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COMBINATORIAL RESTRICTIONS OF AGENTIVE SUFFIXES IN ENGLISH AND SERBIAN

Abstract

The paper presents a contrastive research endeavour into the combinatorial potential of the most frequent agentive suffixes in English and Serbian. The bases for agentive suffixation studied were exclusively of verb provenance. Another objective was the establishment of any concomitant orthographic and morphophonological alterations of the base in obtaining complex lexical forms indicative of any underlying processes. The research corpus consisted of the separate contingents of examples formed by each of the suffixes, the analysis of which yielded results in terms of the frequency and availability of each suffix, as well as the type of morpheme that can be involved or restricted from agentive derivatives. Furthermore, the meaning properties and the type of the bases that possess certain affinity toward a particular agentive suffix were determined, which could provide a better insight into the productivity of the input forms. Thus, the combinatorial restrictions of these morphemes were viewed within the phonological, morphological and semantic context of derivation.

Keywords: English, Serbian, agentive suffix, productivity, restrictions.

1. INTRODUCTION

This paper presents a report on an inquiry into the general qualities of the most frequent agentive suffixes in English and Serbian, as viewed through the combinatorial potential and restrictions of these affixal morphemes, illustrated by Eng. *play-er* or Srb. *igr-ač*. Even though agentive suffixes exist in these two typologically different languages, their properties may considerably differ, particularly in terms of volume, type, productivity, combinatory power or grammatical implications. The problem of the combinatorial properties of derivational suffixes has been described as "one of the most intricate problems in English morphology" (Plag, 1999:63).

The main purpose of the research undertaken is to investigate the characteristics of the bases involved in a derivative relationship with agentive suffixes and establish the potential points of similarity and/or difference between the two languages. The bases studied are exclusively of verb provenance and the noun derivatives obtained in the process refer to person agents, excluding material agents. Another objective set before the research is the establishment of any concomitant orthographic and morphophonological alterations of the base in obtaining complex lexical forms indicative of any underlying processes. Furthermore, the semantic properties and the type of the bases that possess certain affinity toward a particular agentive suffix will be determined, which might provide a better insight into the productivity and selectional potential of the input forms. The research corpus consists of the separate contingents of examples formed by each of the suffixes, 207 English derivatives and 250 Serbian, the analysis of which may yield results in terms of frequency, availability of each suffix, as well as the type of morpheme that can be involved or restricted from agentive derivatives.

Due to the span of the research, the focus of the attention are exclusively nomina agentis in the two languages, which excludes other related derivational phenomena, such as nomina professionalis,

names of practitioners or professionals in different fields, even though these two classes have been frequently observed together.

So far, the nomina agentis of the English language have been studied by Bauer (1979), Fabb (1988), Plag (1999), Prćić (1999), and others, and in Serbian literature, the most prominent work has been done by Matijašević (1986), Kiršova (1998), Ćorić (2000, 2007), Ajdžanović (2005, 2008), as well as in the cumulative overviews of word formation in Babić (1986) and Klajn (2002).

2. AGENTIVE SUFFIXES

Agentive suffixes are usually said to be post-positioned affixal morphemes used to produce derivatives the meaning of which refers to "a person who has to do with what is indicated by the base". The matrix clause for the generation of nomina agentis on a productive pattern is "X-agent der.suff. is a person who X-es", as in *walk-er* is a person who *walk-s*, and presupposes a verb or denominal base. From a different perspective, agentive suffixes are, strictly speaking, used to derive nouns the semantic role of which is that of an AGENT. As it has been already determined by Charles Fillmore in 1968, it is "the typically animate perceived instigator of the action". Agents in a predication are normally conscious and willing performers of an action or controllers of an event, as opposed to any unwilling or unwitting entity which brings an action to effect, when the role is termed as FORCE.²

- (1) a. <u>The teacher</u> was reading a text.
 - b. The rain was pelting on my window sill.

Certain agentive suffixes may also be used to produce a derivative with the semantic role of INSTRUMENT, as in *mow-er*. Bauer (2001:199) and Beard (1995:82) claim, and not without any foundation, that these can be treated as two different homophonous suffixes. The focus of this research is solely on the instances where the complex word has active referents that are involved in performing actions. With certain bases it is not clear whether the derivative indicates an instrument by which an action is performed or the agent itself. The verb *to write* produces *writ-er*, but the form *to typewrite* is a back formation from *typewriter*, a noun which refers to the machine, i.e. instrument, whereas *typ-ist* refers to the professional performer of the action. Another common problem, which is perhaps most obvious to non-native speakers of English, is the distinction between pairs of nomina instrumentalis and nomina agentis such as *cook-er* "stove" vs. *cook* "someone who cooks".

Some of the more prominent suffixes in this group are also used to form derivatives denoting the "occupation" or "profession" of the referent, where there is no action occurring or being performed by an agent, but more permanent engagement in a field or activity. Such nouns have nominal bases and are not agentive nouns in the narrowest sense of the term, but denote professionals, practicers, or followers. The nouns here include *astronom-er*, *botan-ist*, *cannon-eer*, *mathematic-ian*, etc. A subgroup of these is made by nouns that involve the argument in the matrix clause "X-der.suff makes X" or "X-der.suff deals with X" as it *hatter*, *furrier*, *slater*, *tinner*, etc. However, certain noun-based derivatives may pose a problem as it is unclear whether the base is a noun or a conversion-verb. Complex forms like *box-er*, may well have been derived from the verb *to box*, as it is more appropriate to consider *cann-er* a derivative of the verb *to can*.

