The goal of the study is to investigate the interaction between expectation and locality through Hindi (a verb-final Indo-European language). Previous related work on Hindi (Vasishth and Lewis, 2006) has shown that longer dependency length between a relative clause verb and its arguments leads to speed-up at the RC verb, such speed-ups can be neutralized by similarity-based interference. More recent work investigating locality and expectation has shown locality effects in Russian relative clause constructions (Levy et al., 2012), locality effects in German relative clause constructions (along with expectation effects in first-pass regression probability) (Vasishth and Drenhaus, 2011) (cf. Levy and Keller, 2013). Here we explore two kinds of expectation (syntactic expectation in Exp 1, and collocational/semantic expectation in Exp 2) and the influence of dependency length on reading times. We conducted two more experiments but do not discuss them here (but see abstract).

**Task and Participants**
- Participants read experimental sentences following the self paced reading (SPR) paradigm.
- 60 Hindi native speakers from University of Allahabad, India participated in the experiment.

**Experiment I**
- Experiment 1 investigated subject and object relatives, which are head-final in Hindi.
- We varied the word order inside the relative clause such that the verb was either in its canonical (clause final) position or in a non-canonical (clause medial) position. Long condition corresponds to canonical order, while short condition corresponds to non-canonical order.
- The ergative case on the relative pronoun in SR raises a strong expectation for a transitive verb (with perfective morphology).

**Design**
- 24 experimental items.
- 2 (Relative clause type) x 2 (Distance).
- Subject relatives: Long.
- Object relatives: Short.

**Items**
1. a. Subject relative, Long (verb final/canonical)
   NP [rel.pron-erg N.obj Adv V] ...
2. b. Subject relative, Short (verb non-final/non-canonical)
   NP [rel.pron-erg Adv V N.obj] ...
3. c. Object relative, Long (verb final/canonical)
   NP [rel.pron-acc N.subj Adv V] ...
4. d. Object relative, Short (verb non-final/non-canonical)
   NP [rel.pron-acc Adv V N.subj] ...

**Experiment II**
- Experiment 2 examined expectation vs distance in complex predicates (CPs).
- In Hindi, Noun-Verb compounds either have a highly predictable verb (e.g., khayaal rakhnaa, ‘thought keep/put’; ‘to take care of’) or are merely object-verb sequences (e.g., guitar rakhnaa, ‘guitar keep/put’; ‘to put down or keep a guitar’); in both cases, the verb is superficially the same.
- The nominal predicates/objects were selected after a sentence completion study to ensure that nominal predicates strongly predict a light verb and objects don’t predict any verbal predicate consistently. The frequencies of objects and nominal predicates were also controlled.

**Design**
- 16 experimental items.
- 2 (Expectation) x 2 (Distance).
- Strong expectation: Long.
- Weak expectation: Short.

**Items**
2. a. Strong expectation (Complex predicate), Long
   thought Adv (more Advs) keep ...
2. b. Strong expectation (Complex predicate), Short
   thought Adv keep ...
2. c. Weak expectation (Simple predicate), Long
   guitar Adv (more Advs) keep ...
2. d. Weak expectation (Simple predicate), Short
   guitar Adv keep ...

**Predictions and Analysis**
- **Prediction (Experiment 1)**
  - In Hindi, subjects can be elided more easily than objects.
  - This has the consequence that in SRs, the presence of the verb where an object would occur (condition b) is surprising because an overt object is expected.
  - In ORs, the presence of a verb where a subject would occur is not as surprising because subjects are relatively easier to elide.
  - This predicts greater surprise at the verb in (b) vs (a), compared to ORs (d vs c).

- **Prediction (Experiment 2)**
  - Expectation predicts that in CPs the verb should be more predictable if distance is increased, and locality accounts predict that increasing distance should increase difficulty at the verb.

- **Analysis**
  - Linear mixed-effects models were used to analyse the reading time data, logistic mixed-effects models were used to analyse question-answering data.
  - The reading time data was log transformed before fitting the model.

**Results: Experiment I**
- Greater surprise at the verb in (b) vs (a) was found compared to ORs (d vs c). The interaction was also significant ($t=3.25$).
- Results consistent with Staub (2010), but not with Levy et al. (2013) who find locality effects using similar material in Russian.

**Results: Experiment II**
- Strong effect of expectation in the strong expectation (complex predicate) condition ($t=-2.59$); no effect of distance.
- Interaction was marginally significant at the post-critical region ($t=1.50$).
- Effect of distance in the strong expectation condition marginally significant at post-critical region ($t=1.53$), no effect of distance in the weak expectation condition.
- cf. Pifarango et al. (2006); Wittenberg and Pifarango (2011).

**Conclusions**
- New evidence for expectation-based processing benefits due to syntactic and collocational/semantic prediction.
- Strong expectation when not met has processing costs (this can sometimes offset locality/adjacency benefits).
- Strong expectation strength remains unaffected under low memory load (1-3 nominal/adverbial phrases).

Figures and tables are not included in the text.