

**To describe or to make a description:
How Uzbek verbal morphology handles borrowings**

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Abstract. In the field of contact linguistics, how susceptible certain lexical categories are to borrowing is a major topic of discussion. Verbs, in particular, have been a subject of controversy for several decades. This study seeks to add to that discussion by consulting Uzbek as a test case. As a Turkic language with agglutinating morphology and a language that has been subject to influence from several prestige languages, Uzbek has a wealth of borrowed vocabulary available to be analyzed and a verbal system that allows for relatively easy dissection to see which processes borrowings may need to undergo in order to function as verbs in the recipient language. Using two online Uzbek-English dictionaries, verbs that included various derivational morphemes were obtained and analyzed to see if there was evidence of verbs being borrowed into the language. Upon completion of this analysis, it was determined that Uzbek does not borrow verbs. Instead, its rich derivational morphology allows for a highly productive system of transforming adjectives and nouns into verbs, meaning that there is no reason to borrow verbs themselves.

Keywords. Uzbek; borrowing; verbal morphology

1. Introduction. In the field of contact linguistics, there has long been debate over the degree to which items of certain lexical categories can be borrowed. In his introductory textbook on the field, Winford (2003: 51) cites the following hierarchy of borrowing put forth by Muysken (1981):

nouns > adjectives > verbs > prepositions > coordinating
conjunctions > quantifiers > determiners > free pronouns > clitic
pronouns > subordinating conjunctions

According to this hierarchy, nouns and adjectives are the most susceptible to borrowing, followed by verbs as the most difficult of the content morphemes and then various function morphemes. Winford states that part of the reason for this is believed to be the fact that these items are less tied to the grammar, making them easier to extract (2003: 51).

The difficulty of borrowing verbs comes from the fact that they are frequently morphologically complex and inherently tied to the syntax of the donor language. Because of this, it appears that a frequent strategy in borrowing verbs is to borrow the infinitive and then either attach a verb-forming suffix or incorporate it into a verb phrase with a light verb serving as an auxiliary. This light verb will then receive the necessary inflection (Winford 2003: 52). Building on this, Wohlgemuth (2009) offered an in-depth typological survey of verbal borrowings, stating that there were essentially four strategies for borrowing verbs: indirect insertion and light verb (the two mentioned by Winford), direct insertion (where the bare root is added into the verbal system), and paradigm insertion (where the entire paradigm from the donor

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language is borrowed). Examples (1-4) below serve to illuminate further each of these strategies, using data taken from Wohlgemuth 2009.

- | | | | | |
|-----|--------------------|---|--|-------|
| (1) | Direct insertion | German <i>download-en</i> download-INF 'to download' | < English <i>download</i> | (88) |
| (2) | Indirect insertion | Pitjantjatjara <i>payi-pu-wa</i> pay-VBLZ-IMP 'pay it!' | < English (Australia) <i>pay</i> | (95) |
| (3) | Light Verb | Turkish <i>park yap-mak</i> park be-INF 'to park' (itr.) | < English <i>park</i> | (103) |
| (4) | Paradigm insertion | Romani (Ajia Varvara) <i>and o sxoljo ka siklos te</i> in ART school FUT learn.2 COMP <i>okursun ta te jazarsun</i> read.2SG and COMP write.2SG 'at school you will learn how to read and write' | < Turkish <i>okumak</i> 'to read' <i>yazmak</i> 'to write' | (119) |

In (1), the German word takes the form of the borrowed verb with the infinitive ending attached to the end. This can be seen to be direct insertion, as the German inflectional morphology is added directly to the borrowed root¹. In (2), we see indirect insertion, as there is a verbalizing morpheme that is attached to the root. This morpheme serves as an intermediary, to which the inflectional morphology of the recipient language attaches. Example (3) shows a clear example of the light verb strategy as the borrowed root is left uninflected and a semantically broad verb is used for the carrying of inflectional morphology. Typically, this verb has a meaning like 'do' or 'make', but as seen in this case 'be' can also function in this capacity². In (4), we see that the borrowed verbs *okumak* and *yazmak* are conjugated using the Turkish 2SG ending *-sun*, while the native verb *siklos* uses the Romani ending *-os*. Therefore, in this example, not only the verb has been borrowed, but the inflectional morphology as well.

