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Don’t Worry, the Stars Know: Negation and Hedging in Turkish Digital Horoscope Discourse

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Research Article

Keywords: negation, hedging, corpus pragmatics, horoscope discourse, Turkish, source-type variation

Posted Date: November 13th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11595606/v1

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Additional Declarations: No competing interests reported.

Abstract

Hedging research has concentrated on academic and professional genres, and typologies of negation on narrative, argumentative and conversational data. This article asks what negation does in a genre addressed to readers who cannot reply, Turkish digital horoscopes, and whether hedging is among its functions. All 786 negatives in 89 horoscope texts and 30 control news reports (53,096 words) were coded by the author with an inductively developed scheme; a large language model given the same protocol served as a second annotator (macro κ = .68, reported as human–model agreement). Negation is twice as frequent in the horoscopes (16.4 vs 8.5 per 1,000 words), and the surplus lies in ascriptive, preventive and reassuring uses, whereas the news control more often reports absence and places most of its negatives in quoted speech. In about a third of the reassurances that cancel a proposition, the negative is itself the first mention of the worry it dispels. Hedging is seldom the primary function of a negative but recurs as a secondary one, about half of these cases being *-mAyAbilir* predictions, which the protocol codes as hedged. In this genre negation serves less to deny or to hedge than to construct a reader whose worries, failings and temptations the text can then manage.

1. Introduction

The utterances *Korkma* ‘don’t be afraid’, *yalnız kalmak zorunda değilsin* ‘you don’t have to be alone’ and *beklentiler karşılanmayabilir* ‘expectations may not be met’ all come from Turkish horoscope texts. Each is built on a negative form, and none responds to an assertion actually made by a reader.

Research on the pragmatics of negation has established that a negative is used where its affirmative is expected or at issue (Horn, 1989; Hidalgo Downing, 2000; see the overviews in Roitman, 2017a, 2023). Its functional typologies, built on narrative, argumentative and conversational data, are organised around denial, rejection and refutation, and corpus studies have classified negation by function in English speech and writing (Tottie, 1991) and in conversation (Yaeger-Dror, 2002). Hedging research has concentrated on academic and professional discourse, where writers and speakers qualify their commitment to contestable knowledge claims (Prince et al., 1982; Salager-Meyer, 1994; Hyland, 1998; for Turkish, Doyuran, 2009). Negation enters it mainly as a lexical device, such as the negated scalar predicate of *not bad* (Horn, 1989, pp. 330–361) or a negated amplifier (Doyuran, 2009, p. 96), although work on academic writing now counts hedging among the interpersonal uses of negation (Jiang & Hyland, 2022). No study known to the author has examined hedging among the functions of negation in a non-academic genre addressed to lay readers, or in Turkish.

Horoscope discourse suits the question because some sources of expectation assumed in existing typologies are absent. There is typically no preceding turn from a reader and no opponent’s recorded claim, and the propositions at issue concern the reader’s own circumstances and a future that cannot be checked at the time of prediction. Dialogicity is constructed by the producer rather than supplied by an interlocutor, so the question is where the expectations that negation answers come from. Turkish provides a second reason. Its negation is largely bound morphology, with formally distinct forms for

ability negation (*-(y)AmA-*), negation under possibility (*-mAyAbilir*) and under necessity (*-mAmAlI*), privation (*-sIz*) and negative converbs (Öztürk, 2019; Baturay Meral & Meral, 2024). The closest Turkish studies show that magazine horoscopes follow a four-move structure of situation, problem, solution and promise (Dabak Özdemir, 2023, pp. 3342–3345) and that coffee-cup fortune-tellers keep readings open with vague category markers (Eröz et al., 2025). Neither treats negation as an analytical category.

The analysis of 786 negation instances in 89 horoscope texts and 30 news reports addresses four questions. (RQ1) How much more frequent is negation in horoscope discourse than in the control, and does the difference survive the obvious confounds? (RQ2) Which pragmatic functions account for the difference? (RQ3) How are these functions distributed over the Turkish forms of negation, and across the three source types? (RQ4) Is hedging a function of negation in this genre, and if so, at which level of the coding?

The article contributes in three ways: it codes where the expectations cancelled by reassurances and denials come from instead of assuming them, and shows that a negative can supply the expectation it cancels; it locates the hedging work of negation as a secondary function bound mostly to modal forms; and it reports single-annotator coding against a model annotator in full, with the adjudication record released.

2 Background

2.1 What a negative presupposes, and where the expectation comes from

Negatives often have more overt marking than corresponding affirmatives (Horn, 1989, pp. 184–203), and “special contexts are thus needed for negatives to be plausibly used, and the discourse supposition of the corresponding affirmative provides such a context” (Miestamo, 2005, p. 199). This supposition is pragmatic rather than logical, for in Givón’s account (2018, pp. 100–102) a negative is asserted “on the tacit assumption that the hearer either has heard about, believes in, is likely to take for granted, or is at least familiar with the corresponding affirmative”. This familiarity may come from prior discourse, from the interlocutor, from what the speaker knows of the hearer, or from “shared generic information” (cf. Horn, 1989, pp. 72–73, 190–191). The negative is thus a corrective act, in which “[t]he hearer knows wrong, the speaker knows better” (Givón, 2018, pp. 102–103).

In Tottie’s (1991) corpus most negatives in writing are implicit denials of “something which might merely have been expected, or which can be contextually inferred but which has not been asserted by anyone” (p. 21), and the expectation is often of the writer’s own making, since the sender “must deny the proposition which he has caused to be presupposed by the receiver” (p. 27). Hidalgo Downing (2000) makes the same point for text worlds, where “negatives typically introduce the information they deny, except for those cases where the affirmative has been explicitly mentioned in previous discourse” (p. 95). Her example, taken from Werth, is a notice announcing that there will be no big parade on Sunday.

