Infixation and the Predictive Reliability of Prosodic Boundaries

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Abstract

This research concerns three separate aspects of English language infixation and why resulting prosodic boundaries may, or may not, be reliably predicted on a morphemic basis. The language process of infixation occurs when a letter or sound, or a group of letters or sounds, are added within a word, thus changing the meaning or function of the word accordingly. First, although infixation is less productive than the principal affixational forms of suffixation and prefixation, it still holds many linguistic paradoxes for interested researchers.Second, native English speakers marginalize their own use of infixation since its use is often expressly expletive, or deemed too novel for daily usage. English is unlike other languages,sinceinfixing does not serve a consistent purpose for both speakers and listeners. Third, speakers demonstrate a marked reluctance to use, or even a lack of familiarity with the infixational process, choosing to avoid its use entirely. The infixation process offers linguists a real theoretical window through which we can observe and attempt to predict the extent of morpho-phonological integration that takes place. Ultimately, the prosodic boundaries made during infixation may be determinable and become observable within the often subjective contours that are formed within the placement word.

Keywords: Infixation, Affixation, Suffixation, Novelty, Expletives, Prosodic boundaries

1. Introduction

1.1 Background of the Study

According to Yu (2007), over 150 infixational patterns are known to exist within over a hundred distinct languages, including examples taken from all parts of Asia, Europe, Africa, New Guinea, and South America. However, infixation in the English language presents a number of distinct challenges to both the listener and to the speaker. This uncommon usage requires interlocutors to carefully consider the phonological accuracy, pragmatic intentions, and vocalic expression of what has been said or has been intended to be said. The speaker's infix may be wholly novel (uncommon) or offensive (expletive) in nature to the listener.Or, it may be unknown in such a way that some kind of sophisticated socio-linguistic awareness is required to enable both the speaker and listener to regard how and when the symmetric distribution of such infixes may occur.

Difficulties would become readily apparent to both listeners and speakers in both the literal and /or figurative translation gambits taking place from L1 to L2. Given, the resulting situation leaves English language infixation largely within the domain of native speakers and outside the scope of the English as a Second Language (ESL) curriculum; therefore, infixation is seldom taught, much less learned, in a classroom environment.One of the principal reasons that infixing does not present a concern for ESL teachers is that its eventual usage is widely discouraged by native users as both strangely unproductive, or to put it simply, as plain offensive. Its usage is seldom rule-governed as found in the principles that constrain the more familiar ad-positional,affixational forms of prefixes and suffixes. An invariant and multitudinous range of infixational patterns may occur in an ungovernably diverse number of locations, both within words and in terms of morphological formations. However, some predictive word formation patterns followed during infixationmay actually be discernible. Interestingly, this is despite the obvious diversification found in the phonological shapes and morphological functionality occurring throughout the infixation process because of howthe variety of symmetric distribution when such infixes occur.

Consideration of infixing may effectively begin with the simple notion that when an infix is placed inside a word, it will commonly increase the degree to which the word is thus understood. This semantic "difference", so to speak, is taken in much the same way that a word changes when a like adverb is included within a phrasal construction. So, infixation is most commonly used for purposes of adjectival intensification and paralinguistic expression. However, this simple understanding neither assists the potential speakers in how and where to form / locate an infix within the "host" word. It is not simply a matter of placing a prefix at the *"front"* of the word and the suffix at the *"end"* of the word. Choices must be made which lead to wholesale unintelligibility or ready acceptance.

The complex process of determining the accurate, consistent or even accepted placement of an infix within a word requires users to first ascertain the interaction between the diachronic *(the location of the infix is as an affix dependent upon the grammar-internal constraints pre-imposed)* and then the synchronic *(the location of the infix is not a function of its immediate, external environment)* forces operating within the English language (Yu,2007). However, the forces influencing infixal distribution are often found to be in direct opposition to one another during the initial word formation process. They may be applied preferentially (subjectively) and thereby disrupt the regular (productive) typological categorizations, phonological alignments, and morpho-syntactic sequencing required by most linguists. As a direct result, infixation is has been marginally considered since it is taken either as an anomalous form or as a fringe aspect found in morpho-phonological linguistics.

1.2. Research Questions

The following research questions are applied in the study.

Question 1: Is it possible to establish universally accepted prosodic boundaries duringthe process of *novel*infixation it the English language?
*Question 2:*Is it possible to establish universally accepted prosodic boundaries during the process of *expletive*infixation in the English language?
Question 3:Are there any demonstrable differences in the way words are formed duringboth the *novel* and *expletive*infixation processes (*different pivot points*)?
Question 4:Are words formed during both *novel* and *expletive*infixation correctly /consistently perceived by others subsequent to any infixation taking place?

The responses to these research questions require a fixed/accepted determination of the prosodicboundaries (*pivot points*) salient to the word in use. Such a linguistic determination must consider certain objectives. Any research intending to examine if English language infixes use must be solely predicated on the socio-psycholinguistic / paralinguistic competency of both the speakers / listeners involved: or if instead, it will be constrained by a stipulated infixation typology or other given theoretical framework.