Agentive suffixes may be appended to different types of bases. Categorially speaking, the most typical base would be a verb base, as the verbs designate actions, states or events, as in (2) a. However, nouns may serve as bases when the outcome is nomina professionalis, both conversion-nouns and ordinary nouns, as in (2) b. When certain of these suffixes are added to adjective bases, the derivatives are not strictly agentive nouns, as in (2) c.

¹ See Charles J. Fillmore (1968) "The Case for Case". In: Bach and Harms (Ed.): *Universals in Linguistic Theory*. New York: Holt, Rinehart, and Winston, pp 1-88.

² See Thomas Payne (2011) Understanding English Grammar, A Linguistic Introduction, Cambridge University Press, p. 137.

(2) a. dream-er, drink-er, produc-er, speak-er, sleep-er b. bank-er, engin-eer, football-er, guitar-ist, song-ster c. old-ster, young-ster

Structurally speaking, these suffixes are most often added to free bases, but they can also combine with bound bases, when they produce nomina professionalis, as in (3) b. It is not unusual to add some of the more productive suffixes to compound bases. Complex bases are very rare, but possible, as in (3) d.

- (3) a. driv-er, joke-ster, speculat-ist b. auth-or, spons-or, vict-or. c. bus-driv-er, shoe-maker, window-clean-er.
 - d. conform-ist, inter-view-er, theor-iz-er, trans-gress-or.

3. ENGLISH AGENTIVE SUFFIXES

The agentive suffixes taken into consideration for the research from English are: -ANT/-ENT, -AR, -EE, -ER, -IST, -OR, -STER. These suffixes, as opposed to the Serbian ones, are gender neutral, which means that all of them may be used to form masculine and feminine performer nouns. The typical agentive derivative in English will be on a free base of simple morphological structure, formed from a bare infinitive verb.

The French origin suffix -ANT/-ENT which can be found predominantly in adaptations of imported words from French, produces two potential senses in derivatives, "a person that performs the action in the base", an agent, as in as in assistant, attendant, commandant, informant, inhabitant, president, protestant, servant, suppliant and "a material agent that does something expressed by the base", as disinfectant. The suffix -AR is considered to be an alteration of -ER or -OR, occurring in a handful of instances like beggar, liar and padlar, and unlike its alternatives, it is unproductive.

The suffix -EE of Latin and French origin is the only agentive suffix that belongs to Class I affixes³ which change the stress pattern of the base. Even though the suffix-EE is primarily used to designate a person who undergoes a certain action, or presents an indirect object of the verb in the root, it also may have agentive implications, as in *ateend-ee* "someone who attends or is present", *returnee* "someone who returned", but *surrender-ee* is "someone to whom a surrender is made". Its counterpart in legal matters is the Latinate suffix -OR, appearing in pairs such as *less-or* vs. *less-ee* or *grant-or* vs. *grant-ee*, etc. This suffix may be attached to either free or bound roots. Examples include derivatives such as *creator*, *donor*, and the older *donator*, *possessor*, *protector*, *sponsor*, *successor*, *translator*, *victor*. The suffix -EER, more significant in derivation of professional names, can also be employed in the agentive noun derivation, as nouns such as *commandeer* and *mutineer* can confirm.

The chief among the agentive suffixes is -ER, developed from the Old English suffix -ERE, which eventually lost its last grapheme. The suffix has yielded the largest number of complex agent nouns is as in *baker*, *driver*, *lover*, *painter*, *runner*, *singer*, *speaker teacher*, *worker*. Naturally, this means that it has the greatest productivity of all English agentive suffixes, along with the similar, but different suffix -OR. According to OED, these two are almost indistinguishable: "The distinction between -er and -or as the ending of agent-nouns is purely historical and orthographical; in the present spoken language they are alike pronounced." Despite this qualification, the suffixes exhibit differences in certain aspects, which are to be considered in section 5.

Another suffix that could be considered within this group is the suffix -IST. It is productively added to noun bases to produce nouns signaling professionals, adherents or generally performers of certain actions as *copy-ist*, *typ-ist*. However, when -IST is affixed to verbal bases to form agentive nouns, the productivity is much more limited. Of around 700 derivatives in -IST, only 1% would be those based on verbs, such as *alarmist*, *computist*, *rapist*, *speculatist*, etc.

As opposed to some other languages, English agentive suffixes are devoid of gender distinctions. Historically, the suffix -ER denoted individuals of male gender, but the feature is not sustained any

³ The classification suggested by D. Siegel (1979) *Topics in English Morphology*, New York: Garland.

⁴ See -er, Oxford English Dictionary 2 on CD-ROM version 1.01. (1992), Oxford: OUP.

longer. The only trace can be found in the other of the two English agentive suffixes originally from Anglo-Saxon, beside -ER. The suffix -STER is a product of two forms -stro-, an element for forming nouns of action, and the Old English -estre, a formative used to form feminine gender nouns, the sense of which can still be felt in *spinster*. Later on, the affix came to be used for any agents, irrespective of gender, but with considerably low productivity. The agentive derivatives are: *knit-ster*, *poll-ster*, *punster*, *tap-ster*, *trick-ster*, etc.

Generally speaking, the suffixes in this group are attached to the bases without any intervention to the base itself. However, the general tendency in English spelling for short, one syllable bases which are to be combined with vowel initiated suffixes has its confirmation here, as well. Doubling of the final grapheme which stands for a consonant to preserve the short vowel preceding it is required with short, monosyllabic bases, as in *runn-er*, but also with certain two-syllable verbs, as in *beginn-er*.