Readers of such a notice infer that a parade would normally be held, although nothing in the text has said so; the expectation that the negative cancels is thus created by the negative itself (pp. 93–95). In this way negation can accommodate the assumption it cancels, and its function "cannot be limited to the negative clause itself" (p. 180). The unit of interpretation is therefore the text, and the source of the denied expectation is recorded as a variable rather than assumed.

2.2 Descriptive, polemic and addressee-directed negation

The typologies differ in whether the expectation a negative answers must belong to an actual interlocutor. In the polyphonic approach, which treats an utterance as staging several points of view, sentence negation "discloses a 'crystallised discourse' exposing two different enunciators or 'voices', one positive and one negative" (Roitman, 2023, p. 7). Polemic negation refutes an utterance, actual or virtual, whereas descriptive negation asserts a negative content "when there is no more usual or adequate way to express the same thing" (Nølke, 2017, pp. 151–152). Referential relative clauses, gradable predicates and certain genres trigger the descriptive reading, contrast structures and concessives the polemic one (pp. 157–164). In the summaries of reports by the Intergovernmental Panel on Climate Change (IPCC), descriptive negation dominates (Gjerstad & Fløttum, 2017, pp. 200–206), a profile against which the news control is read in Section 5.1. Verhagen (2005) detaches the expectation from any actual speaker. He treats every utterance as coordination between a conceptualiser responsible for it and one who interprets it, whether or not either is a known person, and sentential negation as an instruction to entertain two representations, adopt one and abandon the other (pp. 6, 29). The abandoned representation need not be one the addressee actually held (pp. 34, 72–73), and a horoscope text can exploit this, since its producer constructs the reader whose view is abandoned. Yaeger-Dror's (2002, pp. 1510–1511) informative, remedial and supportive negatives come closest to an addressee-directed type; she finds supportive negatives rare in conversation. None of these typologies asks whether a negative can also limit what the speaker is committed to, which is the concern of the hedging literature.

2.3 What counts as hedging

Accounts of hedging allow a negative to hedge only in restricted ways. Lakoff's (1973, p. 471) hedges, "words whose job is to make things fuzzier or less fuzzy", operate on category membership; Prince et al. (1982) distinguish approximators from shields, which mark the speaker's commitment as less than full, and Hyland (1998, p. 1) defines hedging as indicating "a lack of complete commitment to the truth value of an accompanying proposition" or a reluctance to express that commitment categorically. Fraser (2010, pp. 22–24) lists negation among hedging devices. Hübler (1983) distinguishes understatement, which weakens correspondence conditions, from hedging, which weakens validity claims (pp. 20, 23–24); both reduce liability, for "[t]he smaller the liability commitment on the part of the speaker, the less likely it is that the sentence will be negated by the hearer" (p. 18). His account is restrictive in three ways. Understatement by negation is limited to scalar predicates near the neutral point such as *not bad* (pp. 48–63), predictions and hence prospective possibility modals fall outside what hedges qualify (pp. 97, 125, 129), and devices used "as a general protective device" for the speaker's own benefit are not hedges

in his hearer-motivated sense (p. 181, n. 124). Hübler does not treat negation as a hedging device in its own right.

Caffi's (2007) model of mitigation reorganises Hübler's distinction, mapping his understatements onto her bushes and his hedges onto her hedges, and objects that his analysis "is restricted to assertive acts and is not backed by empirical evidence" (p. 64). Mitigation presupposes a negative object, actual or merely possible (p. 81), "thus switching on a warning light while at the same time trying to switch it off" (Caffi, 2010, p. 185), and where self-protection prevails it "can be perceived and described as a form of masking" (2007, p. 92). Her reading of Italian *non è mica un problema grosso* 'it's not a big problem' in medical consultations is the published formulation closest to the horoscope data. She describes it as a *negatio contrarii* that minimises and reassures while treating the hearer "as excessively worried, a bit fussy, maybe even an anxious subject" (2007, p. 102). Horn (1989, pp. 333–356) contrasts negated weak positives (*not good*, understood as *bad*) with negated negative poles (*not bad*), which leave scalar latitude; following Leech, he notes that the latter can mitigate commitment and so serve as a hedge (p. 333).

For the annotation, then, negation can hedge by leaving a scalar latitude open, by withholding commitment or by limiting liability; none of these accounts warrants treating every instance of negation as a hedge. Hedging concerns what the utterance commits the speaker to, independently of whether it also directs, ascribes or reassures, so it is coded as one function an instance may carry, not as an umbrella.

2.4 Turkish negation and modality

The reference grammars recognise three markers of negation, namely the verbal suffix *-mA*, which converbs, participles and nominalisations also take, the copular negator *değil* and the existential negator *yok* (Göksel & Kerslake, 2005, p. 310; Kornfilt, 1997, pp. 123–124). *Değil* also differs from *-mA* in use, since with a verbal predicate it "repudiates an assumption" expressed earlier or attributed to the hearer, whereas *-mA* "simply asserts a state of affairs" (Göksel & Kerslake, 2005, p. 314). The privative *-sIz* is a derivational suffix forming adjectives "denoting that the entity described lacks whatever is expressed by the root" (Göksel & Kerslake, 2005, pp. 65–66; Kornfilt, 1997, p. 457), not a marker of sentential negation (see Section 3.2).

