

Productivity: An Issue and Explanation

The term ‘productivity’ is used as one of the features that distinguish an Inflectional affix from a Derivational one. Despite its importance and requirement, the term remains quite vague in the literature and there has not been much effort to understand the issue in a proper context.

The present paper is an effort to understand the nature and function of the term ‘productivity’ in linguistic literature. Before I start the investigation, I would like to clarify that there are two key issues concerning the confusion of the term ‘productivity’ and I would consider worth explaining them at the very outset of the discussion:

- a) Productivity is not a matter of ‘Yes’ or ‘No’, rather it is an issue of ‘more or less’. What it means that we should not, in fact, can not say that this feature is ‘NOT’ productive or that feature is very productive in a language. We, instead, see productivity as a feature in the language which is either LESS productive or MORE productive.
- b) Second important clarification is that ‘productivity’ is a matter of SYNCRONIC study of a feature. It is about some features being ‘productive’ at a given period of time. There could be some linguistic features which were very productive in past but the same features might turn into the least productive in the present. There has been some confusion in the literature about trying to examine the issue of ‘productivity’ as a DIACHRONIC. We should keep such confusion away.

Productivity:

Productivity is also referred as ‘creativity’ in the literature. A simple working definition of ‘productivity’ can be stated like “...productivity refers to the ‘generality’ or ‘generalization’ of a feature which should be measured by the number of linguistic item of a class it can occur with. The more general a feature operates in ‘word-formation processes’ the more productive that feature will assume to be. For example, we will examine the following data given in three tables and talk about the nature of the affixes being added to units in each of the tables:

- Divide the words in their morphemes and list the affixes.
- Write the meaning the morphemes, specially of the affixes.
- Add five more words into each SET from your side.
- State the word-class of the bases to which affixes are added.
- What is the word class of the resultant new words.
- Which SET gave you hard time to separate the base and the affixes?

Set:A	Set:B	Set:C
chartist	morbid	worker
communist	tepid	painter
racist	timid	swimmer
pianist	splendid	dancer
anarchist	horrid	jogger

Observation:

- N→N-ist / Adj -ist : Meaning ‘practitioner of X’ (as in anarchist, communist, pianist, violinist [N-Adj: racist, fascist etc]).
- ??N→Adj -id : Meaning ‘having the quality of X’ (as in morbid, tepid, splendid etc.)
- V→N -er : Meaning ‘doer/agent of X’ (as in worker, painter etc.)

Set:A	Set:B	Set:C
chart	morb-	work
commun(e)	tep-	paint
rac(e)	tim-	swim
pian(o)	splend-	danc(e)
anarch(y)	horr-	jog

There are three suffixes i.e. -ist, -er and -id.

- The *Latin* suffix ‘-ist’ may be added to NOUN to form either a noun or an adjective.
- The suffix ‘-id’ is also of *Latin* origin and has come into English via French. In Latin, ‘-id’ is used to derive an Attributive Adjective from a verb such as ‘timidus’ from a verb ‘timer’, ‘to fear’. In English, the *Latin* suffix ‘-id’ is added to the root of the verb i.e. ‘tim’ and has produced ‘timid’. The meaning is derived from the verb ‘to fear’ and then the attributive suffix gives us ‘someone being attributed the quality of being afraid’.
- Finally, the native Germanic suffix ‘-er’ giving an agentive meaning to the verb it gets attached to.

Judgment about the productivity:

- The suffix ‘-er’ is most productive amongst the three as almost most of the verbs in English can take this affix and give an ‘Agentive noun’.
- The suffix ‘-id’ is the least productive affix in English as we do not have enough examples of bases to which this affix can be added. Second, the remnants do not exit in English as a free morpheme or a word.

The notion of ‘Semi-productivity’:

Some linguists like Matthews and Anderson recognize a special category which they term as ‘Semi-productive’. This term covers those idiosyncratic affixes which fail to

attach to apparent eligible forms. Also when such affixes are used, the meaning of the resulting word may be quite unpredictable. Look at the following data from English:

Set:A	Set:B
dependant	*writ(e)ant
defendant	*buildant
assistant	*shoutant
inhabitant	*destroyant
accountant	*adaptant
applicant	*teachant
contestant	*accomplishant

The suffix ‘-ant’ turns a verbal base into an agentive nominal. But it is very irregular in its occurrence. It accepts the base in Set-A, but does not accept the bases that are in Set- B. The reason for such behavior of the suffix is historical in nature. It seems that it accepts the bases that are Latinate origin and fails to take the Germanic bases.

Even in case of its occurrence with the Latinate bases, the meaning of the resulting lexical item is quite irregular. For example, a ‘defendant’ has the narrow interpretation of 'a person is sued in a law court' , and not just any one who defends oneself from something’. Nothing of such meaning is stipulated about the word ‘accountant’. Probably this is why Matthew terms such cases as ‘semi-productive’ and helps us to examine the case of ‘-ant’, and ‘-id’ affixes in English.

Productivity and Creativity:

Some linguists like Hockett, Chomsky and others have termed productivity as ‘creativity’. They define ‘creativity’ as the capacity of all human languages to use finite means to produce infinite number of words and utterances. In the realm of morphology while dealing with ‘productivity of a feature’, creativity manifests itself in two distinct ways: ' Rule-governed creativity' and ' Rule-bending creativity’.