2. Literature Review

2.1 Determination of Prosodic Boundaries during English Language Infixing

This research is limited to three principal areas of academic concern: (1.) a determination of prosodic boundaries during the process of English language infixing, (2.) the marginalization of infixing by native English speakers, and (3.) an understanding of how infixing may provide linguists with a useful research platform necessary for an examination of cognitive implications relevant to general linguistics.

The theoretical or predictive onset (*initial element*) and / or coda (*final element*) of syllables within the structure of an infixed word is at the heart of this preliminary research. Both the onset and the coda are found to be entirely optional to the speaker, with the only obligatory element of a syllable being located in its nucleus (most prominent element). Therefore, it should be useful to first understand that the notional concept of a "syllable" is just like the concept of what constitutes a "word", it is unit "difficult to define"(Collins,&Mees, 2003:13) despite the intuitive feeling that most native speakers possess for the concept. In common instances, syllables may be defined as a unit potentially large than a phoneme, but smaller than a word. But, as shall be examined, there is much argument to be located in the "where"and "how" a word is to be parsed into its syllabic constituents.

Collin and Mees (2003) are also useful in considering how a syllable consists of an "obligatory vowel" that may or may not be surrounded by consonants.

As such, a vowel may be defined as a distinctive speech sound which readily acts as the syllabic nucleus, with consonants used to form speech sounds that typically occur at the margins of the syllable (i.e. forming the contour boundaries or walls of the syllable). In effect, this consideration is what a speaker or a listener uses to decide the phonological criteria upon which a word is accepted or rejected.

The process of determining prosodically-motivated boundaries in given words has a direct effect on the overall structure of what determines a syllable. Likewise, it may also impact the formation within the word of the higher prosodic unit known as the "foot", which can be roughly defined as a grouping of two given syllables into a rhythmic unit useful in the description of stress assignment. This important morpho-phonological process is accomplished through the insertion or deletion of a consonant, or by changing the status of a segment from a vowel to a consonant, or vice versa. (Odden, 2005:244) This last feature is precisely what occurs during the process of infixing, and it is what is hoped to be examined by this research.

Central to any understanding of this overall discussion of how prosodic boundaries are to be determined during the infixational process is awareness of the *Edge-bias Effect* Theory (Yu, 2007). This clearly theoretical approach observes that two converging forces will result during the process of infixing: "an inductive bias in morphological learning that favors salient edge and prominent pivots in sub-categorization formation and the preponderance of diachronic pathways that create infixes from ad-positional affixes (*especially with a situation requiring morphological reanalysis*)" (p.15). Such a theory may go on to further explain Yu's companion hypothesis of Pivot Salience (Yu, 2007) which considers that "morphological learning is biased toward phonological sub-categorization relations built upon perceptually and psycho-linguistically salient pivots (e.g., to ease recoverability and facilitation in language processing and lexical retrieval) (p.9).

2.2 The Marginalization of Infixes by Native English Speakers

According to Bauer (1983), "any process (and not necessarily one found in word-formation) is said to be productive if it can be used synchronically in the production of new forms, and non-productive if it cannot be used synchronically in this way." (p.18). A general tendency to marginalize the inclusion of infixation during any English language instruction concerning affixation is clearly documented / evident in the paucity of literature that surrounds the subject. Most literature is to be found in journals, rather than in texts, and there are currently only two major works directly relevant to the topic (Moravscik, 1977: Yu,2007).

There seem to be two salient reasons available for this relative neglect or rejection of the typology (*infixation*) during the research and / or instruction of the English language. At first, infixing is most often directly associated with overtly expletive speech. Most educators this form of taboo speech to be either slang (non-standard usage) or offensive to the sensibilities of the receiver, and it is therefore unacceptable in any formal classroom setting. Then, second, infixing is often confined to certain forms of novelty speech considered to be overly expressive, imitative, counter-cultural, or uncommon in its usage. Like the instruction of expletive forms, novel forms of speech (i.e.*ludling*) are also seen as being outside the purview of an ESL classroom. Whether the resultant societal marginalization is due in part or in whole to either the offensive quality or to the singularity of its incidence, infixing has not provided the kind of rule-governed, easily digested, or constructive forms which allow most English teachers to include it as part of their ESL lesson plan in the foreseeable future.

However, despite the given reservations, it is still very much possible to formally characterize the entire process of infixation on the same morphological level as prefixation and suffixation. This is evident through an observation / understanding of the word derivations and inflections involved throughout the actual process of infixing. While it may be argued that affixes (both prefixes and suffixes) form the broadest and most evaluative part of a student's vocabulary building expertise, infixes may still provide valuable clues on how words are formed in comparison to the accepted or generalized forms of the same words. These infixes may also be illustrative as to how a native speaker's relative word formation choices are made according to individual preferences of phonological aspect that are more-often-than-not governed by seemingly permissible sequential constraints acceptable to all.