Of the strategies above, Wohlgemuth cites direct insertion as the most frequent based on the data in his typological survey (2009: 87). This is followed by light verb, indirect insertion, and paradigm insertion, in that order. In the section on the light verb strategy, he goes on to say that "for many Turkic languages, this is the default way to accommodate loan verbs", though "[i]ndirect [i]nsertion using a verbalizer like {-lA-} is also common" (2009: 103, 389).

Ralli (2012), in her discussion of verbal loanblends in Aivaliot Greek, found examples of the language using direct and indirect insertion depending on the verb. She argues that the strategy used depends on phonological similarities between the verbal morphology in the donor and the recipient languages. Thus, there is nothing inherent about verbs that make them difficult

¹ An online German dictionary with conjugation tables shows this even further with the following forms: *ich lade down*, *du ludest down*, *er/sie/es loadet down*, etc. (<https://dict.leo.org/german-english/downloaden>)

² It is worth mentioning that, though Wohlgemuth translates *yapmak* as 'be', citing Lewis 1985: 155, this author has usually seen this verb translated as 'do' or 'make' in English (see Taranov 2013: 26).

to be borrowed, and the distinction can be found more accurately in the adaptability of the morphology. If there is phonetic overlap between the verbal morphology of the donor and recipient languages, this can be taken advantage of during the borrowing process.

This brings us to our discussion of Uzbek. Of the major Turkic languages, Uzbek is frequently cited as a kind of outlier, due to the considerable influence that has been exerted upon it by Persian. For instance, a frequently cited feature of the Turkic languages is vowel harmony, which Uzbek notably lacks due to the reduction of its vowel system to the degree that it now fully resembles that of Tajiki Persian (Doerfer 1991: par. 29). This is not altogether surprising as two of the major urban centers in Uzbekistan, Samarkand and Bukhara, are famous locations on the Silk Road and were important cities for various Persianate dynasties in Central Asia. Both cities still count sizable Tajik populations. Thus, there has been a history of significant contact between the Uzbek and Persian speakers, resulting in changes to the language itself. Doerfer cites a statistic using a Russian text that was translated into both Uzbek and Kazakh, where the ratio of words of Turkish, Perso-Arabic, or Russian origin was 72:15:13 in Kazakh but 56:31:13 in Uzbek (1991: par. 31). This shows that there has been considerably higher lexical borrowing from Persian into Uzbek, compared to that into its northern neighbor Kazakh.

Because of this high degree of lexical borrowing, it is expected that verbs would have found their way into the language as well. Given the highly agglutinative nature of Uzbek morphology, there does not seem to be any strong barriers to direct incorporation of verbal loanwords, at least from a theoretical standpoint. That being said, even if not via direct insertion, it is expected that indirect insertion and the light verb strategy should be readily available, based on the tendencies in other Turkic languages, as mentioned above. However, as we shall soon see, the verbal forms in Uzbek that are of foreign origin clearly show denominative, rather than deverbative, properties. The fact that these foreign-root verbs are built on nouns and adjectives, rather than verbs, suggests that Uzbek simply does not borrow verbs.

Having discussed the theoretical background on which this study is built, the rest of the paper will proceed as follows. Sections 2 and 3 will present the research questions that this paper seeks to address and the methods that were used to evaluate them. Section 4 will then discuss the results of the survey. Finally, section 5 will bring up some findings that need to be considered in greater detail.