Items such as *hiç*, *hiçbir*, *kimse*, *asla* and *sakın* co-occur with a marker of negation (Göksel & Kerslake, 2005, pp. 319–324; Kornfilt, 1997, p. 125), and *asla*, *katiyen* and *sakın* cluster in negative imperatives that convey "a warning, a piece of advice or a command" (Görgülü, 2018, p. 139; Kornfilt, 1997, p. 378). Kelepir (2001, pp. 121–125) treats them as polarity items licensed by negation and Kamali and Zeijlstra (2024, p. 6) as neg-words in "a Strict NC language", but both analyses agree that a clause with *hiçbir … -mA* expresses one semantic negation, not two.

The surface order of modal and negative morphology is relevant to their scope relations, since *-mAlI* and *-(y)Abil* scope over *-mA*, and *-mA* over the ability morpheme *-(y)A* (Cinque, 2001, p. 50; Kamali & Zeijlstra,

2024, p. 24). *-mAyAbilir* is “the potential of negation”, distinct from the “impotential” *-(y)AmA-* (Kornfilt, 1997, p. 375). It expresses speculative possibility about a negative situation (*yağmur yağmayabilir* ‘it may not rain’; Göksel & Kerslake, 2005, p. 348) and has only the reading ‘possible that not’ for Baturay Meral and Meral (2024, § 3.1), although van Schaaik (2001, p. 82) notes a root reading, ‘able or allowed not to’, so the epistemic reading depends on context. *-mAmAlI* “expresses an obligation not to behave in a certain way” (Göksel & Kerslake, 2005, p. 352). *-(y)Abil-ir* implies that the speaker has insufficient grounds to count the proposition true and leaves both outcomes open (*kalkabilir de kalkmayabilir de*), unlike the one-sided bare aorist (Erguvanlı Taylan, 2018, p. 13). Negation under possibility is thus a grammaticalised two-sided prediction, and *-mAmAlI* a grammaticalised prohibition.

3 Data and method

3.1 Corpus

One hundred and twenty texts were collected in May 2026 in four subcorpora of thirty texts each. These were transcripts of Instagram Reels by professional astrologers (IG), transcripts of YouTube horoscope videos (YT), written horoscope columns from newspaper sites, astrology sites and professional astrology blogs (YZ, from Turkish *yazılı* ‘written’) and online news reports from Anadolu Ajansı, TRT Haber, Hürriyet and Milliyet (CTRL). The control differs in communicative purpose, since news texts report events rather than advise a reader. It therefore serves as a baseline for negation in general, not for reader-directed functions. The horoscope–news contrast is one of genre (Swales, 1990, p. 58); the source types differ in platform, production mode and possibly register (Biber, 1988, pp. 33–34). The horoscope texts were selected purposively, subject to a minimum length of 200 words, publication within the preceding two years and professional provenance; no more than three texts were taken per identifiable video producer. Written columns were screened to exclude transcripts of video content. The news-control texts were recent reports from the four named websites, selected for recency and availability rather than matched by topic or producer; they cover a range of topics, including the economy, sport, justice, culture and the weather. Horoscope texts were located through keyword searches on YouTube, Instagram and news websites (*astroloji* ‘astrology’, *astrolog* ‘astrologer’, *günlük burç* ‘daily horoscope’, *aylık/yıllık burç* ‘monthly/yearly horoscope’, *güneş/ay tutulması* ‘solar/lunar eclipse’). On the two video platforms only accounts with more than 100,000 followers that published horoscope content regularly were retained. Automatic platform transcripts served only as a starting point; each was corrected against the recording. Written texts were copied manually from the source websites.

Horoscope texts are often republished by other astrologers or by magazine sites, so texts collected from different sources can prove identical. One written column (AST-YZ-05), a verbatim copy of part of another, was therefore removed, leaving 119 texts (Table 1); a paragraph repeated within AST-YZ-23 was counted once, and nine instances in self-recycled paragraphs of two other columns were flagged; excluding them does not alter the findings (Section 4.1). Six replacement control texts received after annotation had begun were left out of all counts and agreement figures (they are flagged as supplementary in the data file). Word counts are of cleaned body text, produced by a script released with

the data. The Instagram and YouTube texts come from 21 producers; producer metadata for the written columns was not preserved at collection.

Table 1
Corpus composition and overall frequency of negation

Subcorpus	Texts	Words	Instances	Per 1,000 words	Texts with ≥ 1 instance
Instagram Reels (IG)	30	7,493	102	13.61	28
YouTube (YT)	30	19,921	286	14.36	30
Written columns (YZ)	29	14,844	306	20.61	28
Horoscope, pooled	89	42,258	694	16.42	86
News control (CTRL)	30	10,838	92	8.49	22

3.2 Identification: what was counted as negation

A corpus can be searched for forms but not for functions (Adolphs, 2008, p. 9; Rühlemann & Aijmer, 2015, p. 9), so every text was read in full, as manual annotation of a small specialised corpus allows (Rühlemann, 2019, p. 3). Candidates were retrieved with deliberately over-inclusive patterns and judged in context; forms the patterns missed (*korkma*-type imperatives, forms split by the transcriber) were added by hand. Three formally distinct classes were included. (A) Grammatical negation: finite verbal *-mA* in all tense, aspect and mood forms; *değil*; existential *yok*; converbal, participial and nominalised negation; ability negation *-(y)AmA-*; negation under modality (*-mAyAbilir*, *-mAmAll*); correlative *ne … ne*. (B) Privative *-sIz* where base and suffix are compositional, tested by the paraphrase ‘X olmadan / X yok’ (*huzursuz* ‘without peace’, *hasarsız* ‘undamaged’). (C) Lexical predicates of avoidance or prevention (*kaçınmak* ‘avoid’, *vazgeçmek* ‘give up’, *engellemek* ‘prevent’, *mahrum kalmak* ‘be deprived of’, *uzak durmak/kalmak* ‘keep away’, avoidance sense only). B and C are included because in Turkish advisory prose the verbal suffix, the privative and the avoidance verb share the work of presenting a state or action as not occurring (*endişelenmeyin*, *endişesiz*, *endişeden uzak durun*). This defines the retrieval domain without equating the three, and the frequency comparison is also reported without B and C (Section 4.1).