The obvious limitations that are placed on the sequences of segments within a word that is to be affixed are known as phonotactic constraints. These non-standardized perceptions of accepted onset permissibility may or may not occur during the process of infixation, which will lead in turn to the independent rejection of the infixation process as a whole by either speaker or listener.

So, it seems there is yet a third reason that may exist as to why infixation is widely disregarded / ignored by scholars, since it clearly eludes the kind of comfortable rule-governed, prescriptive boundaries that make linguistics digestible.

In order to determine the level probability of how infixing may, or may not, escape the ready-formed restrictions / constraints found in most of the generalized or permitted prefix and suffix applications, research is now proposed. Data is to be taken from the research yet to be performed. This initial study would allow for a comparative view of how infixes adopt both inflectional and derivational boundaries in an almost simultaneous sequence, thus eluding the simple categorical typificationqualifiably necessary to most linguists. A parallel questionnaire study will be administered, intended to elicit data by testing the preferences of native English speakers' respective to reduplication within either expletive or novel infixational forms. A parallel will be drawn between each type of infixational type in order to demonstrate exactly how the subjects' predictive abilities determine their choice of form. This study may be useful to illustrate subjects' use of subjectively-based and preconceived phono-tactic boundaries outside the constraints of accepted word formations that involve infixing.

2.3 Understanding How Infixing Is Useful to ExamineCognitive Implications Relevant to General Linguistics

The earliest work specifically regarding the process of infixing may be found in Greenberg (1966) and considered that the presence of infixes in any language further implies the presence of prefixes and suffixes to exist. Additionally, his research stated categorically that there are no languages existent that employ the process of infixation exclusively on order to produce overall word-formations. His pioneering work was followed in Ultan (1975). This study represents one of the first research studies to outline a basic typology for the process of infixation. In this study, Ultan remarked upon the seeming rarity of English language infixes compared to the obvious frequency of other affixes in many languages around the world. One of the principle reasons for the paucity of infixed forms may be its close association with slang (i.e. expletives) and its restriction to youth or non-standardized forms of cultural expression.

Despite the non-standardized form that expletive infixes were found to take, linguists have still chose to continue expanding on the earlier research in this suggested typology. Siegel (1976) and then Aronoff(1976), were among the first researchers to codify exactly how expletive infixing "works", albeit they limited study in purely phonological terms. Similar phonologically-based results were stated in the literature, whereas only base words possessing a 3…1 stress pattern (i.e., *tertiary followed, not necessarily immediately, by primary stress*) were considered to be permissibly eligible for purposes of expletive infixation. The secondary research found in Aronoff (1976) even went so far as proposing a "*Rule of Expletive Infixation*" that dictated a prescriptive where a relevant infix must first be preceded by a tertiary stress, and then it is to be followed by a primary stress thereafter. However, despite this early attempt which was dedicated to codifying the infixing process by determining prosodic boundaries without exception, many salient questions still remained for linguists to ponder.
The questioning began in earnest with Moravcsik (1977), who outlined the three fundamentalconcerns if a complete theory of infixing is to remain relevant within linguistic theory:(i.) the total range of infixationalpatterns?;(ii)the mechanisms and principles exist upon which such patterns are based?; and, (iii.) the meta-theoretical constraints which permit just these mechanisms / principles and the particular language-interval co-occurrence and exclusion of others? (p.4). In a possible response to these postulates, MacMillan (1980) proposed his own basic rule of infixation "procedure"; whereupon, syllabic boundaries (usually determined by a position where the infix occurs just before the primary stressed syllable) are readily determinable by all concerned.

McCarthy (1982) offers a more practical, albeit controversial, theory of infixing that is based on prosodic features that are available at the point of infixation within a word. This theoretical explication consisted of the speaker having the following understanding beforehand: "the metrical stress tree of the host (*word to be infixed*) is to be minimally restructured in order to accommodate the stress tree of the infix (*to be placed*)" (p.576). This means that the least "altered" form of the infixed word, or most recognizable from the original non-infixed form, is the preferred infix form. The subjective assessment of such a word is readily apparent to even the most unaware. McCarthy (1982) went on to note that the (purported) rule for expletive insertion should be considered in terms of syllables, rather than in segments, in order to describe the word's overall contrastive effect from the original. He even went so far as to posit the hard-and fast rule "insert expletive before the foot" (p.576) which pre-supposes the aforementioned "*Edge-bias Effect* " promulgated by Yu (2007) without much success.

However, McCarthy should be commended for trying to affect a fixed notion of where and how infixes occur within the process context, although also without much success.

Despite the determined intentions of many linguists' research to fix a formal typology of infixing, each of the basic rules proposed so far in the literature still allowed for marked exceptions between the differing prosodic structures of countless words, as well as between both the expletive and novel infix forms which are prevalent in English language infixing. The resulting asymmetric / atypical distribution of prosodic differences is difficult to explain outside of anything but the realm of wanton subjectivity or simple speaker preference. Therefore, the determination of a concrete form of prosodic boundaries used during the infixing of words constituted a linguistic paradox that was to remain.Yu (2007) was to be later clarified why determining a fixed typology of the infixation process proved so elusive to so many linguists who tried without success because such a fixed typology could not possibly accommodate all of the exceptions which directly affect prosodic boundaries.

