The pieces of Indo-Aryan aspectual adverbs

Introduction: We examine a subset of aspectual adverbials in Hindi & Nepali. We provide an account of their meaning which captures the inter-relations signalled by their compositional morphology. Specifically we examine Hindi phir (ambiguously “then, after that” or “again”) and phir bhī (“still", both temporal and concessive), as well as their Nepali counterparts pheri and pheri pani. Though in languages like English still, then, again have no obvious connections, in Hindi & Nepali they do, and thus ideally the morphological compositionality of these items can be related to a (at least partially) compositional semantics. Likewise, items like English then have a variety of interpretations which are not always available to their crosslinguistic counterparts. Such considerations drive this investigation of possible decompositions of aspectual adverbs into more basic pieces, taking a cue from earlier investigations such as those of Ippolito (2004, 2007).

Hindi bhī and Nepali pani are additive/scalar particles often meaning something like “also, even", e.g. Hindi Rām bhī so gayā “Ram slept too” or “Even Ram slept.” These particles are also used with indefinites to form NPIs, e.g. Hindi koī bhī, Nepali koī pani “anyone” and free choice items in combination with relative pronouns, e.g. Hindi jab bhī “whenever”, Nepali je bhāe pani “whatever happens”.

The basic idea is to provide an explanation of the relationships between these aspectual elements via an compositional account of their semantics. The account should capture the morphological relationship between phir/peri “then, after that; again” and phir bhī/peri pani “still”. The relation, which is not indicated in languages like English or German, seems surprising at first blush.

Basic data: Hindi Rām phir yahā āyā can mean either “Ram came here again” OR “Then Ram came here”; Rām phir bhī yahā nahā āyā is “Ram still isn’t here” (in the temporal sense of still); Rām guṇḍā hai, phir bhī mera dost hai is “Ram is a villain, (but) still he’s my friend” (with the concessive sense of still).

Unlike English then, Hindi phir/Nepali peri can only denote “temporal ordering” then, i.e. “after that”, not the “anaphoric” then, i.e. “at that time” (as in I dream of the age of kings; people were nobler then). This sense of then would be expressed with the separate lexical items tab (Hindi); while, tahile, taba (Nepali).

Defining then, again, still: We begin with definitions for then, again, and still for English (adapting Ippolito 2007 on again and still; note that t is part of the runtime of the event):

\[
\begin{align*}
(4) \quad [\text{thenordering}]_{c.g.w} \ &= \ \lambda t, \lambda e, \lambda P(\ell, (t,t)) : \exists e' \prec t \exists e' \exists R(\ell, (t,t)) R(e', t')].P(e)(t) = 1 \\
(5) \quad [\text{again}]_{c.g.w} \ &= \ \lambda t, \lambda e, \lambda P(\ell, (t,t)) : \exists e' \prec t \exists e' [P(e', t')].P(e)(t) = 1 \\
(6) \quad [\text{stilltemporal}]_{c.g.w} \ &= \ \lambda t, \lambda e, \lambda P(\ell, (t,t)) : \exists e'' \exists \exists t'[P(e'')(\tau) \& \exists e' \prec t[P(e', t')].P(e)(t) = 1 \\
\end{align*}
\]

All three items take as arguments a time t, an eventuality e, and a predicate P, and assert that it is true that at time t e is an eventuality of type P. Then John snored, Again John snored, Still John snored all assert that there is an event of John snoring which is true at time t. They differ in what they presuppose. All presuppose the existence of a temporally prior time t'. Then additionally presupposes the existence of an eventuality e' s.t. there is some predicate R s.t. it is true that there is an eventuality e' of type R at time t'. Again additionally presupposes the existence of an event e' s.t. it is true that there is an eventuality e' which occurs at time t' which is of type P (i.e. the same type of eventuality as the asserted eventuality). Still like again posits a separate prior eventuality of type P and additionally posits a “supereventuality" e” with a run-time of τ s.t. e and e' are subevents of e".
Hindi & Nepali “then”, “again”, “still”: We assume that the meanings of Hindi phir, Nepali pherei (“then”, “again”) match the English translations given in (4), (5). Either of these entries could be the starting point for phir bhī/pheri pani. For the scalar meaning of bhī/pani we assume the basic definition in (7).