As it appears, the most important spelling implications with agentive suffixes are related to the suffix -ER. The spelling rules with the bases ending in silent <-e> apply here as well, as in *diner*, where the last grapheme fuses with the suffix, as well as with those ending in <-y>, where the final grapheme changes into <-i>, illustrated by *supplier*. Another orthographic intervention that the base may undergo is that of adding a grapheme with no phonological counterpart. With verb bases ending in /k/, and sometimes other types of bases with the same phonemic closure, but represented by the grapheme <-c> in writing, as shown in (4), the base is expanded by the addition of the grapheme <-k-> before the agent suffix. This is supposed to reinforce the consonantal base ending in /k/ and perhaps prevent any "sibilarization" in front of a vowel-initialed suffix, which presents an unlikely ending of a native agentive base. This argument could be best illustrated by the nouns *frolick-er* or *picnick-er*, from the verbs *to frolic* or *to picnic*.

(4) Cf. Eng. adj.
$$electric / \mathbf{I}' lek.tr \mathbf{I}k / > n. electric-ity / \mathbf{I}_l lek' tr \mathbf{I}s. \mathbf{I}_l ti /$$

Finally, with the bases ending in <-w> there is a slight alteration in derivation, as the base is extended by the grapheme <-y>, as in *bowyer*, *lawyer*, *sawyer*. As opposed to the previous case, here the grapheme stands for an additional phoneme, /j/ which is meant to inhibit the contact of two vowels.

4. SERBIAN AGENTIVE SUFFIXES

In Serbian, the list of agentive suffixes includes many more items than in English. One of the primary factors for this, beside the variety in their origin and interfixation is the feature of the language in terms of gender-specific suffixes. The suffixal morphemes with this property are -AC, -AČ, -AČA, -AR, -ARA, -ANT/-ENT, -AŠ, -DŽİJA, -ER, -ICA (f.g.), -İCA, -IN, -INJA, -İST, -İVAČ, -JA (m.g.), -JA, -JAK, -KA, -LO, -LJA, -NİK, -OR, -OV, -TELJ, and-UŠA. These suffixes are mainly added to bound bases, as in *rodi-telj*, as Serbian verbs are characterized by the suffixal infinitive ending, {-ti}, {-sti} or {-ći}, which has to be eliminated before derivation, as in (4). Free bases are possible in derivatives based on nouns, as in *mlin-ar* "mill-er", generally indicating artisans or professionals.

4.1 Masculine gender suffixes

Masculine gender agentive suffixes in Serbian incorporate the following 11 native origin bound morphemes: -AC, -AČ, -AR, -AŠ, -IN, -İVAČ, -JA, -JAK, -NİK, -OV, -TELJ. This implies that no noun which refers to a male performer of an action may select any of the remaining four agentive suffixes. A man who listens to something, in Serbian can never be *sluša-telj-ka, but either sluša-telj or sluša-l-ac "a listener". Arguably the chief agentive suffix in Serbian is the Latinate -AR, having produced numerous complex professional names on nominal bases, illustrated by vodeničar, vrtlar, grafičar, električar,

zlatar, etc, but here we are more interested in the agent nouns on verb bases, such as čuv-ar, kuv-ar, lek-ar, pek-ar, pis-ar, sanj-ar, slik-ar, vaj-ar, vid-ar, vlad-ar, zid-ar, etc.

The suffix -IN stands in a derivational relation with nominal bases to designate professionals such as: bakalin, berberin, kasapin. Equally unproductive seems to be the suffix -TELJ, as it formed a handful of nouns as čitatelj, graditelj, prosvetitelj, staratelj, učitelj, snimatelj, reditelj, voditelj, the majority of which have been squeezed out by the formations in -AC, čitalac, spasilac, etc. Second only to the suffix -AR, this derivative affix is the one of choice for many estasblished nouns, such as imalac, glumac, kupac, lovac, pisac, zajmodavac and the newly-formed agent nouns davalac, komunalac, kradljivac, ronilac, etc.

The suffix -JA, produces forms like *vod-ja* "leader", and the compounds *vojsk-o-vod-ja* "military commander" and *kolo-vod-ja* "ring leader". Few nouns would be derived by -JAK, the most frequent being *pros-jak* "beggar". The noun derivatives in -OV are not numerous and there is one with specific agentive meaning, namely *laž-ov*. Curiously enough, the same notion "a person who tells lies" is expressed by a derivative with a considerably restricted affix in both these languages, as the suffix in *li-ar* has not many more formations in English of the agentive type than this. One of the most prolific suffixes of Serbian agent derivation is certainly the suffix -AČ, with some of the most common of nouns such as *igr-ač*, *istraživ-ač*, *izvodj-ač*, *kop-ač*, *nabavlj-ač*, *pev-ač*, *pliv-ač*, *proizvodj-ač*, *spav-ač*, *svir-ač*, *šapt-ač*, as well as some of the most recent formations as *smarač*. It is a matter worth debating whether -IVAČ is a separate suffix in Serbian derivation, as claimed by Klajn (2002:64) or is this an instance of the suffix -AČ appended to aspectually different forms of related verbs, as *osnovati* (perfective) and *osnivati* (progresive) ,,to establish", where the second, rather than the first may be considered the base of *osni-v-ač*. Other such nouns are *oglaši-v-ač*, *pokazi-v-ač*, *poroblji-v-ač*, *prepisi-v-ač*, etc.

Another suffix with a list of formations regarding agents and therefrom professionals is the suffix -NİK, the derivatives of which include *ispoved-nik*, *put-nik*, *rad-nik*, *rasip-nik*, *rat-nik*, *ured-nik*, *voj-nik*, *zakup-nik*.