2. Research questions. As mentioned above, there seem to be conflicting accounts as to how verbs are borrowed between languages, with many of the details appearing to be language specific. Therefore, this study asks two main research questions:

1. Does Uzbek borrow verbs?
2. How are borrowings of any type handled by the verbal morphology?

3. Methods. The survey conducted in this study was accomplished using two bilingual Uzbek-English dictionaries available online. The primary data set was obtained via a search using regular expressions in the dictionary developed by the Center for Turkic and Iranian Lexicography and Dialectology (CTILD) at Indiana University³. This data was then cleaned and analyzed with the help of another dictionary *Zangori kema*⁴, an updated digital version of the 2001 publication by William Dirks. *Zangori kema* notates language of origin for borrowings and could therefore be used to divide the data set into verbs of native and foreign origin.

³ <https://ctild.indiana.edu/Main/Uzbek-EnglishDictionary>

⁴ <http://uzbek.firespeaker.org/>

To perform the initial queries, a list of verbal derivational morphemes was obtained from Sjoberg’s (1962: 75-80) grammar of Uzbek and can be seen in Table 1. These can be divided into two categories: denominatives (or those that attach to noun or adjective roots) and deverbals (or those that attach to verb roots). The distinction between these two types of morphemes is important because they serve as an indicator of the lexical category of the borrowing as it enters Uzbek. If Uzbek is borrowing verbs, deverbal morphemes should be able to attach to borrowed roots.

| | |
|-------------------------|---|
| (Denominative) | |
| From nouns: | -la-, -lan-, -lash-, -ir-**, -a-*, -at-*, -ash-*, -ay- |
| From adjectives: | -ar-**, -ay-, -la-, -lan-, -lash-, -i-*, -iq- |
| (Deverbal) | |
| Causative-transitive: | -Kiz-, -Kaz-, -ar-**, -az-, -it-, -ir-**, -Tir-, -t-, -sat- |
| Passive-reflexive: | -il-, -l-, -in-, -n- |
| Reciprocal-cooperative: | -ish-, -sh- |

Table 1: List of Uzbek verbal derivational morphemes

Of the morphemes above, those marked with a single asterisk (*) were not included in this study due to issues that arose in the data collection stage. The morphemes *-a-* and *-i-*, being only single letters, returned too many hits that it was not feasible to analyze each one, while the morphemes *-at-* and *-ash-* greatly resembled the morphemes *-t-* and *-sh-*, to the point that the data set of the former appeared to be a subset of that of the latter, an issue that will be considered in greater detail in the Discussion. The morphemes marked with a double asterisk (**) provided an interesting case in that they are both denominative and deverbal, so they will be treated as their own separate class in the Results.

To give a sense of how these derivational morphemes operate in the verbal system, here is a quick explanation. Uzbek verbal morphology follows much the same pattern as the other Turkic languages, with the main verb having the following internal structure:

root – derivational morpheme – negation – inflectional endings

An example of a conjugated verb can be seen in (5).

- (5) bil-dir-ma-y-man
 know-CAUS-NEG-PRS/FUT-1SG
 ‘I do not inform’

It is due to their position in the verbal structure that derivational morphemes are sometimes referred to as pre-final suffixes in the literature.

This study chose to focus on derivational morphemes in investigating the research questions as they provided an effect method of corpus creation via the use of the regular expressions mentioned above. As these morphemes can be grouped based on which lexical categories they attach to, this tells us how the language interprets the lexical category of the root in each verb. A denominative morpheme that attaches to a borrowed root marks that root as a nominal, while a deverbal morpheme would mark it as verbal. This can then be an effective test of whether Uzbek is borrowing verbs themselves or simply borrowing nouns and verbalizing them. This methodology will allow us to consider both indirect insertion (if the borrowings are only present with these deverbal morphemes) and direct insertion (if the deverbal morphemes

attach to roots that function as verbs by themselves). Naturally, the subject of the light verb strategy is not addressed in this methodology, but we will return to that discussion in 5.2.

