1. Introduction

There are four verbal vowel prefixes in the Georgian Language: -a-, -e-, -i-, -u-. The vowels are poly-functional and they represent semantically different derivational verb forms – transitive, causative, contactive, reflexive, passive, subjective version (resp. middle), objective version. The verbal vowel-prefixes occupy the third position in the structural formula of the Georgian verb, which incorporates the following elements:

\[
\text{(1) PREVEB(S)} \quad \text{(2) S/O AGREEMENT PREFIX} \quad \text{(3) VOWEL PREFIXES} \quad \text{(4) ROOT} \quad \text{(5) PASSIVE FORMANT} \quad \text{(6) THEMATIC SUFFIX} \quad \text{(7) IMPERFECT MARKER} \quad \text{(8) TENSE/MOOD VOWEL} \quad \text{(9) SIII AGREEMENT SUFFIX} \quad \text{(10) PLURAL SUFFIX} \quad \\
\text{-}a-, -e-, -i-, -u- \quad \text{-v-/-m-/-g-/-gv-/-h-,-s-,0-} \quad \text{-a-, -i-, -u-, -e-} \quad \text{-eb/-ob/-av/-am/-op/-i-} \quad \text{-d-} \quad \text{-in-/-evin-} \quad \text{-eb-/-ob-/-av-/-am-/-op/-i/-0} \quad \text{-d-/-od-} \quad \text{-a-/-o-} \quad \text{-a-/-o-} \quad \text{-s-/-a-/-o-} \quad \text{-t} \quad \\
\text{E.g.} \quad \text{da} \quad \text{g} \quad \text{a} \quad \text{c’er} \quad \text{in} \quad \text{eb} \quad \text{d} \quad \text{e} \quad \text{s} \quad \\
\text{prev} \quad \text{OII} \quad \text{vers.} \quad \text{write} \quad \text{cause} \quad \text{them} \quad \text{imp.} \quad \text{mood} \quad \text{SIII} \quad \\
\text{da} \quad \text{g} \quad \text{a} \quad \text{c’er} \quad \text{in} \quad \text{eb} \quad \text{d} \quad \text{a} \quad \text{t} \quad \\
\text{prev} \quad \text{OII} \quad \text{vers.} \quad \text{write} \quad \text{cause} \quad \text{them} \quad \text{imp.} \quad \text{SIII} \quad \text{pl(O)}
\]

Although, the maximal positions for a theoretically possible string of morphemes in the structural formula for one verb root are 10 (3 for prefixes and 6 for suffixes), the verb form can consist of no more then 9 morphemes. Here are some implicational and/or restrictive rules:

1. Imperfect Marker (7) implies existence of Thematic Markers (6);
2. Plural Suffix -t (10) phonetically excludes appearance of the SIII suffix -s (9); it can co-occur only with the SIII suffixes: -a or -o (9);
3. The SIII suffixes (-a or -o) phonetically exclude the appearance of Tense-Mood vowel suffixes (8).

Thus, the allowed combinations are either (8)-(10), or (9)-(10) and the string (8)-(9)-(10) is excluded. All other combinations of positions are possible and a concrete verb form is defined by the various combinations of verb categories.

2. Generalization

Based on a semantic and functional analysis of the vowel prefixes one generalization can be suggested: The main function of the verbal vowels prefixes is the formalization of the conceptual changes which arise as a result of either increasing or decreasing of the verb valency that implies either appearance or disappearance of the semantic roles – Ag, (P) or Ad.
3. General Scheme

The changes of the verb valency can be summarized by the following scheme:

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<table>
<thead>
<tr>
<th>App. of Semantic role</th>
<th>Disapp. of Semantic role</th>
</tr>
</thead>
<tbody>
<tr>
<td>+Ag appearance</td>
<td>+Ag disappearance</td>
</tr>
<tr>
<td>+actor</td>
<td>+Adpos. app.</td>
</tr>
<tr>
<td>+Adpos. app.</td>
<td>+Ad disapp.</td>
</tr>
<tr>
<td>+Adloc. app.</td>
<td>+Ad app.</td>
</tr>
<tr>
<td>Causative</td>
<td>Bipers. Pass.</td>
</tr>
<tr>
<td>Contactive</td>
<td>Monopers. Pass.</td>
</tr>
<tr>
<td>Obj. vers</td>
<td>Subj. vers. Depon.</td>
</tr>
<tr>
<td>Locative</td>
<td>Ø</td>
</tr>
</tbody>
</table>