Among the agentive suffixes that can be traced to foreign origin, the Serbian language has several, 5 to be more precise: -ANT/-ENT, -DŽİJA, the suffix which has been imported from Turkish, -ER, -IST, and -OR. The first is appended on reduced verbal bases such as in *emigr-ant*, *demonstr-ant*, *diskut-ant*, *project-ant*, *stimul-ant*, etc. or the other form in *assist-ent*, *depon-ent*, *pretend-ent*. In the past sixty years, the Serbian language has imported the suffix -ER, together with the imported derivatives as *designer*, *leader*, *packer*, *programmer*, etc in *dizajner*, *lider*, *paker*, *programer*. The item *sufler* is an adaptation of an import from French, i.e. *souffleur*. However, the suffix came to be used actively in forming nouns independently from import, as in *mas-er*, *tenis-er*, for "masseur", "tennis player", etc.

Serbian and English share certain foreign agentive suffixes that have entered through lexical import of from Latin. In the case of -OR which is present in both, it is obvious that it combines with Latinate bases, with concomitant adaptation in Serbian and English, *agres-or* vs *aggress-or*, *skulpt-or* vs *sculpt-or*, almost never found in combination with native bases. Certain bases present bound denominal forms, as in *investit-or* from the noun *investi-cija*, as the verb base would be *investira-ti*, opposed to the English *invest-or*. The same holds for -IST, the more common Serbian variant being the form -ISTA. Very few strictly agentive nouns are derived with this suffix, the bases of which are foreign verbs, such as in *separatist*.

4.2 Feminine gender suffixes

The feminine gender suffixes include -AČA, -ARA, -ICA -INJA, -KA, -LJA, -UŠA, all of which may be said to be productive, except for -AČA, -ARA and -LJA. The suffixes -AČA and -ARA, with *skit-ara*, *trač-ara*, present feminine gender counterparts of the masculine gender suffixes -AČ, -AR. The specificity of certain agentive formations in Serbian is that the feminine gender is formed on masculine gender bases, as in (6).

 $^{^5}$ See Ivan Klajn (2002) *Tvorba reči u savremenom srpskom jeziku I: slaganje i prefiksacija*, Beograd: Matica Srpska / SANU / SKZ, pp 242-244.

(6) *čita-telj* read-masc. gend. suffix "male reader"

čita-telj-ka read-masc. gend. suffix -fem.gend. suffix "female reader"

Among the most productive of these is the suffix -KA. There is a number of formations based on it: *graditelj-ka*, *ministar-ka*, *molitelj-ka*, *pekar-ka*, *profesor-ka*, *služitelj-ka*, *tužitelj-ka*, *učitelj-ka*. The suffix has recently obtained even greater productivity, as the issue of gender equality has achieved a considerable level, so that all masculine gender agent nouns obtained their feminine gender counterparts. The formations with this suffix are alternated with the formations with -ICA, the most employed agentive suffix for feminine gender derivatives in modern Serbian: *berač-ica profesor-ica*, *učitelj-ica*, *kuvar-ica*, *vaspitač-ica*, *pevač-ica*.

The suffix -LJA is a specific case as it almost exclusively, aside from *porodi-lja* and *prati-lja*, combines with verb bases indicating manual work traditionally considered to be suitable for females only. The nouns *pleti-lja*, *pra-lja*, *pre-lja*, *predi-lja*, *šva-lja*, *tka-lja*, *vezi-lja*, confirm this statement, and as the suffix is unproductive, it is not likely to be used with verbs from other semantic fields or more recent origin, **studi-lja*, etc. Agentive nouns in Serbian can be obtained by means of -INJA, attached to varying bases as in *dojk-inja*, *prosjak-inja*, *slušk-inja*, *trgovk-inja*.

The other suffixes are qualified by a considerably small number of derivatives. The suffix -AČA is found in *narik-ača* and *udav-ača*, and *gat-ara*, *vrač-ara*, *kart-ara*, *trav-ara* make the set of formations upon -ARA. The common element is that the derivatives indicate women dealing or skilled in fortune-telling and homeopathic healing.

4.3 Common gender suffixes

The three suffixes of coomon gender are -iCA, -JA and -LO. The most productive agentive suffix that may involve both male and female agents is -iCA, with many examples buba-l-ica, $\dot{c}uta-l-ica$, izbeg-l-ica, ize-l-ica, luta-l-ica, nezna-l-ica, propal-ica, ub-ica, udvor-ica, uliz-ica, varal-ica, etc. Almost all of the derivatives express a negative attitude on the part of the speaker. The forming of Serbian synthetic compounds of the agentive type with -JA may imply a relatively simple addition of the suffix on a compound base, such as with krv-o-pi-ja, vino-pi-ja, vod-o-li-ja, whereas the majority of the examples will be accompanied by a phonological change, e.g. fusing s0 an s1 into s2 as in s3 as in s4 and s5 and s5 as in s5 and s6 and s7 and s8 and s9 are companied by a phonological change, e.g. fusing s8 and s9 as in s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change, e.g. fusing s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 are companied by a phonological change s9 and s9 are companied by a phonological change s9 are companied by a phonological chan

As opposed to these, the derivatives in -LO indicate agent nouns the referents of which perform actions that are considered undesireable, excessively practiced or of low-esteem, so much so that they may be considered typical of the referent. The examples are numerous: *crta-lo*, *ćaska-lo*, *drema-lo*, *ismeva-lo*, *maza-lo*, *naklapa-lo*, *namigiva-lo*, *nasrta-lo*, *okleva-lo*, *sprda-lo*, *škrabalo*, *šunjalo*, *zadirkivalo*, *zakeralo*, and compounds *zlopamtilo*. The English counterpart would be -STER, as in *joke-ster*, etc.