4. Results. Table 2 presents the overall results of the study, through which the first research question can be easily answered: Uzbek does not borrow verbs. None of the deverbal morphemes were found to attach directly to a borrowed root. Even the morphemes that could be considered deverbal or denominative, *-ir-* and *-ar-*, were found to attach only to foreign roots that were clearly nominal (*bajar-* ‘to execute, carry out’ < *bajo* ‘satisfactory, fine (adj.)’, *tozar-* ‘to become clean’ < *toza* ‘clean (adj.)’, *gapir-* ‘to speak’ < *gap* ‘saying, words (n.)’). Because of this fact that none of the borrowed roots were found with a deverbal morpheme, this means that none of these roots were considered to be verbs at the point that they entered the language, bringing us to the conclusion above.

| Morpheme | Total | No Root | Native | Loan | |
|----------------|-------|---------|--------|------|--|
| (Denominative) | | | | | |
| -la- | 1314 | 244 | 699 | 371 | (A: 145, P: 142, R: 83, M: 1) ⁵ |
| -lan- | 244 | 6 | 103 | 135 | (A: 97, P: 35, R: 2, S: 1) |
| -lat- | 22 | 3 | 16 | 3 | (A: 3) |
| -lash- | 262 | 15 | 95 | 152 | (A: 73, P: 42, R: 35, C: 1, M: 1) |
| -ay- | 111 | 81 | 25 | 5 | (P: 5) |
| -iq- | 34 | 23 | 7 | 4 | (P: 4) |
| (Deverbal) | | | | | |
| -Kiz- | 27 | 1 | 26 | 0 | |
| -Kaz- | 11 | 2 | 9 | 0 | |
| -Tir- | 798 | 62 | 736 | 0 | |
| -sat- | 1 | 0 | 1 | 0 | |
| -(i)t- | 763 | 48 | 713 | 0 | |
| -(i)l- | 511 | 22 | 489 | 0 | |
| -(i)n- | 649 | 81 | 568 | 0 | |
| -(i)sh- | 838 | 42 | 796 | 0 | |
| (Both) | | | | | |
| -ir- | 63 | 42 | 20 | 1 | (P: 1) |
| -ar- | 42 | 19 | 21 | 2 | (P: 1) |

Table 2: Counts of the type of root that joined with each morpheme

Attention needs to be brought to the column titled ‘No Root’. This does not mean that these words were not built upon an existing (or previously existing) root. Rather, these were words that were returned by the query, but for which there was no entry in either dictionary that seemed to be the form that the target morpheme had been applied to in order to create the verb. This could be either due to a lack of a lexical item with the right phonetic shape or due to the fact that the lexical item that seemed to match had a meaning that was not readily transferable to the meaning of the verb. For example, the following are words that were returned as having the *-la-* morpheme:

- (6) a. *butunla-* ‘to repair, restore; fill out, complete’ < *butun* ‘complete, whole, entire (adj.)’
 b. *ishtarapla-* ‘to do something energetically or vigorously’ < **ishtarap*

⁵ Donor Languages: Arabic (A), Chinese (C), Mongolian (M), Persian (P), Russian (R), Sogdian (S)

- c. *chaqmoqla-* ‘to break up; cut a sample slice (from a melon)’ </ *chaqmoq* ‘lightning; flint and steel; lighter (n.)’

In (a), the two forms are clearly related. Repairing or restoring something carries with it the idea of making that item complete or whole, so it is evident how the verb could be derived from the adjective. In (b), neither dictionary has an entry for the word **ishtarap*. It is possible that it may have existed in the language beforehand and though it has since fallen out of use, the verb derived from it lives on. However, this cannot be known for certain, which leads us to mark this word as ‘No Root’, as we do not have access to the root that it was originally built upon. In (c), *chaqmoq* would seem to be the root that the verb has been derived from. However, there does not seem to be a clear connection between lightning and the action of breaking something up, let alone when the secondary definitions are factored in. It is possible that the verb was derived with a more figurative relationship with its root than what is typically seen (cf. *butun* and *butunla-* in (a)), or that there has been some sort of semantic shift in the period between the first attestation of the derived verb and now. Again, this cannot be known for certain, so this has also been deemed to fall into the category of ‘No Root’.