A negative polarity item (*hiç* ‘at all’, *kimse* ‘anyone’) and the negation that licenses it were counted as one instance, with the item recorded separately (60 instances) (Section 2.4). Lexicalised negative forms (*beklenmedik* ‘unexpected’, *rahatsız* ‘uncomfortable’; 103 rows) were recorded but not function-coded, because their negative morphology no longer contributes a negation in context; the productive participle *beklemediğiniz* ‘that you did not expect’ is an instance. Forms that are negative in shape but negate nothing in context (*-Ar -mAz* ‘as soon as’, *-mAdAn önce* ‘before’, *yoksa* ‘or else’, polarity items in questions), retrieval false positives and duplicated text were excluded, each with a stated reason (78 rows). The data file has 972 candidate rows, comprising 791 instances (694 horoscope, 92 control, 5 supplementary), 103 lexicalised forms and 78 exclusions, all with the adjudicated values of Section 3.4.

3.3 Functional annotation

The scheme was developed from the data, drafted after reading the whole corpus, fixed on the first fifteen Instagram texts and revised during annotation, with every revision applied retrospectively. Theory entered through the diagnostics, in that the denial tests follow Tottie's (1991, pp. 21–22) distinction between explicit denial of an assertion on record and implicit denial of an expectation, the backgrounding test follows Nølke's trigger contexts, and the commitment test follows Section 2.3. Each of the seventeen fine categories has a diagnostic (Online Resource 1). All functions an instance serves were recorded, and the one carrying the illocutionary force of the host utterance was coded as primary. Functions are coded for the negative in its host utterance and context, so the annotation shows which pragmatic functions negative forms serve in this genre, not that the negative morpheme produces them alone; mood, modality and context contribute as well (the imperative in *bastırmayın*, the possibility modal in *-mAyAbilir*). Two ordering rules were fixed after the pilot round (Section 3.4). A negative directive that also reassures is primarily directive, and in *-mAyAbilir* predictions the content function is primary and commitment reduction secondary.

The fine categories are grouped into five macro categories defined by the negative's discourse function in context (Table 2); the residual group keeps the three meanings usually treated as basic, non-existence, rejection and denial (Roitman, 2017a, p. 1). After the pilot round PART (conditions singling out the addressees concerned) was moved from the non-committal to the ascriptive group, because its members attribute a state to a referent and differ from backgrounded ascription only in information status; the grouping was fixed before the post-pilot candidates were coded. The change was definitional, not a means of raising agreement (macro-level agreement with the model's coding was $\kappa = .675$ under the earlier grouping and .679 under the final one).

Table 2
Macro categories, constituent fine categories and diagnostics

Macro category	Fine categories	What the negative does	Diagnostic
Preventive	DIR	Directs the addressee not to act, feel or enter a state	Paraphrasable as 'I advise you not to X' with no change of force; host is or is embedded under a directive
Ascriptive	ASCR, PROB, PART	Attributes a lack, inability or unfavourable state to the addressee or a referent, as background (ASCR), as the problem at issue (PROB) or as a condition singling out the addressees concerned (PART)	ASCR survives 'Hayır' to the host; PROB: *ne yazık ki* can be inserted; PART: the clause can be swapped for its affirmative twin with a different continuation
Reassuring	REAS	Presents an undesirable state as absent, avoidable or non-persistent	The affirmative would be a threat or burden to the addressee; *merak etmeyin* can follow coherently
Non-committal	HEDG, ALT	Does not commit the speaker to the negated proposition: lowers what the speaker is committed to (HEDG) or presents the negative and its affirmative as open alternatives (ALT)	The affirmative can be added without contradiction (*ama olabilir de*; *olan da olmayan da*); the speaker is less exposed to falsification than by the affirmative
Other	NONEX, NPRED, COR, ADD, REJ, DE, DI, CONC, INT, IDM, UNCL	Reports absence, predicts neutrally, corrects, adds, rejects, denies, concedes, or is interactional or idiomatic	Category-specific tests (Online Resource 1)

The data file also records formal and grammatical features of each instance and two further fields, reported descriptively. The first marks whether an instance falls within the reported speech of a source or within speech the astrologer voices on the addressee's behalf, since negation inside quoted speech behaves like interactive language (Yaeger-Dror, 2002, pp. 1500–1501). The author coded it for all 92 control instances, for the 51 horoscope instances that either coding had marked as reported or voiced, and for a random sample of 40 unmarked horoscope instances, none of which proved to be reported or voiced. The second records, for reassurance and denial, whether the cancelled expectation is present in the co-text, derivable from world or genre knowledge, or first introduced by the negative itself; the author coded it for all 103 horoscope instances with a reassuring or denial function. Because it rests on a single coding, and the model's coding of the same field agreed with the author's only weakly ($\kappa = .28$), its counts are read descriptively.

3.4 Coding procedure and agreement

The author coded all 972 candidates in context. As the study was carried out by a single researcher, a large language model (LLM; Claude Fable 5.1, Anthropic) prompted with the same written protocol and

diagnostics served as a second annotator; the author did not see its output while coding. In corpus-based pragmatics, LLM annotation approaches the accuracy of a human coder on clearly defined categories but still needs human oversight for complex pragmatic features (Yu et al., 2024; Bianco et al., 2026). The identification and ordering rules were fixed after a pilot round of 163 candidates. The author then adjudicated the 331 disagreements on status and primary function against the diagnostics, so that all final decisions rest with the author; secondary functions were adjudicated only where primary codes differed. Status disagreements were almost all settled by the written identification rules (duplicated text, lexicalised forms, transparent *-slz*). The complete record of decisions is released (Online Resource 3). Frequencies are computed from the adjudicated codes, agreement from the codes before adjudication (Krippendorff, 2019, p. 285).