The nature of the inductive bias in morphological learning (McCarthy(1982), itself tends to favor pivot points close to the edge since such units are psycho-linguistically more salient and can be more reliably recovered. Non-edge pivots that are not prominence-based are difficult to obtain either because no historical pathways may give rise to them or because they are rejected in the acquisition process (p.9).

In fact, the very act of fixing a formal typology on something deemed *porno-linguistic* only seemed to promote the heated discussion revolving around some of the more non-standard, non-productive, and expletive-laden aspects of English language infixing.Again, it is commonly accepted that English language infixes are most commonly associated with expletive forms. As noted in Kiparsky's (1982) data, expletive insertion cases bear directly on a claim of lexical phonology which considers that derivation and infection can be closely intermingled with one another. This research sought to couple the various phonological and morphological elements of word-formation in order to more readily encompass an explanation of the entire infixation process. Again, typological fixing focused on expletive forms of infixing was at the center of the argument.

Chomsky (1986) joined in the argument by famously assuming that a natural and universal typology of morpho-phonological tendencies does in fact exist throughout linguistics. It not only accounts for all that is found in a language, but it will also explain the source of any variations to be found within a language's accepted grammar. However, it should be noted that despite the universal grammar viewpoint Chomsky proposed, much of the literature considered that infixation cannot be fully taken into account or exactly explained without some kind of recursive consideration to determine the "*grammar-external sources" (namely, diachronic factors or psycholinguistic constraints that defy ready placement*).

Katemba and Stonham (2006) chose to cite McCawley (1978), MacMillan (1980) and McCarthy (1982) in order to provide examples that might account for the ready position of the infix within the host word. They agree with these three available sources by affirming that the point of infixation will always be located "at the onset possessing a single prosodic foot". They consider it therefore necessary "to employ prosodic structure to isolate the site of the infixation of a prosodic unit (a foot) between the two prosodic units" (p.201). This statement means that boundary markers are of principal concern to infixing.

Yu (2007:4-5) provides a comprehensive starting-point to begin research on the infixation phenomena, as it presently exists within the greater linguistic domain. He provides an opinion that McCarthy and Prince (1986), Inkelas (1990), McCarthy and Prince (1993) and Prince and Smolensky (1993) are all to be considered as the so-called "ground-breaking" studies of infixation. In terms of more relevant studies that deal directly with the placement properties of infixation and the generalized developmental theories of infix placement specific to prosodic boundaries, he also proposes a lengthy bibliography that is certainly useful in further research endeavors. Since one of the three stated purposes of this paper is an understanding of "How?" and "Why?" infixing takes place within the root or stem of the word being infixed, it is especially helpful to consider what is provided in both Yu(2007) and Elfner and Kimpel (2008). Each of these research studies posit that a reasonable understanding of infix placement will be governed by both inflectional as well as derivational concerns. They reason that while an infix may be clearly discernible / identifiable as it is located inside the stem or the root, it is not always governed by distinct rules of placement. It should also be noted that infixes also do not always conform to the same pattern of construction.

According to Yu(2007: 1-2), there are three separate, broad infixation constructions that may be found in the English language: (1.) expletive infixation (MacCarthy, 1982), (2.) *Homer-ic*infixation (Yu, 2004); and, (3.)Hip-hop *iz*-infixation (Viau, 2002).

First, incidence of the expletive form of infixation predominates / permeates the examples provided throughout the literature on infixation.A second kind of infix construction is illustrated in Yu (2004) as the less common, novel form of "*Homer-ic*" infixation. English *Homer*-icinfixation involves the insertion of *–ma-* after the disyllabic trochaic foot (e.g. the infixal pivot). Based on novel evidence from English *Homer*-icinfixation (e.g., *saxophone→saxo-**ma**-phone* (infixation without reduplication); *oboe → oba-**ma**-boe*(infixation with reduplication), Yu (2008) argues that reduplication can be induced by purely prosodic or phonological factors (i.e. reduplication,see also Inkelas, 1990).When the slang-*ma-* infix is used on a two-syllable word with the initial; open syllable, the second syllable is reduplicated and the infix appears in between, though often the first instance of the reduplicated syllable is reduced to the consonant-schwa. Thus from the word "oboe", we get *oboe-**ma**-boe* or *oba-**ma**-bae*, and from *purple* we get *purple-**ma**-ple* (Yu, 2004). Finally, Viau (2002) exemplified the seemingly peculiar derivation of the so-called hip-hop *iz*-infixation withyet another infixation source originating from *Carnies* (carnival workers) usingthe '*iz*' infixation precisely in the same fashion for centuries and from a dialect emerging from the practice of adding '*ee-us'* after each consonant, dubbed '*Ciazarn*' (i.e., a dialectized form of 'carny'. For most speakers using infixational forms, the novel *iz*-infixationwas widely popularized by the U.S. hip-hop performing artist *"Snoop Doggy Dogg"(a.k.a. "Snoop Lion"*(real-name *Calvin Broadus*), which might account for why Viau chose to define this recognizable infixational form as "hip-hop', despite documented and historical use elsewhere.