Turning attention to the verbs that were derived from loanwords, we see that, rather than borrow verbs themselves, Uzbek has leveraged its highly productive verbalizing morphology in the creation of verbs from nouns and adjectives of foreign origin. Table 3 provides examples from Arabic, Persian, and Russian, by far the languages that have contributed the largest number of borrowings to Uzbek.

| Verb | Root | Language | Original |
|------------------------------------|--|----------|--------------------------------|
| <i>jazola-</i> ‘to punish’ | <i>jazo</i> ‘punishment (n.)’ | Arabic | جَزَاء <i>jazā</i> id. |
| <i>baravarla-</i> ‘to equalize’ | <i>baravar</i> ‘equal (adj.)’ | Persian | بَرَابَر <i>barâbar</i> id. |
| <i>pachkala-</i> ‘to package’ | <i>pachka</i> ‘bundle, packet (n.)’ | Russian | пачка <i>pačka</i> id. |

Table 3: Verbs with the *-la-* morpheme attached to borrowed roots

As can be seen, the borrowed roots share a strong phonetic resemblance to the forms in the donor language, and attaching the denominative morpheme *-la-* to the end of the root changes the root from its original sense as a nominal to a verb with a related sense.

The fact that there are no deverbal morphemes that attach to borrowed roots does not mean that no deverbal morphemes are attached to words that are ultimately of foreign origin. It simply means that the derivation immediately preceding the attachment of the deverbal morpheme was already incorporated into Uzbek and not a borrowing. Example (7) helps to illustrate this point with the verb *zararsizlantiril-* ‘to be rendered harmless’.

- (7) *zarar* ‘harm (n.)’
zarar + *-siz* ‘without’ > *zararsiz* ‘harmless’
zararsiz + *-lan-* (intransitive denominative morpheme) > *zararsizlan-* ‘to be harmless’
zararsizlan- + *-tir-* (causative deverbal morpheme) > *zararsizlantir-* ‘to render harmless’
zararsizlantir- + *-il-* (passive deverbal morpheme) > *zararsizlantiril-* ‘to be rendered harmless’

As can be seen, the verb is ultimately of foreign origin, as the word *zarar* comes from the Arabic *ḍarar* ‘damage, injury, harm (n.)’. However, the deverbal morphemes are never attached to the borrowed root directly. Several steps must occur prior, with the most important being the addition of the denominative morpheme *-lan-*. It is only after a verb has been created using a native Uzbek morpheme that the deverbal morphemes *-tir-* and *-il-* are allowed to attach.

5. Discussion. From the summary of the results above, it should now be clear that Uzbek only borrows nominals. It cannot even be argued that Uzbek borrows verbs and uses denominative morphemes like *-la-* as general verbalizers to integrate them into the morphology via indirect insertion (cf. the Hungarian examples in Wohlgemuth 2009: 96), as very few borrowed roots even resemble verbal items from their source languages. With the Russian roots, only one resembles a verbal form in its ending: *pechat* ‘seal, stamp (n.)’. This word in Russian is печать *pečat’*, which, while it may look like the infinitive of a first conjugation verb, is a noun. The etymologically related verb in this case is печатать *pečatat’*. Though, in this case the semantics are off, as печатать *pečatat’* means ‘to print, type’. The verb for ‘to stamp’ in Russian, which is how the Uzbek derived form *pechatla-* is used, is штамповать *štampovat’*, itself a denominative verb from штамп *štamp* ‘stamp’, which has also been borrowed into Uzbek as *shtamp*, with the derived verb *shtampla-* having a wider meaning than *pechatla-*: ‘to stamp; punch, press’.

In Persian, the marker for the infinitive is a final *-an*. Interestingly, the closest any borrowed roots get to that are three that end in /n/: *afsun* ‘spell, sorcery (n.)’, *parchin* ‘horseshoe (n.)’, and *shirin* ‘sweet (adj.)’.