Table 3 reports this human–model agreement as Cohen's κ (Artstein & Poesio, 2008) and, for function sets, as Krippendorff's α with MASI (Measuring Agreement on Set-valued Items) distance (Passonneau, 2006), which gives partial credit when two label sets overlap. As in Bianco et al. (2026), agreement is lower for functions than for identification. The most frequent disagreements concern the boundary between asserted problem and backgrounded ascription, which the macro grouping absorbs (over a third of the fine-level disagreements fall within a single macro category), and that between plain absence and ascription, which crosses macro categories; its effect is checked in Section 4.2. Inference is therefore carried at the macro level, where agreement is substantial, and fine-category distributions are reported descriptively.

Table 3
Agreement between the model's coding and the author's coding before adjudication

Scheme	*n*	Raw agreement	Chance-corrected agreement
Identification (instance / lexicalised / excluded)	965	.94	.82 (κ)
Fine scheme, 17 categories, primary function	759	.64	.58 (κ)
Macro scheme, 5 categories, primary function	759	.77	.68 (κ)
Function sets, all functions	759	.63 (mean overlap)	.55 (α, MASI distance)

3.5 Statistical analysis

Instances cluster within texts and, for the Instagram and YouTube texts, texts within producers, so the primary comparisons treat the text as the unit. Per-text rates per 1,000 words were compared between the 89 horoscope and 30 control texts with the two-sided Mann–Whitney *U* test (effect size: rank-biserial *r*), and the number of texts containing a category was compared with Fisher's exact test. The three horoscope source types were compared with the Kruskal–Wallis test, followed by pairwise Mann–Whitney tests. The five macro categories form one family of tests, separately for primary-function and

any-function counts, with Holm-adjusted *p*-values. The pooled distribution of primary functions is summarised descriptively ($\chi^2(4) = 52.91$, Cramér's V = .26); instance-level inferential tests are not used because instances are nested within texts. Robustness checks remove classes B and C, directives and the recycled paragraphs, and repeat the comparison with producers instead of texts as the unit. All calculations are scripted in Python, and the scripts are released with the data (Online Resource 3).

4 Results

4.1 Frequency (RQ1)

Negation is about twice as frequent in the horoscope texts as in the news control, with 16.42 against 8.49 instances per 1,000 words pooled and a median per-text rate of 14.71 against 4.31 ($U = 2028.5$, $p < .001$, $r = .52$). The difference holds for each source type separately (Instagram $r = .40$, $p = .007$; YouTube $r = .49$, $p = .001$; columns $r = .67$, $p < .001$), and it survives each robustness check: excluding *-sIz* and lexical negatives (13.35 vs 5.54 per 1,000; $p < .001$, $r = .57$), removing primary-directive instances (median 9.90 vs 4.31; $p = .006$, $r = .34$), omitting the nine instances in recycled paragraphs ($r = .51$), and comparing producers instead of texts, all 21 Instagram and YouTube producers lying above the control median ($p = .002$, $r = .51$).

The two groups also differ in whose voice carries the negation. In the control, 72 of the 92 instances occur inside the reported speech of a named source, leaving 20 negatives (1.85 per 1,000 words) in the journalist's own voice. The horoscope texts contain eight reported instances but 28 voiced ones, which the astrologer puts into the addressee's mouth (*"Ben artık böyle yaşamak istemiyorum" ayı* 'the month of "I don't want to live like this any more"', AST-YT-11). Here the negative is attributed to the reader rather than to a quoted source, a pattern without parallel in the news texts.

4.2 Function (RQ2)

Table 4 counts each instance once, under its primary function, and Table 5 every function it serves, with text-level Mann–Whitney tests on per-text rates (*p*, Holm-adjusted in brackets; effect size *r*). Fine categories are in Online Resource 2.

Table 4
Primary function by macro category: counts, rates and text-level tests

Macro category	Horoscope *n* (per 1,000)	Control *n* (per 1,000)	Texts with ≥ 1 (of 89 / of 30)	*U* test *p* (Holm)	*r*
Ascriptive	263 (6.22)	35 (3.23)	71 / 14	.002 (.009)	.37
Preventive	198 (4.69)	3 (0.28)	61 / 3	< .001 (< .001)	.64
Reassuring	49 (1.16)	2 (0.18)	31 / 2	.004 (.012)	.28
Non-committal	28 (0.66)	3 (0.28)	23 / 3	.085 (.17)	.15
Other	156 (3.69)	49 (4.52)	56 / 18	.79 (.79)	.03
All instances	694 (16.42)	92 (8.49)	86 / 22	< .001	.52

Table 5
Any function by macro category (each category an instance serves counted once)

Macro category	Horoscope *n* (per 1,000)	Control *n* (per 1,000)	Texts with ≥ 1 (of 89 / of 30)	*U* test *p* (Holm)	*r*
Ascriptive	266 (6.29)	35 (3.23)	71 / 14	.002 (.004)	.37
Preventive	204 (4.83)	3 (0.28)	62 / 3	< .001 (< .001)	.65
Reassuring	73 (1.73)	3 (0.28)	40 / 3	< .001 (.003)	.35
Non-committal	60 (1.42)	3 (0.28)	41 / 3	< .001 (.002)	.37
Other	179 (4.24)	52 (4.80)	60 / 20	.85 (.85)	.02

Ascription, prevention and reassurance account for most of the frequency difference. Together they make up 73.5% of horoscope instances but only 43.5% of control instances, and the median per-text share of the three is .78 against .41 ($p < .001$, $r = .52$). The residual category occurs at similar rates in the two groups ($p = .79$), but its content differs. In the control, a prominent component is the plain report that something is absent or did not happen, as in (1), which accounts for 21 of the 49 residual instances; rejections and additive contrasts in quoted speech make up much of the rest. In the horoscope texts, reports of absence account for only 18 of the 156 residual instances, and the category consists mainly of neutral predictions about the addressee (49) and corrective contrasts (28). This difference also holds at text level, though modestly ($p = .006$, $r = .24$).

