

## The Role of Second Order Schemas in the Analysis of [N + *fenasi/negari/kavi*]<sub>N</sub> and their Corresponding Adjectives in Persian

Parsa Bamshadi<sup>1\*</sup>, Shadi Ansarian<sup>2</sup>

1. PhD Candidate in Linguistics, Shahid Beheshti University, Tehran, Iran.
2. PhD Candidate in Linguistics, Shahid Beheshti University, Tehran, Iran.

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### Abstract

The purpose of the present study is to apply the concept of 'second order schemas' within the framework of Construction Morphology (Booij, 2010, 2018) for analyzing some morphological structures in Persian in order to explain how these structures are formed. Second order schemas, which are defined as sets of two or more paradigmatically related constructional schemas, are employed in the present research as an analytical tool for explaining three morphological patterns that predominantly are related to scientific disciplines, branches and technologies. These patterns include: (1) nouns with the structure [N-*fenas-i*] and their corresponding relational adjectives; (2) nouns with the structure [N-*negar-i*] and their corresponding relational adjectives; (3) nouns with the structure [N-*kav-i*] and their corresponding relational adjectives.

In the first derivative structure, a noun is combined with the present stem of 'fenas' ('know') and the suffix 'i'. The output of this schema is a noun denoting a scientific discipline or branch, as represented below:

$[[x]_{Ni} - fenas]_N - i]_{Nj} \Leftrightarrow [a \text{ scientific discipline/branch for studying SEM}]_j$

The above schema has two corresponding relational adjectives, as illustrated below:

#### Noun Relational adjective 1 Relational adjective 2

zaban-*fenas-i* ('linguistics') zaban-**fenaxt-i** ('linguistic') zaban-*fenas-ane* ('linguistic')

ravan-*fenas-i* ('psychology') ravan-**fenaxt-i** ('psychological') ravan-*fenas-ane* ('psychological')

These two patterns can be accounted for by the following second order schemas in which

\* Corresponding Author's E-mail: p\_bamshadi@sbu.ac.ir

there is a paradigmatic relationship between the verb stems or the affixes in the two constructional schemas.

$\langle [[x]_{Ni} -fenas-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -fena\alpha t-i]_{Ak} \Leftrightarrow [Related\ to/based\ on\ SEM_j]_k \rangle$

$\langle [[x]_{Ni} -fenas-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -fenas-ane]_{Ak} \Leftrightarrow [Related\ to/based\ on\ SEM_j]_k \rangle$

In the second derivative structure, a noun is combined with the verb stem 'negar' ('graph') and the suffix 'i' to form a noun denoting a scientific method or technology.

$\langle [[x]_{Ni} -negar-i]_{Nj} \Leftrightarrow [a\ scientific\ method/technology\ for\ studying/analyzing\ SEM_i]_j \rangle$

The paradigmatic relationship between this schema and its two adjectival schemas can be expressed by the following second order schemas:

$\langle [[x]_{Ni} -negar-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -negaft-i]_{Ak} \Leftrightarrow [Related\ to/based\ on\ SEM_j]_k \rangle$

$\langle [[x]_{Ni} -negar-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -negar-ane]_{Ak} \Leftrightarrow [Related\ to/based\ on\ SEM_j]_k \rangle$

Here is an example of the above two second order schemas:

**Noun Relational adjective 1 Relational adjective 2**

qowm-negar-i ('ethnography') qowm-negft-i ('ethnographic') qowm-negar-ane ('ethnographic')

In the third derivative structure, a noun is combined with the verb stem 'kav' ('analyze') and the suffix 'i' to form a noun denoting a scientific discipline, approach or method.

$\langle [[x]_{Ni} -kav-i]_{Nj} \Leftrightarrow [a\ scientific\ discipline/approach/method\ for\ studying/analyzing\ SEM_i]_j \rangle$

An example of this schema and its two relational adjectives is as follow:

**Noun Relational adjective 1 Relational adjective 2**

ravan-kav-i ('psychoanalysis') ravan-kaft-i ('Psychoanalytic') ravan-kav-ane ('Psychoanalytic')

The following second order schemas show the morphological patterns of the corresponding relational adjective:

$\langle [[x]_{Ni} -kav-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -kav-ane]_{Ak} \Leftrightarrow [Related\ to/based\ on\ SEM_j]_k \rangle$

$\langle [[x]_{Ni} -kav-i]_{Nj} \Leftrightarrow SEM_j \rangle \approx \langle [[x]_{Ni} -kaft-i]_{Aj} \Leftrightarrow [Related\ to/based\ on\ SEM_i]_j \rangle$

The results show that 'second order schemas' are useful analytical tools for explaining the way in which the aforementioned structures are formed. These results also suggest that the constructional approach, unlike the derivational approach, can promisingly explain the way in which such problematic structures are formed.

**Keywords:** Construction Morphology; Second order schema; Word-based approach; Derivation