The Arabic situation is more complex since there is no real infinitive form of the verb. The closest approximation to that is the verbal noun, which would theoretically present a problem in determining whether the form being used in Uzbek is treated as a verb or a noun. For example, *tasnif* ‘classification (n.)’ (the root of *tasnifla-* ‘to classify’) is borrowed from Arabic تصنيف *taṣnīf* ‘classification’, which exists as the verbal noun of صَنَّفَ *ṣannaḥa* ‘to classify’. A number of the Arabic roots are of this type, including *tasdiq* ‘confirmation (n.)’, *g’azab* ‘anger (n.)’, and *fahm* ‘understanding (n.)’.

This would seem a major hurdle to deal with, but the answer can be found by simply comparing other borrowed roots of the same type. For instance, the Uzbek borrowings *fikr* ‘thought, idea (n.)’ and *jihaz* ‘equipment (n.)’ are also closely tied to verbs in Arabic, but here the forms borrowed into Uzbek do not exhibit the same vocalism as the verbal nouns. The verbal noun for فَكَّرَ *fakara* ‘to think’ is فَكْرٌ *fakr*, while that of جَهَّزَ *jahhaza* ‘to prepare, furnish’ is تَجْهِيْزٌ *tajhīz*. The difference between the verbal nouns and the nouns that were borrowed into Uzbek and have derived verbs with similar meanings shows that, in the case of those where there was no detectable difference, those items were likely also meant to be simply nouns rather than substitutes for the infinitive.

5.1. HOW TO BREAK UP THE MORPHEMES. When analyzing the underlying structure of some of these verbs that include multiple derivational morphemes, the question arises as to how to split them apart. In most cases, like that of (3) above, the answer is rather simple, as the deverbal morphemes are quite distinct, but there is some difficulty when it comes to the combining certain denominative and deverbal morphemes. Looking again at the general results in Table 2, we can see that the denominative morpheme *-la-* is by far the most productive in Uzbek, with 1070 true tokens, compared to 247 true tokens for *-lash-* the next closest. This combined with the fact that there are deverbal morphemes of the form *-n-*, *-t-*, and *-sh-* means that it is possible to interpret

the denominative morphemes *-lan-*, *-lat-*, and *-lash-* as composites of two morphemes (*-la-n-*, *-la-t-*, *-la-sh-*) rather than individual morphemes themselves.

The uncertainty stems from the fact that there are several occasions where the form in *-la-* is not attested, only the form with the composite, as shown in Table 4.

| | -la- attested | Not |
|--------|---------------|-----|
| -lan- | 460 | 238 |
| -lat- | 449 | 19 |
| -lash- | 321 | 248 |

Table 4: Count of roots where there is cooccurrence between *-la-* and other morphemes

In each case, it is more common for *-la-* to be attested along with any of the composite morphemes than not, but for *-lan-* and *-lash-* there are still many roots where they occur alone. However, for those roots where *-la-* is not attested, it is still somewhat common for the other complex morphemes to exist as well. There are five roots with both *-lat-* and *-lan-*, four with *-lat-* and *-lash-*, and thirty-four with *-lan-* and *-lash-*.

It is also questionable whether the intermediate forms of these derivations even need to be attested. Of the 62 verbs from the *-Tir-* query that were considered to have no root present, 43 were of the form *-lashtir-*, and 8 were of the form *-lantir-*, where the intermediate forms ending in *-lash-* or *-lan-* were not attested for these roots. An example of this is *abstraktlashtir-* ‘to make abstract’, where there is no attested verb of the form **abstraktlash-* in the dictionaries. The fact that the root here is a borrowing from Russian is not unique. Of the 51 verbs of this type, 25 are based on roots of Russian origin, 11 of Arabic origin, and 5 of Persian origin. It seems then that this phenomenon disproportionately affects borrowings and is probably a relatively recent development, given the comparably high proportion of Russian borrowings affected.