The contrast does not depend on where the boundary between absence and ascription is drawn, although that boundary produced the most frequent cross-category disagreement (Section 3.4). When the 21 instances on which the codings differed between these categories (15 horoscope, 6 control) are

counted first as ascriptive and then as absence, the three leading categories make up 75.5% or 73.3% of horoscope and 50.0% or 43.5% of control instances, and the horoscope texts keep significantly more ascription ($p \leq .007$) and the control significantly more reports of absence ($p \leq .006$).

1. İlk 5'te Türk oyuncu **yok**. (CTRL-04)
2. 'There is no Turkish player in the top five [*yok*, NEG.EXIST].'

Preventive negation, as in (2), is realised by second-person negative imperatives and optatives, by nominalised negatives governed by predicates of care or necessity (*girmemeniz gerekiyor* 'you mustn't get into', AST-YT-10), by *-mAmAlI* (*değerlendirmemeliyiz* 'we shouldn't regard', AST-YZ-15) and by avoidance verbs; the three control instances are a purpose clause and two quoted prohibitions.

(2) Kalbinizin sesini lütfen **bastırmayın**. (AST-IG-23)

(3) 'Please don't suppress the voice of your heart [*bastır-ma-yın*, suppress-NEG-IMP.2PL].'

Ascriptive negation concentrates in participial and nominalised structures and in *-sIz* derivation, and one in six horoscope instances involves ability negation (44 of 263; *yapamadığınız* 'that you couldn't do'). The ascribed state may be backgrounded, as in (3), asserted as the problem (*doğru bir zamanda değilsiniz* 'you are not at the right moment', AST-YT-11), or used to single out the addressees for whom the prediction holds (*hayatınızda bir insan yoksa da* 'and if there is no one in your life', AST-YZ-11). Backgrounded ascription also occurs in the control (*galibiyet alamayan Trabzonspor* 'Trabzonspor, which has not managed a win', CTRL-29), since the category is defined by information status, not addressee.

(3) Aşk hayatınızda şimdiye kadar **yaşamadığınız** kadar yoğun ve çarpıcı duygular deneyimleyebilirsiniz. (AST-YZ-16)

(4) 'In your love life you may experience feelings more intense and striking than any you have lived through until now [*yaşa-ma-dığ-ınız*, live-NEG-NMLZ-2PL].'

Reassuring negation, as in (4) and (5), presents a burden, threat or feared outcome as absent or avoidable, mostly through finite verbal negation and *değil* (*merak etmeyin, öyle çok ciddi olaylar yaşanmayacak* 'don't worry, nothing that serious is going to happen', AST-YT-05), with *zorunda değil* 'doesn't have to' as a recurrent frame. Eleven of the 73 instances with a reassuring function have a future-tense host and convey a positive forecast by denying a negative outcome, as in (5); there are none in the control. No test separates them from (4), so they were not made a separate category.

(4) Hayatını düzene sokarken yalnız kalmak zorunda **değilsin**. (AST-IG-07)

(5) 'You don't have to be alone while putting your life in order [*değil-sin*, NEG.COP-2SG].'

(6) Bu aydan hiçbir Başak boş **çıkmayacak**. (AST-IG-13)

(7) 'No Virgo will come out of this month empty-handed [*çık-ma-yacak*, come.out-NEG-FUT].'

4.3 Where the cancelled expectation comes from

Reassurance and denial differ in where the cancelled expectation comes from. Of the 73 horoscope instances with a reassuring function, 50 cancel a proposition; the other 23 are *merak etmeyin*-type directives, which cancel none. In about half of the 50 the undesirable state is inferable from genre or world knowledge (24), and in a fifth it appears in the preceding co-text (10); in the remaining third (16) it is first introduced by the very negative that cancels it, as in (4). In *Biriken stres ve gerilimleri taşımanıza gerek yok* 'You don't need to carry the accumulated stress and tension' (AST-YZ-16), by contrast, the burden has just been named in the co-text, and in *Dolunaylar her zaman yalnızca zorlayıcı değildir* 'Full moons are not always only challenging' (AST-YZ-06) it belongs to the genre's own lore. Genre-based worries cluster in the written columns (17 of 24), whereas worries introduced by the negative occur in all three source types (Instagram 5, YouTube 6, columns 5). Denials without a reassuring function behave differently: their expectation usually lies in the co-text (14 of 30) or in general knowledge (12), and the negative introduces it in only four cases.

4.4 Form and function (RQ3)

Some forms are tied to one function and others spread across several (Online Resource 2; its cells are sparse and are read descriptively). Embedded forms are predominantly ascriptive: backgrounded ascription accounts for 122 of the 200 non-finite instances and ascription for 73 of the 90 privatives, and 44 of the 54 horoscope instances of ability negation are ascriptive. Finite verbal negation is the most varied, its 200 instances including 82 directives and 16 reassurances. *Değil* is associated with corrective contrast and the *zorunda değil* reassurance (16), lexical negatives with prevention (29 of 40). The two modal constructions, both absent from the control, are the clearest single-function forms: *-mAmAlI* is preventive in 19 of its 20 instances (18 of them in the written columns), and *-mAyAbilir* carries commitment reduction in all 18, in 17 as a secondary function. Imperative and optative hosts likewise belong to the horoscopes (88, against two quoted ones in the control).

