Cross-linguistic aphasiological data suggest that verb forms expressing reference to the past or conveying perfective semantics are more impaired than verb forms expressing reference to the non-past (present or future) or conveying imperfective semantics, both in comprehension and production. The present study used structural properties of Russian to systematically test the interaction of time reference and aspect across populations (individuals with aphasia, typically developing children, healthy adult bilingual and monolingual speakers) in a range of tasks (sentence production, sentence-picture matching, acceptability judgment). The results showed a consistent advantage of non-past time reference over past time reference, and more importantly, an interaction between time reference and aspect: imperfective verbs were better processed in the non-past, whereas perfective verbs – in the past time frame. The findings are explained in terms of prototypical and non-prototypical matches of time reference and aspectual semantics: perfectives primarily refer to completed, past events while imperfectives prototypically describe ongoing, non-past events. The larger size of the effect in individuals with aphasia, children and bilingual speakers suggest that limited processing resources, which are characteristic of these populations, evoke the same productive strategy: the overuse of cross-linguistically prototypical and cognitively grounded time reference–aspect matches.