5. COMBINATORIAL RESTRICTIONS

The issue of selecting agentive suffixes for derivation may be viewed from different perspectives, but the question posed here is how the process takes place and which factors cause the option for ones and exemption of other affixal morphemes in lexeme derivation. The restrictions for suffix selection can be of various character, found at several levels of language organization, roughly grouped into phonological, morphological and semantic.

5.1 Phonological context

All English agentive suffixes are initialed by vowels, except for -STER, a suffix which combines with consonant ending bases, save for a couple of cases of nomina professionalis such as *barrister* and *chorister*. It is a fact worth noting that of all bases, both free and bound, used to form agentive nouns in English, around 75% are finalized by any of the alveolar consonants of the language, /t/, /d/, /s/, /z/, /l/, /r/, /n/. The consonants that would present unsuitable base endings include the bilabial /w/ and the glottal /h/, which is a definite phonological restriction. A few instances, less than 5%, would be ended by vowels, which indicates that open syllables do not present a favourable base ending for agentive suffixes. The examples as *brewer*, *employer*, *player*, *slayer*, *supplier*, *surveyor* may indicate that the vowel contact that is allowed at morpheme boundaries is between the central vowel of the suffix and the /i/-directed diphthongs. The derivatives on -ANT require a consonantal epenthesis, as in *appli-c-ant*, *suppli-c-ant*.

Serbian agentive suffixes basically follow a simple pattern when it comes to the phonological context. The number of vowel-initial suffixes preponderates by 50% over the consonant initialed ones. The former will be combined with a consonant-final base, and vice versa, irrespective of gender. If the derivative base should be vowel-final, there occurs a kind of suffixal prosthesis which could be termed L-epenthesis, a phenomenon that Serbian linguists tend to link to the existence of a separate suffix. However, this operation is supposed to promote morpheme identification and to prevent the hiatus, two vowels at morpheme junctures in Serbian, a strategy present in many other languages. In case of alternation between two suffixes, the one initialed with a consonant will block the formative [1], as in (8) c.

This has been indirectly confirmed by Klajn (2002:43-44), who has accepted interfixation as the probable explanation of the appearance of a kind of coda epenthesis, as in the nomina professionalis *more* > *mor-n-ar*, *vrt* > *vrt-l-ar*, *sve zna-ti* > *svezna-d-ar*, *barjak* > *barjak-t-ar*, *zulum* > *zulum-ć-ar*, which could be attributed to neither the base, nor the affix. Obviously, these interfixed consonants belong entirely to the group of alveo-dental consonants, but the motivation remains unclear.

This implies that consonant-final bases in Serbian will be restricted from entering derivation relations with consonant-initial suffixes. The only exception to this regularity seems to be the suffix -NIK, which accepts only consonant-ending bases, such as *gubit-nik* "loser", without any gemination of consonants and only in less than 5% of the corpus. The fact that there is a considerable number of consonant-initial suffixes may account for the fact that, as opposed to English, alveo-dental consonants will end only around 45% of the derivative bases. The Serbian vowels /a/ and /i/ have shown to have an almost equal share of the total as base endings.

Another notable tendency in Serbian agent nouns derivation is the reduction of bases by elision of vowels, a phenomenon that Stockwell and Minkova (2001:122) call **V-drop**. This occurs with disyllabic bases of verbs such as *bori-ti*, *glumi-ti*, *pisa-ti*, where the phoneme /i/ is dropped, as shown in (9) a. or *kopa-ti*, *peva-ti*, *spava-ti* where the phoneme /a/ is dropped, as shown in (9) b.

(9) a.
$$bori$$
- ti + $-ac$ > $bori$ - ac > bor - ac > bor - ac > $kopa$ - ti + $-ac$ > $kopa$ - ac > $kopa$ - ac

The suffix -iST that is present in both languages appears to favour verb bases with alveolar consonant ending, which is quite understandable, as the initial vowel of the suffix is a front vowel. In the few verb-based derivatives in English, *controvert-ist*, *favour-ist*, *impart-ist*, etc, the base ends in either /t/ or /r/. The first example, the base of which is *contover-*, points to the fact that alveolar

consonants may be interfixed if required in front of derivational suffixes initialed by vowels. In the formation of the neo-classical Serb. *stat-ist* "an extra", it is obviously a bound base to which the suffix is added, originating from the Latin verb *stare* "to stand" and the present tense form *stat* for the third person singular indicative mood.

5.2 Morphological context

First of all, unlike the Serbian language, nomina agentis derivation in English may be alternated with the process of conversion and obtaining conversion-nouns from verbs. Here, this direction of conversion appears to be the special rule in obtaining agentive nouns in terms of the so-called **elsewhere condition**, mentioned by Plag (2003:171). Suffix-based derivation of agent nouns in English is blocked by the possibility of obtaining a conversion-word, as the application of this special rule has to occur first, at the "closer" level, and the more general rule at a "later" level. The example that has been provided by the author is a way to deal with the fact that the nouns *cook*, *bore*, *spy* block synonymous words with the agentive suffix -ER such as **cook-er*, **bor-er*, **spy-er*.

However, conversion may appear to play quite a different role and be a decisive factor in the combinatory potential of certain agentive suffixes. Actually, the ability to convert nouns into a verb may be a decisive element in selecting a particular suffix for combination. Derivative nouns of players of certain musical instruments show an interesting tendency. As is the case with the nouns in (10), the nouns referring to musical instruments that can and have been converted into verbs derive agentive nouns by mean of the suffix -ER.