In addition to defining three separate or distinctive forms of infixing, Yu (2007) further suggests the existence of another two separate, yet fundamental approaches towards infix analysis: *Phonological sub-categorization* (Yu, 2007; Broselow& McCarthy, 1983 / 1984; Cohn, 1992; Inkelas, 1990; Kiparsky, 1986; McCarthy & Prince, 1986) and *phonological readjustment* (McCarthy & Prince, 1993a; Prince &Smolensky, 1993) to be considered.

Linguists may choose to analyze infixes in terms of either a phonological sub-categorization approach or a phonological readjustment approach. According to Yu (2007), the preferred phonological sub-categorization approach "embraces the morpho-phonological mismatching nature of infixes by treating them as affixes that sub-categorize for a phonological element, rather than for a morphological one". (pg.8) this approach allows simultaneous analysis of morphemic placement by utilizing morphologicaland prosodic / phonological means, as in the English languages-*ma* infix. Naturally this dual approach will lead to certain dissatisfying ambiguities because there is no requirement fundamentally apparent for the structured reordering of segments or affixes. Yu(2007) even goes so far as saying, "Infixation simply falls out from the cross-level edge-alignment property of phonological sub-categorization; no stipulated mechanism is needed to account for infixation"(pg.23).Notably, such an unorthodox approach towards typology is ill-appreciated by some linguists and purists.

Another secondary approach linguists may choose to analyze infixes is that of phonological readjustment. The phonological readjustment approach (Yu, 2007:19) considers the placement of an infix intimately linked to its prosodic shape and to the phonotactics of the language-infixes are predominantly *"edge-oriented"* because they are ad-positionally underlying; and, driven minimally inward due to the optimizing forces operating in the phonological grammar of the language. Ultimately, this approach argues for an exogenous view of infixes as whole, whereby formal economy (the elimination of the infix altogether) and an adequate explanation of infixing within a theory of grammar (constraint-based framework) are to predominate.

Yu(2007) provides one of the most comprehensive studies of infixation to date, in his seminal work *The Natural History of Infixation* (2007). This monograph is based on a considerable amount of research for which Yu convincingly argues the point that English language infixes are used mainly (*if not entirely*) for para-linguistic purposes. However, he freely admits that infixes may otherwise be used to signal a wide array of other morpho-syntactic functions within a hose of languages other than English (inclusive of , but not limited to): agreement (*person, gender number, focus*), possession, intensification, nominalization, verbalization, diminution, derision, expletive, distribution, durative, frequentative, perfective / imperfective, completion, aorist, intransitive, passive, negation past, verbal / nominal plural, reflexive / reciprocal, and resulting state. For purposes of this research, only English language infixing (i.e., para-linguistic *intensification* / *expletive*) will be considered within the study parameters.

In review, taken liberally throughout various points of reference in his book, Yu (2007) goes on to characterize the theoretical argument taking place between the validity of a phonological sub-categorization approach and the phonological readjustment approach to be a rejection of either one theory in place of another, with very little synthesis ever taking place as a result. However, Yu (2007) specifies that both analytical approaches do share one generality between them: "If an infix is concatenated ad-positionally, it would have resulted in a phonotactically ill-formed input"(pg.5).As such, infixes still remain outside accepted typological acceptance.

By surveying 154 infixational patterns in more than 100 different languages, Yu (2007) was able to formally determine that an infixational pattern arose from the above-mentioned generalization, namely because infixes "invariably locate near one of the edges of a stem or next to a stressed unit" (pg.3). Thissame study concluded that of the 137 / 154 infix patterns observed, the majority were in fact "*edge orientated*". Yu chooses to offer a basic explanation, without a balanced referral to the infixational patterns appropriate in determining sub-categorization relationships:

Infixes predominately lodge themselves close to one of the edges of the domain of the infixation, which may be a root, a stem (i.e., root or root plus affixes) or a free-standing word(cf. Moravcsik, 2000; Ultan, 1975). This asymmetric distribution of infixes is referred to as the '*Edge-Bias Effect'*. (pg.3)

The subjective, or even indeterminate, nature of choosing which prosodic boundary within the word is where the "bias" in the "Edge-Bias" Effect is most acutely felt. The process of infixation often disturbs the comprehensional integrity of the word is infixes; so much so, that the original phonological pattern of the word may become rapidly indistinguishable to the listener. Since the infixation occurs directly at the root of the targeted word, it requires the listener to be capable of understanding / perceiving what word was intended to be communicated by the interlocutor. In order to compensate for this difficult cognitive process, as well as accommodate for the other forms of affixation more commonly in use, another phonological process called *reduplication* (repetition of a syllable, a morpheme, or a word) must take place in order to insure eventual comprehension by the receiver.
Syllables can serve as phonological units (i.e., *constituent building blocks*) and are composed of one or more phonemes as the case may be. Each syllable will havea nucleus, which is usually a vowel. This syllabic nucleus is often preceded by one or more additional phonemes called the syllable onset, and it is often frequently followed by one or more segments which are called *coda*. Together, the nucleus and the coda will form what constitutes the sub-syllabic unit called the rime (i.e. such as /en / in the word *rain*). A brief prescriptive explanation of the process rules governing how syllables may be defined in both "legal" and "illegal" formations of words may be found Pinker (1994).

