system, for instance, the pharynx has to be one of the articulators coming into the discussion because in this language this active articulator is involved in the generation of certain speech sounds.

Conclusion

The present scholarly work has been tailored for one overriding aim in mind: to palliate the tension that hallmarks first-year Algerian students' experience when coming into first contact with phonetics at the tertiary level. We have right from the outset endeavoured to adopt a non-alienating way of information exposition when introducing the targeted students onto a portion of the ABC's of this field of enquiry. We have, likewise, avoided as best we could the data presentation format where readers are presented with information incessantly cluttered with reference to lists of other research work and where confusingly block quotes and in-depth discussions are dealt with. Furthermore, every attempt was made to rid the flow of discussions of perplexing elements pertaining to the divergent viewpoints a given notion has sparked off amongst scholars over the years. Although such a constituent, which we opted for discarding it, may broaden the learners' horizon, we did so lest it would turn out to have repelling influence. This, however, does not imply that we are claiming that writers who get into fine-grained analyses are not doing the academic community much service: what is to be underscored through our here salient line of reasoning is that a-one-size-fits-all maxim is flawed: too many doses for a beginning learner are more of a hurdle than an asset. Large scholarly works, which are rated to be references on the field, should be employed only when proper grounding has been firmly established. No such an objective is to be

fulfilled unless the person tailoring the material has had first-hand experience with learners' reactions towards the content of phonetics and phonology. Our overriding objective was to furnish an appetisingly easy-to-grasp command, as it were, of some of the key concepts and terms widely used in introductory courses and manuals on phonetics and phonology. It is our assumption that articles-wherein moderately small doses of terms and discussions are imbedded, are a better tool to utilise for introducing the anxiously hopeful students. This will guarantee (at least partly) that the targeted learners will have a long-lastingly enjoyable journey into the exploration of the field by virtue of the warm welcome furnished by learner-friendly, readily comprehensible first input received.

Bibliography

- Chalker, S., & Weiner, E. (1994). *The Oxford dictionary of English grammar*. Oxford: Oxford University Press.
- Chomsky, N., & Halle, M. (1968). *The sound pattern of English*. New York: Harper and Row.
- Cruttenden, A. (2014). *Gimson's pronunciation of English*. New York: Routledge.
- Gimson, A. C. (1970). *An introduction to the pronunciation of English*. Edward Arnold: London.
- Jones, D. (1950). *The phoneme its nature and use*. London: London University press.
- Kreidler, K. W. (2004). *The pronunciation of English: A course Book* (2nd. Ed.). Oxford: Blackwell.
- Lodge, K. (2009). *A critical introduction to phonetics*. London: Continuum.
- McCully, C. (2009). *The sound structure of English: An introduction*. New York: Cambridge University Press.
- Ogden, R. (2009). *An introduction to English phonetics*. Edinburgh: Edinburgh University Press.
- Roach, P. (2002). *A little encyclopaedia of phonetics*. Retrieved from <http://www.personal.reading.ac.uk/~llsroach:peter/>.
- Roach, P. (2009). *English phonetics and phonology* (4th ed.). Cambridge: Cambridge University Press.