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(10) a. drum > to drum > drummer
b. trumpet > to trumpet > trumpeter
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On the other hand, nouns that show no inclination to be converted into verbs are restricted from combining with -ER, but rather select -İST, since there are no conversion-verbs like *to guitar, to violin, to cello, to piano, etc.*

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(11) a. guitar > guitarist not *guitarer
b. violin > violinist not *violiner
c. cello > cellist not *celloer
d. piano > pianist not *pianoer
```

On the other hand, complex verb bases exhibit considerably predictable behaviour. Those ending in the -iZE, the most productive verb suffix, the selection is reduced to either -iST or -ER. If the base ends in -ATE, it is -OR, when the final morpheme is -iFY, the suffix -ER. This is in almost in accordance with the so-called **Latinate constraint:** "Bases and affixes may combine only if their etymological features are compatible" (Plag, 1999:58). However, there are specific cases when this constraint is not observed in Serbian, particularly with certain semantic and stylistic effect.

With the derivative verbs in -EN, as with *embold-en-er, the choice of -ER with human referents would also be limited. The exception might be found particularly if the reference is that of an alias or nickname, as illustrated in (12). In the majority of other formations, the derivatives designate substances or devices, as in *sweet-en-er*, *fast-en-er*, *soft-en-er*, etc.

(12) As Cæcius, the "darkener," became ultimately changed into Cacus, the "evil one," so the name of Vritra, the "concealer," the most famous of the Panis, was gradually generalized until it came to mean "enemy," ... ⁶

On the other hand, verb bases that typical end in -ate are necessarily combined with, as with denominate vs. denominator, and allow for no other agentive suffix: *denominater, *denominatee,

⁶ John Fiske (1900) *Myths and Myth-makers: Old Tales and Superstitions Interpreted by Comparative Mythology*, Boston and New York: Houghton, Mifflin and Company, accessible on http://etext.lib.virginia.edu/modeng/modengF.browse.html

*denominist, etc. Even though the input meaning of the suffixes -ER and -OR is almost identical, there exist a certain restriction in their interchangeability. The latter is employed with more technical formations in comparison to -ER, which would implicate generality. A considerable part of this statement is due to the fact that the suffix -OR is appended only to Latinate bases, which on the other hand produce nominalizations with stronger associations of office, trade, or function. This can be verified by the item actor, author, creator, doctor, donor, inventor, possessor, professor, rector, sculptor, sponsor, successor, translator, tutor, victor, visitor. A similar degree of expressing higher professionalism or commitment to an area or interest may be achieved by selecting -IST in the stead of -ER, for bases with which both suffixes are eligible. This can be met in the pairs conformer, conformist; copier, copyist; cycler, cyclist; philologer, philologist. The selection of -ER in blogger, spammer or forumer is more natural than -IST, in *bloggist ,*spammist and *forumist, obviously conditioned by the requirement for semantic shading, rather than by the origin of the base.

When it comes to forming agentive noun compounds of the synthetic type, Radford et al (2009:191) point out that the suffix -ER is still very productive, listing certain established and novel compounds such as *taxi-driver*, *road-mender*, *horse-rider*, *crossword-compiler*, *net-surfer*. Obviously, the greatest majority of new synthetic compounds stemming from "a person who Xs (a) Y(s)" will be agentivized by this suffix. This is predictable, as the complex derivatives are suffixed with this suffix, *driver*, *mender*, *rider*, *surfer*, and it would be unlikely to expect *electromobile-drivist.

Intransitive verbs appear to provide few bases for derivation of agent nouns, and in particular this refers to those verbs that may undergo secondary coversion into transitive verbs. Verbs like *begin*, *break*, *come*, *go*, *stop*, *swim*, *wait*, *work* may be taken as either transitive or intransitive, and thus agent derivatives can be expected, whereas intransitive-only are disallowed: *arriv-er, *cough-or, *decreaser, *disappear-ist, *di-er, *fall-ist, *happen-er, *laugh-er, *li-er, (body posture), * sneeze, *vanish-er.

The complex bases ending in another derivational suffix such as the suffixoid -LOGY for specific studies or scientific disciplines, have a particular affinity toward certain suffixes. This suffix will naturally select -iST for nouns, rather than -iCiAN, while there is a free alternation in studies ending in -ics. This may be illustrated with nouns such as *archeologist*, *biologist*, *gynecologist*, *morphologist*, *philologist*, instead of **archeologician* or **morphologician*. However, the noun involving *logic* itself, calls for *logician*.

The Serbian language expresses much greater disinclination of combining foreign agentive suffixes with native bases. The only Serbian derivatives that have been formed disregarding the morphological constraint of combining [+Latin] bases with the agentive -OR/-ATOR would be substandard items with affected, mocking effect, as if to potentiate the awkwardness of the match, as in *drmat-or*, *grebat-or*, *muvat-or*, *šljakat-or*. The example *gnjavat-or*, from the verb *gnjavi-ti* shows that analogical influence can affect the base.

The derivatives based on the masculine -TELJ can form feminine gender counterparts by agglutinating the suffix -KA, alternatively -iCA, to the complex base, as in (13).

This type of gender operation is not possible with other masculine suffixes which may alternate with -TELJ, such as -AC, for instance. This suffix in combination with -KA provides an anomalous *gleda-l-ac-ka, as does direct addition of -ICA, *gleda-lica. Even its corresponding feminine gender suffix cannot replace it at all times, as the outcome may be blocked by the inadequate semantic role of INSTRUMENT. This restriction has also been noted both by Stevanović (1968:540) and Klajn (2002:192). Even though -ICA may be used to form feminine gender upon bases ending on -TELJ with -AC it is not acceptible. The difference between sluša-l-ac "listener" and sluša-l-ica "headphone" is obviously not in gender, but in the semantic role.