In general, words which are formed by following general rules and principles exemplify the Rule-governed creativity. For example, the affix ‘-ly’ when gets attached to an adjective brings an adverb and an affix ‘post-’ when gets attached to words like ‘war, dinner-walk, and election’, it gives a meaning to the word which is similar to ‘after X’.

However, speakers have the ability to extend the stock of words idiomatically by producing words without following the general rules or the norms of the language and

come up with words like ‘lazybones, redlegs, stoolpigeon, and deadline’, where the meaning of the items in the compounds does not match with the resultant words. This is what is called ‘Rule-bending creativity’.

Constraints on Productivity:

A constraint which is more commonly known as ‘blocking’ might take place in the language due to its specific phonological, morphological and semantic reasons. For example, blocking may take place in certain formation of word due to the prior existence of a word which will be equivalent to the resulting word after some affixation take place. The word ‘thief’ already exists in English and therefore blocks the formation of a very productive affix ‘-er’ to a verb ‘steal’ and therefore we do not have ‘stealer’. The word ‘stealer’ is there but can not replace ‘thief’.

Second, if there are two semantically similar affixes which bring the words of same ‘grammatical class’ and one of them is more productive than the other one, the blocking will take place with the less productive ‘affix’. This can be seen in case of the affixes, e.g. ‘-ity’ and ‘-ness’ in English. Aronoff (1976) has shown that the suffixation of ‘-ness’ is more productive than the suffixation of ‘-ity’ in English. The reason that he gives is that where there is an existing noun derived from an adjectival base ending in ‘-ous’, it is not possible to create a new noun by adding ‘-ity’. However, in such cases, the suffixation of ‘-ness’ to those adjective bases are possible. Thus, ‘-ness’ is treated more productive than ‘-ity’ in English. Look at the data given below:

X-ous(adj)	Pre-existing Nouns	Noun (‘-ity’)	Noun (‘-ness’)
acrimonious	acrimony	*acrimoniousity	acrimoniousness
glorious	glory	*gloriousity	gloriousness
fallacious	fallacy	*fallaciousity	fallaciousness
spacious	space	*spaciousity	spaciousness
furious	fury	*furiousity	furiousness

Phonological Factor:

Blocking can take place due to the phonological constraint. Siegel (1971) and Halle (1973) have observed that verbs with an inchoative meaning, roughly interpretable as to ‘having the quality of X’ can be formed by adding a suffix ‘-en’ to some adjective bases. This rule, however, has to meet the following phonetic conditions:

- i. the adjective base should be monosyllabic;
- ii. the base must end in an *obstruent* (i.e. stop, fricative or affricate) and optionally preceded by a *sonorant* (i.e. a nasal or lateral) consonant.

Rule governed examples

black-en, white-en
 damp-en, quite-en
 tough-en, soft-en

Cases suffering the phonological-blocking

*dry-en, *green-en
 *lax-en, *dimm-en

Another case of phonological factor in blocking the productivity is given in the process of derivation of an Adverb from an Adjective by putting a suffix ‘-ly’. This suffix gets attached to many adjective to form an adverb. This, however, is not the case when the adjective base already has an ending ‘W_{ord}-ly’. Look at the examples:

Rule governed examples

kind → kindly
 elegant → elegantly
 serious → seriously

Cases suffering the phonological-blocking

* silly- sillily
 *miserly-miserlily
 *friendly-friendlily

Morphological factor:

Morphological properties of a base may prevent the application of any morphological rule. Remember what we said earlier in case of a suffix ‘-ant’ and its selection of the base to which this gets attached. We said that ‘-ant’ being a Latinate suffix, it can only select a base which has Latinate origin. Look the examples given below:

Rule governed examples

depend -ant
 defend -ant
 assist -ant
 inhabit -ant
 account -ant
 contest -ant

Cases suffering the phonological-blocking

*writ(e)ant
 *buildant
 *shoutant
 *destroyant
 *adaptant
 *accomplishant

Another case of morphological (actually morphophonemic) block is known as *Velar Softening*:

Rule:

{/k/ → [s] / ___^v[-low] i.e. i }

{*/k/ → [s] ___^v[+low] i.e. a }

The rule must be read as the sound /k/ changes into /s/ if it is followed by a non-low vowel /i/. This, however, does not happen when the following vowel is a low vowel as in case of a suffix ‘-al’ in English. Look at the examples given below:

Rule governed examples

cynic- cynic_[s]ism
 critic- critic_[s]ism
 fanatic-fanatic_[s]ism

Cases suffering the phonological-blocking

cynic- al = cynic_[k]al
 critic- al = critic_[k]al

Semantic factor:

Semantic factor also brings the case of blocking for some word-formation processes. For example, the suffix ‘-ed’ is added to a noun, which then becomes the part of a compound word in ‘past participle form’ and an adjective is formed. This process is governed by a semantic requirement of ‘inalienable possession’ (i.e. obligatory possession). But in case of a compound which lacks such relation does not take this suffix ‘-ed’. Look at the examples given below:

Rule governed examples

short-sleeved = shirt
 blue-eyed = boy
 short-sighted = man

Cases suffering the phonological-blocking

* two-cared
 * three-daughtered
 *big-housed

Another instance of the semantic factor blocking the productivity takes place in case there is already an equivalent word for a word that can otherwise be obtained through a word-formation process. For example:

Rule governed examples

un-well
 un-wise
 un-clean

Cases suffering the phonological-blocking

*un-ill
 *un-sad
 *un-dirty

That’s all☺