Because of these last examples, it is the opinion of the author that it makes more sense to conceive of *-lat-*, *-lan-*, and *-lash-* not as individual morphemes but as combinations of the denominative *-la-* and the deverbals *-t-*, *-n-*, and *-sh-*.

5.2. DIFFERENT STRATEGIES FOR CREATING VERBS. During the introduction of this article, a brief mention was made of the verbal borrowing typology put forth by Wohlgemuth (2009). As Uzbek is an agglutinating language and given the research questions considered, most attention was paid to attempting to find examples of insertion. It is interesting to note, though, that Uzbek has both analytic and synthetic word-formation processes and therefore permits the use of certain light verbs to pair with a noun to create a related verb. The most common are *qil-* ‘to do; make’ and *et-* ‘to do; make’, but others like *ber-* ‘to give’, *qo’y-* ‘to put’, and *ol-* ‘to take’ are also seen. In Table 5, the total number of verbs formed from a denominative morpheme that have a

| | Total Denominative | Total Light Verb | Percentage |
|-----------|--------------------|------------------|------------|
| Native | 971 | 141 | 14.5% |
| Arabic | 318 | 124 | 39.0% |
| Persian | 231 | 67 | 29.0% |
| Russian | 120 | 12 | 10% |
| Mongolian | 2 | 1 | 50% |
| Chinese | 1 | 0 | 0% |
| Sogdian | 1 | 0 | 0% |

Table 5: Rate of corresponding light verb by language of origin

corresponding formation using a light verb is presented. It can be seen that Uzbek does not employ this strategy equally across languages of origin. Arabic roots are used with light verbs at a much higher rate than roots from other languages. Since Arabic influence on Uzbek was primarily through literary works, particularly Islamic texts, this may speak to the fact that Arabic roots are less fully integrated into the language, as native roots in Uzbek have a much lower rate of this cooccurrence. Much like words of Latinate origin in English, it could be argued that words of Arabic origin in Uzbek have a more literary or sophisticated perception.

The question of Persian is more difficult, as it is clearly the language to have had the greatest influence on Uzbek and its influence is not limited to higher prestige. Therefore, one would expect Persian roots to be more fully integrated into the language, as evidenced by the fact that Persian roots are the only ones that are joined with almost all of the different types of denominative morphemes (see Table 2). In contrast, borrowings from other languages are limited to just those built on *-la-*.⁶ However, Persian roots also cooccur with light verb formations at a higher rate than native roots. These two facts would seem to work against each other, and further research is needed to make any conclusive statements one way or the other.

6. Conclusion. Thus, due to the evidence exhibited by the behavior of the different morphemes, it is clear that despite the long history of contact with Persian and Arabic, Uzbek has not borrowed any verbs from them. It has only borrowed nominal forms, which it then converted into verbs via an intralingual process.

This is surprising given the current state of the discussion over how lexical borrowing occurs and the growing belief that there is no fundamental difference between nouns and verbs in their ease of being borrowed. Granted, it is true that the systems of verbal morphology in the various source languages are quite distinct from that of Uzbek. However, given the highly agglutinating nature of Uzbek and the ease with which the nominal forms are able to be incorporated into Uzbek morphology, one would expect there not to be a significant hurdle for doing the same with the verbs. In order to learn more about why this is the case, it is likely that we would need to consult other languages of this typology to see what their strategies are. Perhaps, because converting nominals into verbs is such a regular process in an agglutinating language like Uzbek, there may not actually be a need to borrow verbs. The productive richness of the morphology may result in non-derived verbs being more of a closed class, with the engine for providing new lexical items located firmly among the nominals.

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⁶ Given the discussion in 5.1 and the opinion that it makes more sense to consider *-lat-* as the combination *-la-t-*, it could be argued that Persian roots, in fact, are joined with all denominative morphemes and roots from other languages only join with *-la-*. This then makes it even clearer that Persian roots are highly integrated into the Uzbek language, while roots from other languages maintain a younger or more foreign character.

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