The alternation between -TELJ and -AC, two Serbian suffixes, is acceptable when it involves simple bases. Apparently, even though *gleda-telj* "spectator" and *tuži-telj* "prosecutor "has been neglected in Modern Serbian for the sake of *gledal-ac* and *tužil-ac*, the compound bases combined

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⁷ All examples from Oxford English Dictionary 2 on CD-ROM version 1.01. (1992), Oxford: OUP.

with -TELJ will resist any change of the agentive suffix, *brodo-gradi-telj* "ship-builder", *telo-hrani-telj* "body-guard", etc. On the other hand, the compound bases including modifier-head relationship of the elements is more likely to form a synthetic structure by means of -AC: *mnogo-zna-l-ac*, *rano-rani-l-ac*, *kasno-lega-l-ac*, etc.

The majority of the feminine gender suffixes in Serbian may be used for the derivation of feminine gender agentive nouns on masculine gender nouns, except for -AČA and -LJA. This automatically means that no masculine gender agentive nouns may ever obtain any of the two, e.g. to form nouns such as *spemova-ti*, to spam" > *spemov-ača or *spemova-lja.

5.3 Semantic context

Generally speaking, agentive derivation is restricted primarily to dynamic verbs which denote activities of limited duration or temporary actions which have beginning and end. This preempts any agentive suffix appending to processes (except for *grow-er*), bodily sensations like *ach-er and transitions, like *leav-er. As for stative verbs which denote states or actions which are of unlimited duration, unchanging over time, they may serve as bases for derivation of nouns referring to individuals involved in cognitive operations, as in *believer*, *doubter*, *knower*, *thinker*, when stative verbs are given a kind of dynamic use.

By the same token, the verbs with the semantic role of EXPERIENCER are generaly not suitable for modeling by agentive suffixes, as the verb bases would consist of verbs of sensory perception, hear, feel, observe, see, sense, smell, perceive, taste, touch. These verb bases would produce forms like *feeler, *senser, *smeller, *perceiver, and *toucher. However, the derivatives hearer, observer, seer, taster, are acceptable in English, which might suggest that these forms of perception are believed to implicate the performer to a greater extent, as opposed to the others. Emotional states are also perceived as suitable for -ER derivation, illustrated by ador-er, desir-er, hat-er, lik-er, lov-er, want-er, worship-er. The only form unlikely to be found in any derivative is the verb to prefer, *prefer-er. Finally, the greatest restriction can be noted with verbs that indicate conditions, where own-er appears to be the only acceptable derivative, unlike *hav-er.

Monosyllabic verbs that represent certain simple actions like *cut*, *dry*, *give*, *wash*, are not normally used as bases in deriving agentive nouns *cutter*, *drier*, *giver*, *washer*, and those are much better accepted as bases for nomina instrumentalis. Even if the reference is made to humans, the referents are normally taken to be typified by the action. The same holds for the Serbian language, with nouns such as *rez-ač*, *suši-l-ica*, *dav-ač*, *peri-l-ica*. Furthermore, common verbs like *break*, *fly*, *make*, *tell* more often combine to refer to FORCE rather than AGENT, as in *breaker*, *maker*, *flier* and *sitter*, *teller* but in compounds, it is different, e.g. *strike-breaker*, *shoe-maker*, *baby-sitter*, *fortune-teller*, etc. This means that with making the argument obvious by forming a synthetic compound, the predicator element may become more adequate for human agents.

As for the semantic environment of the dominant suffixes in these languages, in a number of instances, there is a free variation between the two most productive agentive suffixes, -ER or -OR, and -AC or -TELJ. However, the greatest majority of the cases do not allow for variation and require one or the other. It can be noted that in both English and Serbian, the choice of the agentive suffix in certain cases is considerably affected by the context of situation. In other words, a particular effect is achieved by the selection or retaining of unproductive suffixes or bases when a special reference is made, in particular to Jesus Christ. In Serbian this reference is reserved by the suffix -TELJ in *spasi-telj*, as in English it is achived by the no longer used -IOUR, in *sav-io(u)r*. Reference to any other entity based on the root will be made by other, more "mundane" suffixes or bases, e.g. *spasi-l-ac* and *sav-er*. When it comes to bases, the one less likely to be used in everyday communication will be selected to attain similar effect. Thus the form *Mak-er* is parallel to the Serbian *Stvori-telj*, where the effect still rests on the suffixal grounds, while *creat-or* and *stvori-l-ac* are basically used for every other reference.

Another semantic implication with derivatives is the one regarding nomina professionalis. Nouns in English and that denote a person who is skilled or is a professional in the art or science in question, particularly added to names of arts or sciences ending in -ic, -ics, may not be formed by the most productive suffixes. Therefore, forms politician, cosmetician and optician, but not *politic-er *cosmetic-er or *optic-er, as opposed to the Serbian complex forms, politič-ar, kozmetič-ar, optič-ar,

and not *politik-ac, *kozmetik-ac, *optik-ac. The English form Mechanic-ian, is a rare form which may alternate with machinist, but the form mechanic appears to resolve the dilemma and take over the frequency of appearance in language.