4.5 Register (RQ3)

The three source types differ in how often they negate, not in what they negate for. The written columns negate most (20.61 per 1,000 words; Kruskal–Wallis $H = 9.32$, $p = .009$) and differ from both spoken subcorpora (Instagram vs columns $p = .004$, Holm-adjusted .011; YouTube vs columns $p = .022$, adjusted .045), which do not differ from each other ($p = .58$). Their functional profiles are nonetheless alike. In all three, preventive and ascriptive negation are the two largest named categories, and reassurance and non-committal negation the two smallest; only in the Instagram transcripts is the residual category larger than either leading category. The source types differ instead in form. The columns build directives with *-mAmAlI* and nominalised negatives, the videos with the imperative; only the Instagram transcripts contain interactional negatives (eight), and the YouTube transcripts carry most of the voiced speech (23 of 28).

4.6 Hedging and multifunctionality (RQ4)

Hedging is rare as the main function of a negative and more frequent as an accompanying one. Commitment reduction is the primary function of only 16 horoscope instances (0.38 per 1,000 words) and two control instances, a difference that is not reliable (p = .17, r = .11, on per-text rates; 16 of 89 texts vs 2 of 30, Fisher's exact test p = .24). Once secondary functions are included, it is present in 49 horoscope instances (1.16 per 1,000) in 37 texts, against two in the control (p < .001, r = .35).

Part of this secondary hedging follows from the protocol. In 33 of the 49 occurrences hedging accompanies another primary function: a neutral or unfavourable prediction about the addressee (18), a reassurance (7), or another content function such as a directive, concession or correction (8). Seventeen of the 33 are *-mAyAbilir* predictions, for which the ordering rule (Section 3.3) prescribes secondary commitment reduction; the other 16 were identified by the commitment test alone. Counting only test-identified hedges, primary or secondary, commitment reduction is a function of 32 horoscope instances (4.6%).

Formally, 18 of the 49 hedges are *-mAyAbilir* forms, 11 finite negatives and 10 *değil*; the other ten are spread over further forms, including non-finite negatives such as (9). Functionally, across these forms, they reduce commitment in four ways. The *-mAyAbilir* forms (6) predict while leaving both outcomes open; most finite negatives and *değil* forms disclaim knowledge or liability (7, 8); negative escape conditions (9) protect a prediction against a counterexample if the condition is not met; and a few negated intensified predicates of the *not bad* type (10) are the only cases that meet Hübler's conditions for understatement.

(6) … bunu belli etmek **istemeyebilirsiniz**. (AST-YZ-22)

(7) '… you may not want to show it [*iste-me-yebil-ir-siniz*, want-NEG-POT-AOR-2PL].'

(8) Tabii ki de yatırım tavsiyesi **değil** ama bunu da söyleyelim. (AST-IG-05)

(9) 'Of course it isn't investment advice [*değil*, NEG.COP], but let's say it anyway.'

(10) Sizin haritanıza hangi açıda geliyor, onu **bilmediğim** için genel anlamda şöyle yorumlayabilirim. (AST-YT-12)

(11) 'Since I don't know at what angle it falls in your chart [*bil-me-diğ-im*, know-NEG-NMLZ-1SG], I can interpret it in general terms as follows.'

(12) Son anda **vazgeçmediğiniz** müddetçe her şey mükemmel gelişecek. (AST-YZ-23)

(13) 'As long as you don't give up at the last minute [*vazgeç-me-diğ-iniz*, give.up-NEG-NMLZ-2PL], everything will develop perfectly.'

(14) Kaygılı olabilirsiniz. Ha, kötü bir ay **değil**. İyi planlayın. (AST-YT-17)

(15) 'You may be anxious. Well, it isn't a bad month [*değil*, NEG.COP]. Plan well.'

Multifunctional coding is modest (14.1% of horoscope and 8.7% of control instances). The most frequent combinations all involve reader-oriented categories: directive with reassurance (20; *korkma*, *merak etmeyin*), hedging with a neutral or unfavourable prediction (19) and reassurance with correction (8; *Seni sınırlamak için değil, … fark etmen için* 'Not to limit you, but so that you notice …', AST-YT-20). Hedging is the function that most often accompanies another (Section 5.4).

5 Discussion

5.1 Why negation is more frequent

The frequency difference is not explained solely by the inclusion of derivational and lexical negatives or by directives (Section 4.1). It is also accompanied by a marked redistribution of pragmatic functions, in line with Roitman's (2023, p. 2) view that negative forms adjust to "the cultural domain and the social setting of their appearance". In the news control, negation frequently reports absence or non-occurrence, and much of it occurs in quoted speech, a profile close to the one Gjerstad and Fløttum (2017) describe for the IPCC climate-report summaries and Nølke (2017, p. 164) for descriptive texts. In the horoscope texts, refutational uses (rejection, denial, correction) account for only 8%, and in horoscope contexts these may invoke an imagined rather than an actual prior assertion.

5.2 The redistribution of functions

Of Givón's four sources of expectation (Section 2.1), a horoscope producer has no access to the interlocutor's contribution or to knowledge of the individual reader, and prior discourse is limited to the producer's own text. What remains is that text, generic expectation and the producer's own construction of what the reader might think (Verhagen, 2005, pp. 32, 72–73). The utterances in the three categories that account for most of the surplus construe such expectations in different ways. Ascriptive negatives present the reader's own deficits and inabilities as given (*şimdiye kadar fark edemediğiniz konular* 'matters you have not been able to notice until now') in non-finite clauses where, as Nølke's trigger contexts predict, the negation reads descriptively and cannot be answered with *Hayır*. Preventive directives presuppose the reader's capacity for the very conduct they proscribe, as Hidalgo Downing's parade notice presupposes parades, and in *kalbinizin sesini bastırmayın* the negative imperative places the suppression of one's feelings on record only to exclude it. In none of the three does the negative respond to anything the reader has said; the reader-oriented functions are much more prominent here than the supportive negatives in Yaeger-Dror's conversational data, although the schemes are not directly equivalent. Reassurance, the third category, is considered separately because for it the source of the cancelled expectation can be traced.