In English an onset can consist of a cluster of consonants, like *flit, thrive, and spring*, as long as they follow certain restrictions (Example: *vlit* and *sring* are impossible.). A rime can consist of a vowel followed by a consonant or certain clusters of consonants, as in *toast, lift* and *sixth.*..Onsets and rhymes not only define the possible sounds of a language; they are the pieces of the word-sound that are the most salient to people, and thus are the units that get manipulated in poetry and word games(p.169).

Therefore, given an understanding of this constituency process, it should be possible to discern the *weak-strong* or *strong-weak* pattern of syllables within any given word; although, as it shall be pointed out, this is not always to be the case with the process of infixing.

According to Fromkin et al (2003:318), a syllable possesses a prosodic hierarchical structure (intonation unit or intonational phrase) that will be governed by a word's stress marking, which is itself a property of the syllable rather than that of the segment. A clear or definitive determination of syllabic stress within the infixed word is the prosodic or super-segmental feature (i.e. *pitch*, *stress*, and *segment duration*) that makes the infixation process so problematic to so many. This is especially true whenever the irregular process of infixation is compared to the more commonly accepted morphological process of regular affixation (i.e. of *prefixes* and of *suffixes*). For example, the <*ma*> infix, whose location in the word is described in Yu (2004), is said to give a word a sort of ironic pseudo-sophistication, as in the glosses sophisti<***ma***>*cated, saxo,*<***ma***>*phone,* and *edu*<***ma***>*cation*for no better reason other than nuance.

Finally, Yu (2007) considers that an adequate theory of infixation will have to accommodate a generalized theory of affix placement that is sufficient in scope to account for infixing, along with the more traditional morphological structures commonly in review. Ultimately, he considers that the proper analysis of infixation resides as an entirely "theoretical matter" (pg.14), hence the research implied through this study.

It should be noted, any distinction between unattested and common patterns within linguistic study has been instrumental to the development of relevant or even wide-ranging theory. Finally, the study focus of infixes should be squarely placed on synchronic argumentation since it is the study of word-structure at one stage in the life of the language rather than on the evolution of the word that will afford the morphological learning infixing vastly affords to linguists.

3. Method

3.1 Questionnaire

A parallel questionnaire study is proposed to test the preferences of native English speakers with respect to the choices they make in their phonological reduplication during the novel *iz*-infixation [Test#1] and in the expletive infixation of -*bloody*-[Test #2] process. These tests will mirror / replicate similar research performed in MacCawley (1978) and in Elfner and Kimper (2008). Previous studies employed infixational forms that included a variety of expletive infixes, as well as the novel infixational form of –*diddly*- utilizing a survey methodology to obtain raw data useful to subsequent comparisons. This research partially replicates the previous research frameworks found in MacCawley (1978) and Elfner and Kimper (2008) and then attempts to validate many of Yu's (2007) findings.

The research to be conducted in this study will serve two primary purposes; first, to validate the previous research found in MacCawley (1978) and in Elfner and Kimper (2008); and second, to determine if the choice of the *target*- infixation will affect the given results of the previous research data provided. This validation practice should form the basic support for whether the research hypotheses are to be proved or disproved accordingly. As stated previously, this research has the ancillary purpose of focusing / instructing the researcher's attention on the morphological processes inherent in the coursework intended.

MacCawley's data focused primarily on the unexplained phonological discrepancies involved in the use of expletive infixes. The initial hypothesis that the subject-preferred "location of word stress (initial vs. non-initial) crucially correlates with the presence of reduplication" will be directly tested / applied by using a secondary hypothesis taken from Elfner and Kimper (2008: 4). This hypothesis states "if reduplication in (*novel*) infixation is to act as a kind of phonological repair, it will appear only where it is phonologically improving. If on the other hand, it serves as a meaningful part of the process, it will appear in all environments". This means that expletive and novel forms of infixation should follow the exact same typological pattern(s) which cannot be presumed.

3.2 Subjects

Each of the two separate / distinct questionnaire studies [*Test#* and *Test# 2*] is to be conducted using 100+ native speakers of English (undergraduate students at an American four-year college, all of whom would be in the process of studying sociolinguistics). Subjects would not be allowed to participate in both administrative portions of the study to insure the discrete nature of the research data. For purposes of relevance, subjects would be asked to refrain from discussion during the completion of the survey instrument. Responses should be considered as subjective in nature since no "correct" or "incorrect" response is to be pre-supposed.

