Manifestations of Aphasia in Persian

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Abstract—The general characteristics and specific language deficits of seven native speakers of Persian who became aphasic (with three different etiologies) are discussed. Three major linguistic deficits related to site and size of lesion and to individual differences emerge from the data: breakdown of the verb, deletion of free grammatical morphemes, and substitution of bound grammatical morphemes. Four types of language-specific agrammatic deficits are described: (a) substitution of a filler verb /budan/ 'to be' as a default for all kinds of verbs, including transitive active verbs; (b) substitution of the polymorphemic infinitive for the contextually proper inflected form of the verb; and (c) tendency to omit the *ezafe* linking morpheme /-e/ and the NP-internal conjunction /va/ 'and'.

Keywords: aphasia, Persian, agrammatism, inflection, substitution, typology.

Introduction

Although aphasiological and neurolinguistic studies on Persian are in their infancy, a number of systematic case studies have been reported in the literature during the past decade or so, from which we can extract some major features of Persian agrammatic language for the purpose of cross-linguistic comparison. Apart from the case studies reported here, there has been no documented report in the neurolinguistic literature on Persian aphasiology, not even in the cross-language source book on agrammatic aphasia (Menn & Obler, 1990), until recently (Nilipour, 2000). The major aim of this paper is not to give a comprehensive description of Persian aphasiology, but rather to attempt to depict the general characteristics of agrammatic language in Persian. It is also an attempt to show the general trend of aphasic deficits in different types of aphasia in Persian. With these aims in mind, we first present a short description of three published aphasia cases (Nilipour, 1988, 1989; Nilipour & Ashayeri, 1989), then we describe two unpublished cases (Raghibdoust, 1999) and, in the final part, we present two newly published cases (Nilipour, 2000) of agrammatic aphasics and their grammatical violations, compared with subject control data.

All aphasic data reported here are based on systematic assessments with the same standard aphasia test, *The Bilingual Aphasia Test* (the BAT, Farsi Version). Based on these results, the cases have met the general clinical characteristics of four types of

aphasia syndromes: Broca's aphasia (MG, RL, HB, and MN), conduction aphasia (PA), transcortical motor aphasia (TB) and transcortical sensory aphasia (AS). With respect to etiology, they are of three kinds: cerebrovascular accident (CVA) (PA, MG and RL), trauma (AS, HB and MN) and arteriovenous malformation (AVM) (TB).

The grammatical violations and deficits of two patients (HB and MN) reported here are matched with control data based on the descriptive framework of the *Cross-Language Aphasia Study* (Menn & Obler, 1990: ch. 2) and may be used for cross-language comparison purposes. In five other patients (PA, TB, AS, MG and RL), the reported aphasic deficits and grammatical violations are based on the results of the general assessment as well as the BAT post-test analysis (Paradis & Libben, 1987) of the connected speech samples elicited from each patient during the evaluation procedure.

1. Persian grammar in normal use

BASIC TYPOLOGY
Persian is an Indo-European language, belonging to the Iranian branch of the Indo-Iranian group. Typologically, it is an SOV language with a rather rich morphology. But it is an atypical SOV language in the sense that it has prepositions rather than postpositions. The word order is rather loose and the order of all major constituents of the sentence may vary for pragmatic purposes. The subject may be optionally omitted since the verb is inflected for person and number. Direct object and indirect object are marked with postposed /râ/ and preposed /be/ markers respectively. Adjectives follow the head noun and auxiliaries follow the main verb, but modals precede the main verb. Arabic, an unrelated Semitic language, is a major source of loan words. Arabic nouns typically retain their Arabic plural forms, making them irregular in Persian.

There is no gender in Persian, and hence no gender agreement. There is also no number agreement for adjectives in prototypical noun phrases (N + ADJ). But there is subject-verb agreement with respect to person and number.

MORPHOLOGY
THE NOUN
Persian has two major types of word formation: compounding and derivation. In compounding, two or more stems are joined to make a single lexical item (example 1); in derivation, a new lexical item is made using a stem plus bound derivational elements such as suffixes and prefixes (example 2). A combination of the two means is also possible, that is, compounding of stems plus a derivational suffix or prefix (example 3). These patterns of word formation are applicable to all major lexical categories.

1. /âb mive/	/ruz nâme/	2. /xaste-gi/	3. /dandân peze_g-i/
water fruit	day letter	tired-ness	tooth physician-*i*
fruit juice	newspaper	tiredness	dentistry

Derivational morphemes are a good source of new lexical items by being attached to the present and past stems of the verbs:

4. /xor-âk/ = present stem + /âk/	food
5. /xor-e_/ = present stem + /e_/	dish
6. /xord-an-i/ = past stem + Infm + /-i/	edible