-a-                    -u-/-i-   -a-   -a-   -in-   -u/-i-   -a-   -e-   -i-   -i-   -i/-e-   -refl.   -refl.
```

For the creation of ditransitive verb forms vowels -a- and -u- are distinctive and they form the following categories: causative, contactive and objective version.

4. Conceptual Explanation

Naturally, the following questions arise: What is the cognitive background for the creation of such derivational verb forms? Why the markers of different categories occupy one and the same position in the structural formula of verb forms? When the valency of the verb changes (that is: Ag or Ad appears/disappears), what kind of conceptual changes generate the basis for the various formal models of the verb forms creation.

First of all, let us consider the conceptual interpretation of the semantic roles.

Every concept has its own space within which “it stays identical with itself”. Conceptual space is defined according to many features. For the conceptual spaces of the semantic roles the most relevant are the features which characterize the noun in relation to the action which is represented by the verb.

During the action nouns can: (1) cross the space; (2) approach the space; (3) stay within the space. The three possibilities seem to be decisive for distinguishing between Ag, P and Ad. The Ag (as far as it is active, telic, volitional, dynamic, high in potency, etc.) is the concept which crosses (its own or something/somebody else’s) the space. The P (as it is inactive, atelic, non-volitional, static, low in potency, etc.) is the concept which stays within its own space; it allows the space to be crossed but never crosses the space itself. The Ad is the role which receives something, allows that it be reached but does not allow the space to be crossed. Schematically:

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Ag → P → Ad →
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Different combinations of these features construct the conceptual structures which mirror the process of the linguistic structuring of the extra linguistic situations respective to the concrete verb semantics. Some examples:

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Ag P → to build, to write, to paint, etc.
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The second conceptual structure reflects relations between the semantic roles which take place in case of ditransitive verbs. The strategy of structuring can differ and due to the various strategies languages can be different in the way of structuring – they represent different linguistic structures.

5. Conceptual Representation of the Georgian Verb Forms Creation

Suggested conceptual structures mirror also the conceptual background of the different derivational verb models (Among them (2), (3) and (4) represent abstract structure of the ditransitive ones):

1. O-c’er-s Ag P     “(S)he writes smth.”
2. u-c’er-s Ag P [+Adpos]   “(S)he writes smth. for/to smb.”
3. a-c’er-in-eb-s[+Ag] (AgÆAd) P   “(S)he makes smb. to write smth.”
4. a-c’er-s Ag P [+Adloc]   “(S)he writes smth. above smth.”
5. i-c’er-s Ag P [-[+Adpos=Ag]]  “(S)he writes smth. for him/herself”
6. i-c’er-eb-a [-Ag] P    “Smth. is written”
7. e-c’er-eb-a [-Ag] P (+Ad)     “Smth. is written for/to smb.”

6. Exceptional Ditransitive Verb Forms (EDVF) in Georgian

Some ditransitive verbs like ‘to give’ show recipient person suppletion that is typologically well known phenomenon for some languages. In Georgian such verbs have specific paradigm where distribution of the preverbs mi- and mo-, which distinguish the orientation of the action according to the person dichotomy: I/II(action directed/oriented to I/II person) : III(action directed/oriented to III person), build the basis for the suppletion. Polypersonal verb forms in Georgian incorporate subject markers as well as the object ones. I or II person recipient is represented by the object markers. As the semantics of the verb ‘to give’ (nicema) implies the meaning of direction, preverbs mo- or mi- are necessarily used with it and their distribution is in accordance with their meaning: mo- is used in case of I/II recipient and mi- in case of III recipient. Thus, we have an exceptional suppletive paradigm; e.g.: mi-v-eci ‘I gave smth. to him/her’; mi-eci ‘You gave smth. to him/her’; mi-s-c-a ‘S/he gave smth. to him/her’; mo-m-c-a ‘S/he gave smth. to me’; mo-g-c-a ‘S/he gave smth. to you-sg’; mo-gv-c-a ‘S/he gave smth. to us’; mo-g-c-a-t ‘S/he gave smth. to you-pl’.
Forms *mi-m-c-a* ‘S/he gave me to him/her’, *mi-g-c-a* ‘S/he gave you to him/her’ represent different functional relations: I/II person markers here refer to the patient (res.DO) and not to the recipient (res.IO).

Some such ditransitive verbs allow the form *mi-ac’oda* ‘S/he gave smth. to smb. who is not included in I/II persons’ space’ as well as the form *mo-ac’oda* ‘S/he gave smth. to smb. who is included in I/II persons’ space’. This happens when verb semantics allows the III recipient to be included in I/II persons’ space; but the functional interpretation of the forms: *mi-m-ac’oda, mi-g-ac’oda* where -m-, -g- would be the markers of I/II recipient are absolutely excluded.

The same suppletion according to the preverbs *mi-* and *mo-* is characteristic also for other ditransitive verbs: *mic’odeba* (to send), *mipurtxeba* (to spit to), *mipereba* (to caress), *mikiraveba* (to hire out), *mitxoveba* (to marry to) and others.

7. Conceptual Interpretation of EDVF

Specific semantics of the ditransitive verb ‘to give’ (*micema*) can be represented by the following conceptual structure:

![Conceptual Structure](image)

Preverbs *mo-* and *mi-* are the elements of linguistic realizations of the spatial relations in Georgian where two dimensions are valuable: ‘Ego Space’ and ‘Alter Space’. The opposition of the preverbs *mo-* : *mi-* is the linguistic representation of the cognitive opposition ES:AS. Thus, *mo-* marks a situation where an action is directed/oriented to I/II persons (ES), whereas *mi-* is the formal representation of a situation with an action directed/oriented to the III person (AS). According to this opposition the conceptual relations can be represented by the following schemes:

![Conceptual Scheme](image)

I recipient (and due to the Georgian specific peculiarity, II recipient as well) are always included in ES, while III recipient prototypically is excluded. If we match the conceptual structures of the preverbs and the conceptual structure of ditransitive verbs the following complex structures arise:

![Complex Structures](image)

We suppose that such matching reflects the complex cognitive process of the linguistic structuring of the ‘to give’-type ditransitive verb concepts. It clarifies the basis of the ‘exceptional’, suppletive paradigms in Georgian: The linguistic structures arise in accordance with the conceptual meanings of the preverbs and the semantic roles and, thus, must not be qualified as the ‘exceptional’ ones any more.