Structural Asymmetries – The View from Kutchi Gujarati and Marwari

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Background: Indo-Aryan languages exhibit a split in their case and/or agreement pattern that correlates with aspect. This is illustrated for Standard Gujarati in (1) (from Mistry 1976, DeLancey 1981:628-629). In the perfective, (1a), the subject combines with an ergative case marker *-e* and the verb agrees with the direct object; in the imperfective, (1b), the subject is unmarked and the verb agrees with the subject. In both cases, we are dealing with gender/number agreement, which is cross-linguistically typical for *participle agreement*.

(1) a. Ramesh-e **pen** khərid-y-**i**. *Standard Gujarati*
Ramesh.m-erg pen.f buy-pfv-f 'Ramesh bought the pen.'
 b. **Ramesh** pen khərid-t-**o** hə-t-**o**
Ramesh.m pen.f buy-ipfv-m aux-ipfv-m 'Ramesh was buying the pen.'

To derive the case split in such constructions, Coon & Preminger (2011) (*C&P*) and Coon (2012) argue that perfectives, (1a), are less complex than imperfectives, (1b). The ergative marking in (1a) arises when subject and direct object are in the same case domain, (2a). Contrastively, an additional functional projection introduces a domain boundary in (1b), the *FP* in (2b), separating the case domains; this gives rise to unmarked subjects and objects.

(2) a. Perfective: $[_{TP}$ *Ramesh-e* $[_{T'}$ T^0 $[_{vP}$ v^0 $[_{VP}$ *pen khərid-y-i*$]]]]$
 b. Imperfective: $[_{TP}$ *Ramesh* $[_{T'}$ T^0 $[_{FP}$ $[_{vP}$ v^0 $[_{VP}$ *pen khərid-t-o*$]]$ *hə-t-o*$]]]$

While C&P focus on case marking, it is generally assumed that agreement tracks case, i.e. object agreement in (1a) may arise as a consequence of the subject's ergative marking.

Puzzle: We focus on the closely related Indo-Aryan languages Kutchi Gujarati and Marwari. In Kutchi Gujarati (and Marwari, cf. Magier 1983) we find the same agreement split as in Standard Gujarati, but without the case split. In the perfective, (3a), the verb agrees with the direct object; in the imperfective, it agrees with the subject, (3b). The subject is always unmarked and the direct object can carry the differential object marker *-ne*. Our core aim is to derive the pattern in (3) and develop a uniform analysis for agreement in (1) and (3).
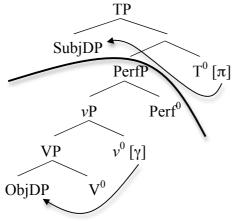
(3) a. Reena **Khimji-ne** ad-y-**o**. *Kutchi Gujarati*
Reena Khimji-DOM touch-pfv-m 'Reena touched Khimji.'
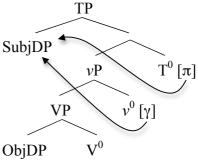 b. **Reena** Khimji-ne ad-th-**i** t-**i**.
Reena Khimji-DOM touch-ipfv-f aux.past-f 'Reena was touching Khimji.'

Proposal: Our core claims are illustrated by (4) and can be stated as follows: (**C1**) case is irrelevant for agreement in Kutchi Gujarati; (**C2**) there are two agreement probes (a person/number probe π on T^0 and a gender/number probe γ on v^0), only one of which (namely γ) has an overt reflex in (3); (**C3**) perfective clauses, (4a), are more complex than imperfective clauses, (4b); (**C4**) the additional *Perf* head in perfective clauses introduces a domain boundary for agreement, giving rise to the split that we observe. In brief, the perfective/imperfective asymmetry that we posit is exactly the opposite from C&P's in (2).
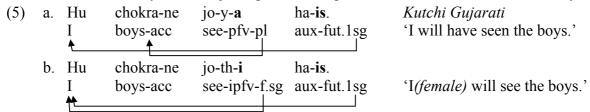
(4) a. Perfective pattern b. Imperfective pattern

Learning from the Future: Our proposal is motivated by the pattern that arises in the future tense in Western Indo-Aryan languages such as Kutchi Gujarati, (5), and Marwari. Here, we also find split agreement in the gender/number domain: The main verb (*joya / jothi*) agrees with the direct object in the perfective, (5a), and with the subject in the imperfective, (5b). Nevertheless, we always find subject agreement in person/number on the future auxiliary.