\[(7) \ [ADD_1 [...F_1 ...]]: [...F...] (\exists F' \neq F[...F'...]) \] (Ippolito 2007, adapted from Krifka 1998)

For sake of ease, only considering the temporal “still” for the moment, and thus taking bhī, pani to be functioning as additive particles [APs], the addition of an AP to “again” as per (4) adds a presupposition that there is an additional eventuality e′′ which is of also of type P. This fails to be fully compositional, since it still lacks the requirement that eventualities e, e′ be sub-events of e′′, and there is likely a role for language change here: roughly, the AP adds a presupposition of the additional type P eventuality e′′, and in context e′′ should somehow relate to e, e′. That e′′ contains both e and e′ is one such possible relation, and apparently the one which became conventionalised over time.

In fact, the same explanation can apply if we take (ordering) “then” as the base for phir bhī/pheri pani; the diachronic fixing of the relation of the additional presupposed event to that of containment will end up subsuming R as also being of type P (nothing in (4) precludes R from being identical to P). Further, given the ambiguity in both Hindi & Nepali, we might even take (4) to be the underlying meaning of phir/pheri, with certain contexts imposing a felicity condition that R=P resulting in contextual “disambiguation” of “again” from “then”. This in fact is an ideal outcome, showing a relation between the two items that does not appear from English, German, &c.

For the concessive sense of “still”, we assume that the APs bhī, pani contribute their scalar reading:

\[(8) \ [SCAL_1 [...F_1 ...]]: [...F...] (\neg \exists F' \neq F[...F'...]) <_{\text{likely}} [...F'...] \] (Ibid.)

Here assuming that the AP combines with an item with essentially the meaning of (4), this adds a presupposition that there exists not only an eventuality e′′ which (through diachronic change) has the containment relation to e and e′, but also triggers the generation of a set of alternatives, each of which an alternative to eventuality e′′. Each of these alternative “supereventualities” contain both the asserted eventuality e and an alternative to the presupposed eventuality e′. And, these alternative eventualities are ranked on a scale of likelihood s.t. e′′ is less likely than any of the alternatives to e′′.

\[(9) \left[ \text{still concessive} \right]^{e,q,w} = \lambda t_1 \lambda e_1, \lambda P_{l(t,i,t)} : \exists e'' \exists \tau \exists P(e'')(\tau) \& \exists e' \langle t[P(e',t')] \& e' \subseteq e'' \& e' \subseteq e'' \& \tau \subseteq \tau \& t' \subseteq \tau \& \text{max}_{e,w} \{w : w \in pkw \in q} \langle \text{likely} \max_{e,w} \{w' : w' \in \neg pkw' \in q} \rangle . P(e)(t) = 1^1 \]

Remaining issues: In addition to ambiguous phir, Hindi also lacks the bimorphemic form phir se which is unambiguously “again”. There is no immediately obvious explanation for why adding the instrumental/ablative postposition se to phir should pick out the “again” sense. We can only gesture generally towards a potential answer. Though present-day Hindi lacks a comitative function, but this appears represents a later development, as se derives from Skt. sahita “accompanying”/sahitam “together with” (Turner #13310), and so the ablative and instrumental senses both seem to be later developments, with a loss, at some point, of the comitative sense. In that comitative would seem to have some sort of additive function, it is possible that this is what resulted in the disambiguation in some fashion or other.

Also of interest is Sanskrit punar\(^2\) for similar reasons as Hindi phir and Nepali pheri:— its inherent ambiguity. Punar can mean “back”, “again”, “still” and so might well be analysed as even more underspecified then Hindi phir/Nepali pheri, with contextual constraints aiding in precise interpretation.


\(^{1}\)Adapted in part from Ippolito 2007:26, def. of max ultimately based on von Fintel 2001.

\(^{2}\)From which, incidentally, Nepali pani derives. Hindi bhī, on the other hand, represents earlier Sanskrit api “also”.

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