3.3 Instrumentation

A questionnaire was administered to each subject to complete and then return to the researcher for purposes of compilation. A separate form of the questionnaire shall be prepared for *Test #1*-[novel (-*iz*-) infixation] and for *Test #2*[expletive (-*bloody*-) infixationa].

3.4 Procedures

Subjects will be provided *en masse* with a copy of either *Test #1* or *Test #2* that they are to respond to according to the subjects' given infixational preferences. Instructions will be provided for subjects fill out the survey to the best of their knowledge without discussion involving their immediate peers. Each survey instrument will consist of a list of twenty-four (24) words (same list of *target* words given in each test instrument). The test will be introduced by connotative examples of the novel-*iz*-infixation or the expletive -*bloody*- infixation comprised of five (5) initial –stress words with reduplication and one (1) being a monosyllabic example. All responses should be subjective and a statement should be made that there are no "*right or wrong*" answers regarding the subjects' initial response to each word.

The complete provisional list of words to be infixed will consist of the twenty-four (24) words which have equal measures (six each) of initial-stress (10), non-initial stress (210), non-initial stress (2010), and monosyllabic (1) words. This lexical procedure mirrors the original Elfner and Kimper (2008) study; however, the complete word list and the choice of infixational forms have been changed / altered to insure any possibility of validation or invalidation, as may be proven. The complete word lists for Elfner and Kimper (2008) are given in *Appendix 1*, and the complete word to be utilized in this study is proved in *Appendix 2*, of this study. It is to be understood that Elfner and Kimper (2008) mirrors that of MacCawley (1978) despite being non-referential in nature.

Each word will first be given *sans*infixation. A multiple-choice list of four possible responses is then provided to the subject for application to initial word offering. Responses are listed from A~D, with subjects presented two possible infixational gambits each demonstrates a hypothetical, yet distinct phonological pivotal point to form the given infixation. An example of the task might consist of the following: Example: [*painter*] - (A) pain-*iz*-ainter; (B) pain-*iz*-ter; (C) *A* and *B* are equally acceptable; or, (D) Neither *A* or *B* are acceptable.

As in the original Elfner and Kimper (2008) study, "for mono-syllabic words", the choice provided as to either response *A* or response*B*is given "between reduplication of all or part of a coda cluster (e.g. (win-*iz*-inter vs. win-*iz*-ter))". These responses are to beprovided along with the given optional choices of "*both*" or "neither*"* as the respondent may choose. The *A* and *B* responses are similarly counterbalanced by presenting examples in a pseudo-random order throughout the course of the test to further assure reliability.

4. Research Objectives

This study maintains two principal research objectives: first, to validate, or to invalidate, the given hypothesis presented within this research by addressing the given research questions; and second, to determine how the process of infixation may achieve some kind of relevancy in the broader study of linguistics. The overall research of this paper stems directly from a statement made by Yu (2007:9), "the idea that certain positions in a word are privileged in the grammar has a long pedigree". Accepted phonological contrasts are inherent in terms of their historical prominence and of their productive reducability. The infixes used by some segments of the speaking population may have given rise to a kind of linguistic inconsistency, such as when they are arrived at when accepted contrastive phonological boundaries are informally crossed / violated. As a result, certain non-generalizable ambiguities may arise during the morphological parsing of a word, leading to the unintelligibility and non-acceptance of the word-form. This wholesale situation will lead to a production of non-standard forms which border on "*slang*" or word-play (i.e. *ludling*) that will never make their way into the dictionary oroff the playground.

The primary research objective of this proposal remains to validate or to invalidatethe stated research hypothesis by utilizing two earlier infixation studies taken from the literature. The first research, (MacCawley 1978), asked if it was possible for subjects to consistently predict the prosodic boundaries present in the formation of expletive infixes by providing a survey list of infixed words for this purpose. A determination of whether or not subjects would consistently identify the exact same infixational pattern was attempted in this study. Data indicated that numerous inconsistencies had occurred in the subjects' understanding of formational boundaries within the infixed words prepared in the list. This rather subjective / generalized research perspective caused significant subject disagreement both at the time of administration and in a subsequent subject forum that allowed subjects to reason their choices. The obtained results further indicated that infixational inconsistencies were almost entirely based on subject preferences or within a stated personal concern relating to the perceived final dissonance of the resultant infixed form. A secondary research presented in ElfnerandKimper (2008) was found to have been conducted along the same lines as the original research performed by MacCawley (1978), despite an apparent lack of any reference to the precedent by those same researchers. This subsequent study sought to directly correlate the location of stress-based infixation within the indicative parameters of reduplication. These researchers stated their research objective / hypothesis as determining whether or not "the location of word stress (*initial vs. non-initial*) crucially correlates with the presence of reduplication" (Elfner&Kimper, 2008). Both researches help form the basic research framework found in this study.