(5) a. Hu   chokra-ne   jo-y-**a**   ha-**is**.   *Kutchi Gujarati*
         I   boys-acc   see-pfv-pl   aux-fut.1sg   'I will have seen the boys.'

     b. Hu   chokra-ne   jo-th-**i**   ha-**is**.
         I   boys-acc   see-ipfv-f.sg aux-fut.1sg   'I *(female)* will see the boys.'

To our knowledge, such patterns have gone largely unnoticed in theoretical analyses of Indo-Aryan, with the exception of Magier (1983), who documents identical patterns for the present perfect in Marwari. We argue that (5) only differs from (3) in that (5) exhibits an overt reflex of both π-agreement and γ-agreement, whereas (3) lacks an overt reflex of π-agreement.

On the Irrelevance of Case (C1): It follows directly from (5a) that object agreement in the perfective cannot be attributed to a (phonologically null) ergative case marking on the subject. If the subject in the perfective was unavailable for agreement, we should not encounter subject agreement on the future tense auxiliary. Conversely, we argue that the split in the agreement system is also not related to any properties of the direct object that involve abstract case or morphological case. To show this, we focus on the construction in (6), where the subject carries inherent/lexical dative marking (*-ne*). We argue that (6) is monoclausal, i.e. *par* 'have to' is a modal auxiliary and not a main verb, based on evidence that *par* 'have to' (in contrast to the main verb *gam* 'like (to do)') (i) does not require its dative subject to be animate, and (ii) cannot combine with any aspectual light verbs, and that (iii) the VP that *par* 'have to' combines with does not behave like an infinitival *complement*.

(6) a. Khimji-ne   **Reena-ne**   jo-v-**i**   par-t-**i**   th-**i**.
         Khimji.m-dat   Reena.f-DOM   see-inf-f   have.to-ipfv-f   aux.past-f

     b. Khimji-ne   **Reena-ne**   jo-v-**i**   par-**i**.
         Khimji.m-dat   Reena.f-DOM   see-inf-f   have.to-pfv.f
         'Khimji used to have to watch Reena.' / 'Khimji had to watch Reena.'

We then observe that the direct object does not show any asymmetrical behavior as soon as the subject is truly unavailable for agreement; it can always occur with the differential object marker *-ne* and it triggers agreement in both the imperfective, (6a), and the perfective, (6b).

On the Direction of the Asymmetry (C2-C4): Agreement is split in (5a), but converges on the subject in (5b); this indicates that the perfective is more complex than the imperfective (**C3**), and that the perfective involves an additional domain boundary (**C4**) that gives rise to overt reflexes of both probes (**C2**). Contrastively, a system that assumes the opposite asymmetry (e.g. C&P) cannot straightforwardly derive the pattern in (5). On the one hand, if there was only one agreement probe, it is unclear why we would ever find (5a). On the other hand, if we assume two agreement probes, a C&P style system does not straightforwardly derive that the two probes diverge in the (purportedly) simpler structure (5a) (which would not contain a domain boundary), but converge in the more complex structure (5b) (which would contain a domain boundary). We conclude that (4) is more explanatory than (2).

Conclusion: Based on observations from Kutchi Gujarati and Marwari, we have argued that Indo-Aryan split-agreement derives from perfectives that are more complex than imperfectives as opposed to imperfectives that are more complex than perfectives (C&P).

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