Agentive suffixes in English and Serbian do not exhibit a considerable potential in indicating value judgment, as the majority of them are neutral when it comes to sense components that refer to a veriety of sense relations in combination with the base. Nevertheless, both English and Serbian proved to have agentive suffixes which contributed negative connotations to the base. In time, the suffix -STER has obtained a largely derogatory ring to it, as it is predominantly combined with nominal bases that involve activity that is either not respectable, that may be illicit, or of low esteem. The items that could support this argument include gamester, gangster, jokester, mobster, rhymester, songster, tipster, trickster. Thus, this suffix should not be involved with bases that have positive associations, or high esteem, as *helpster, *policester, *sportster, etc. A similar restriction is imposed on another unproductive suffix, the suffix -EER. It is normally employed to indicate a person's activity, specialty or line of work, as in auctioneer, marketeer, profiteer, racketeer, rocketeer. The use of which may cause the appearance of mocking or contemptuous tone that many of the words may carry, as in pamphleteer, or sonneteer, an effect that could be achieved by the Serbian agentive suffix -LO or -iCA, both gender neutral. As opposed to English, Serbian requires particular bases, having in mind the restriction that with certain verb bases, these suffixes provide instrumental meaning broji-lo, lepi-lo, *uči-lo*, and the like.

6. CONCLUSION

There is a considerable mismatch in terms of agentive suffixes in English and Serbian, as the latter language has three times more forms to derive agent nouns. There are 26 different suffixes for agent nouns derivation in Serbian, whereas only 8 in English. This is due to the fact that Serbian has imported a contingent of suffixes along with the lexical items from other European languages, such as Turkish, German, English and French. The great diversity of these suffixes is in a correlation with the productivity of individual suffixes. English productive suffixes are "more" productive than the Serbian productive suffixes, since the span of morphological bases for combining in Serbian is much narrower. There are many more agentive suffixes in Serbian, but a considerable number of these are not productive, nor have they produced a significant number of examples. Moreover, the difference may be ascribed to the fact that there are separate suffixes for feminine and masculine gender in Serbian, whereas in English this difference is not maintained. The third reason may be the fact that suffixation is one of the means of achieving subjective evaluation in language, where suffixes such as -LO smetalo and -İCA cutal-ica, lutal-ica, pričal-ica, sanjal-ica, sveznalica with many more examples in Serbian have evaluative quality and express the attitude of the speaker. Serbian agentive suffixes are gender sensitive, so that no noun in determining the potential suffix can disregard the grammatical category of gender. This automatically limits the choice of suffixes, however, since there may be identified feminine-gender-only bases that require corresponding suffixes, such as in udav-ača or masculinegender-only bases in že-nik.

The dominant suffixes would be *-er* and *-ac*, respectively, whereas in terms of base endings, three quarters of all would be of alveolar or alveo-dental origin. Consonantal epenthesis has been registered in both of the languages with vowel-final bases and vowel-initial agentive suffixes. The bases in Serbian are exclusively bound with any of the agentive suffixes, while the English Germanic origin ones appear to combine with free bases, which also supports the claim by Harley (2006:168).

In English, it is much more difficult to distinguish agentive nouns from nomina professionalis as the base may be a denominal verb, as in *slat-er*, where it is not completely clear whether it refers to "a person who lays slates on a roof" or "a person who slates a roof". In Serbian, on the other hand, nomina agentis derived from non-verb bases are rather conspicuous, as in *rud-ar*, "miner" the base *ruda* "ore" is not related with the predicate, but with the argument. There is no potential alternation between the verb-based *kopa-ti* "to dig" and the non-existant **ruda-ti*. It is the quality of the base that significantly influences the productive force of the agentive suffixes, as English bases may be obtained from denominal verbs, and Serbian infinitives possess a post-positioned infinitival affix.

The results of the analysis have shown that simple-structured verbs that refer to everyday actions normally do not freely produce in either of the languages agentive derivatives. If they do, they either

refer to nomina instrumentalis or present semantically toned lexemes, as *eat-er* is someone who eats a lot and a *drinker* is someone who drinks alcohol. In Serbian, such nouns would be derived from adjectivel bases. Finally, both of the languages have inclinations toward agentive suffixes that are used to form nouns of agents performing actions of lower prestige or undesireable actions.

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KOMBINATORNE RESTRIKCIJE AGENTIVNIH SUFIKSA U ENGLESKOM I SRPSKOM

Rezime

Rad ima za cili da uspostavi kontrastivni odnos između agentivnih sufiksa u engleskom i srpskom jeziku. Istraživanje je obavljeno na primerima izvedenica u oba jezika, 207 u engleskom i 250 u srpskom, isključivo na glagolskim osnovama, uzimajući u obzir njihove karakteristike u fonološkom, morfološkom i semantičkom derivacionom kontekstu. U poređenju sa srpskim, engleski sufiksi za formiranje *nomina agentis* su trostruko malobrojniji i nisu podložni varijaciji u odnosu na rod. Manji raspon u izboru engleskih agentivnih sufiksa kompenzovan je većom produktivnošću postojećih afiksa. Dominantni sufiksi su -er, u engleskom, odnosno -ac u srpskom, uz konstataciju da alveolarni, i alveolarno-dentalni suglasnici predstavljaju veliku većinu fonemskih završetaka osnove, dakle oni suglasnici koji se tvore u prednjem delu govornog aparata. Uočljiva je potreba za konsonatnom epentezom u oba jezika, u slučajevima gde osnove imaju vokalsku završnicu, a sufiks inicijalni vokal. Osnove u srpskom jeziku su isključivo vezane, za razliku od engleskih, gde agentivni sufiksi germanskog porekla generalno vezuju slobodne morfeme. Rezultati pokazuju da u oba jezika postoji restriktivno formiranje imenica od osnova prostih glagola koji se odnose na uobičajene radnje, jer u većini slučajeva tvorenice jesu ili semantički diferencirane, ili predstavljaju zapravo nomina instrumentalis. Oba jezika poseduju agentivne sufikse, mada srpski jezik u većoj meri, za izvođenje imenica sa značenjem vršioca radnje nižeg prestiža ili nepoželjne radnje.

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