The given hypothesismade byMacCawley (1978(i.e., *Hypothesis:* The word formation process of *novel* and *expletive*infixationwas used in order to provide consistent phonological boundary pivot points; and, therefore, they will be predicatively reliable in determining speaker / listener comprehension) was directly tested / applied through a further research application of A secondary hypothesis, (Elfner,&Kimper's, 2008:4) which stated that "if reduplication in (*novel*) inflixation is to act as a form of phonological repair, it will appear only where it is phonologically improving. If on the other hand, it is a meaningful part of the process, it will appear in all environments". This means that reduplication will be dissimilar in novel infixing, but conversely consistent with the patterned cases observable in expletive infixing.

The hypothetical / research objectives of this paper are somewhat simplistic by comparison with the previous two infixation studies performed. This is due in large measure to the time constraints of this present research (a single semester, currently) and by the relative lack of obtainable data from linguistic fieldwork evidenced from those primary works. The research presented in this paper is meant to re-validate these earlier linguistic studies in a general sense and is therefore meant to form a basis / platform. This frame of reference will provide the researcher with a broader personal understanding of how infixation is motivated by both phonological and morphological factors throughout the entire word formation process.

5. Results

The intentional scope of the proposed research is that this given hypothesis may be supported, or rejected, as the case may be. Any attempt to support or reject the given hypothesis will be used to form the basis needed to validate the referenced earlier studies performed in MacCawley (1978) and Elfner, &Kimper (2008). The eventual purpose of this research is to respond to the following questions in such a way that is of research interest to the prospective reader: First, "Why is the process of infixation in the English language considered to be far less productive than the other two principal forms of affixation: suffixation and prefixation?"; second, "Why do many native English speakers marginalize their own use of the infixing process because of either expressly expletive or novel usage considerations, unlike in some other languages?", finally, "Why do native English speakers' demonstrate a marked reluctance, or even a lack of familiarity, to use the infixing process, whereby many speakers choose to avoid it entirely?" The responses to these questions will hopefully be contained in the stated importance of this paper.

Infixation in the English language requires a native-like fluency. It is considered to be non-productive in terms of word formational characteristics since it cannot be governed or typologically rule-bound. Most speakers who are aware of this form of speech will choose to reference examples of the expletive infixational type (an infixing of expletives within a base word for purposes of intensification or self-expression) if they are to consider infixing at all. Likewise, it is though that infixing is at best a novel / vernacular form (used in popular culture to provide novelty or imaginative applications) and found outside the mainstream or pop-culture (i.e. *hip-hop, language games, cartoons / comics, on-line*) vocabularies.

However, it should be noted that infixation persists in the English language and that regular infix users still face the real dilemma of how to decide upon both the common expletive and less common novelty forms they will choose to employ. Infixation does not share the facile placement aspects constraining prefixes and suffixes. Theseaffixational forms are found in English usage texts with abundant explanation and exemplification. Infixation requires that a conscious decision must be made regarding the placement *(pivotal)* point of infixation within the target word by any potential speaker. Such a choice will be almost entirely governed by the perceived / existent rules which may or may not constrain the derivational or inflectional boundaries of the given word. More often than not, only phonological realization and intelligibility of the word *post-infixation* will be used to govern any resulting lexical product.A speaker's individual decision of how an infix is achieved is often preferential / subjective in nature; it may vary markedly, especially in terms of the more novel infixational forms. A kind of phonologically-driven reduplication often takes place in many forms of infixation since the speaker

Endeavors to repair any lack of comprehension should the original product is misunderstood. This purpose-driven reduplication remains open to the rather subjective elements of preference, argumentation or even to conjecture whenever repair strategies are needed to achieve acceptance or relevance of the given or resulting word form. The morph-phonological anchors (*syllabic pivot-points- the morphological and / or phonological unit to which an infix attaches*) within the target word frequently remain open to the receiver's interpretation despite any attempt at establishing a fixed typology.

This will remain true, unless of course, if there is an understandable acceptance (by both speaker and listener) of a mutual sub-categorization framework that is made governing prefixes and suffixes (Yu, 2008). This agreed-upon infixational framework remains almost entirely theoretical since the morphemic interruption which occurs at the point of infixation (POI) has yet to be determined with any universal acceptance or permissibility:

Hence, this research addressed four questions regarding how a speaker may reliably achieve regularized prosodic boundaries within the strategic word formation of those words which involve infixes. This has been the stated purpose of this study.

The traditional process of learning English language vocabulary is facilitated through many diverse approaches and proven strategies that involve consistent methods and given typologies. Some of these approaches remain quite complex in their psycholinguistic process, although seemingly transparent to the typical ESL learner, while others involve a simple process of rote memorization so common to classroom practice. Aside from the ready and regularized repetition of words in their entirety, teachers,may also choose to "*break*" words into their constituent part (*syllabification*) for students to learn by using a standard process called affixation (e.g., the application of stems to roots) and of root identification.

Finally, English language roots may abundantly be found in both their original or modified forms, displaying all the etymological derivations that make Latin Greek so evident to learners of modern English. Stem affixes which are comprised of both prefixes and suffixes may be easily listed by both teachers and students alike. These paradigms are then easily memorized in some formal manner in order to create a fundamental word-formation framework that allows learners to construct / comprehend a veritable slew of new words.

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