5.3 Reassurance and the construction of the expectation

Most reassurances answer a worry the genre already supplies, but some first mention the threat they cancel (Section 4.3), which is more typical of reassurance than of denial. In Caffi's medical consultations, by contrast, the patient's concern is already part of the interaction, and the doctor's double negative

serves “to remove possible reasons for concern on the patient’s part” (Caffi, 2007, p. 245). The horoscope producer, with no access to any reader’s worries, posits a worry in order to manage it, and a single negative utterance can do both. It switches on Caffi’s warning light while trying to switch it off (2010, p. 185), in the manner of Tottie’s sender and Hidalgo Downing’s accommodation (Section 2.1), and asks the reader to entertain the threatening representation only to abandon it (Verhagen, 2005, p. 29). The practice resembles the debater’s straw man, in which a negative attaches an invented viewpoint to an opponent and refutes it at once (Roitman, 2017b, pp. 212–213), except that the horoscope producer posits the worry on the reader’s behalf to dispel it, not to defeat a position. What the data document is not an effect on readers but a textual practice, found in a minority of reassurances, of placing threats on record in order to cancel them.

Kötü bir ay değil in (10) negates the negative pole of a scale and leaves the latitude Horn describes (1989, p. 356); it is litotes. *Zorunda değilsin*, *yaşanmayacak* and *boş çıkmayacak* negate propositions rather than scalar predicates and therefore fall outside litotes. Horn’s scalar asymmetry may nevertheless help explain the choice of form. Denying a feared outcome commits the producer to much less than asserting a good one (cf. Roitman, 2017b, p. 242), because negating a negative predicate need not assert its positive counterpart (Horn, 1989, pp. 334–336), and it can leave room to retract an implicated positive (Gotzner & Scontras, 2024, p. 502). At this point reassurance converges with liability reduction, which may explain why seven reassurances also carry a hedging function.

5.4 The bounded status of hedging

Hedging is marginal as a primary function but not as a secondary one, which a single-label scheme would have missed. About half of the secondary cases follow from the rule for *-mAyAbilir*; the rest, identified by the commitment test, show a real but small hedging role (Section 4.6).

These hedges reduce commitment in different ways. The *-mAyAbilir* forms, as in (6), place a possibility operator inside the proposition and leave both outcomes open; Prince et al. would count them as shields, whereas for Hübler a prediction lies outside the assertions that hedges qualify (1983, p. 129). Disclaimers of knowledge, as in (8), withhold commitment in the manner of Prince et al.’s plausibility shields. Liability disclaimers and negative escape conditions, as in (7) and (9), protect the producer against a counterexample. Hübler’s notion of liability (1983, p. 18) covers them, but their speaker-protective aspect is closer to Caffi’s (2007, p. 92) masking and to Channell’s (1994, p. 188) vagueness used “as a safeguard against being later shown to be wrong”. In these data liability reduction thus operates on predictions, directives and reassurances as well as on assertions, which bears out Caffi’s objection that Hübler’s analysis is confined to assertive acts (2007, p. 64). Givón’s observation that negation combined with another irrealis operator “can be used as a softening device” in “both epistemic and deontic modalities” (2018, pp. 115–118) fits the two most productive Turkish patterns, *-mAyAbilir* predictions and negative escape conditions on directives.

In this corpus, then, negative constructions are among the means by which the genre limits its producer’s commitment, typically together with modality and mostly as a secondary function: two thirds

of the hedges accompany another function, most often a prediction or a reassurance. Commitment reduction is not, however, their principal role; that role belongs to the ascriptive, preventive and reassuring functions.

5.5 Turkish forms, functions and source types

Two pairings are grammatical rather than lexical. Negated necessity (*-mAmAlI*) is almost always preventive, and negated possibility (*-mAyAbilir*) always carries commitment reduction (Section 4.4), although the latter partly reflects the coding rule (Section 3.3) and is therefore not independent evidence for it. The scope relations outlined in Section 2.4 are consistent with this distribution. The root reading van Schaaik (2001, p. 82) notes does not occur in the eighteen instances, all forecasts about the reader, so the hedging value of *-mAyAbilir* is a fact about its use in this genre, not about the suffix alone. Backgrounded ascription concentrates in non-finite negation and *-sIz*, embedded below the main assertion and unavailable for denial, whereas finite negation and *değil* often carry reader-directed functions.

Form also varies across the source types more than function does. Tottie found English conversation negating about twice as often as expository writing (1991, p. 17) and attributed the surplus to explicit denials, questions, supports and mental-verb mitigation (pp. 42–43, 315–316). In this corpus it is the written columns that negate most, and they do so with planned advisory constructions (*-mAmAlI*, nominalised directives) rather than with the interactional uses Tottie describes. Medium, planning and producer, however, cannot be separated in this design.

5.6 Generalisation

The data establish a contrast between Turkish digital horoscope texts and one control genre, online news; they do not show that the profile is characteristic of prediction, future reference or digital media. Possibly, communicative purpose and addressee orientation matter more than future reference alone. The control contains forecasts (*yarın yağış beklenmediğini* ‘that no rain is expected tomorrow’, CTRL-15) coded as plain absence, and Chinese newspaper weather commentaries routinely advise readers, often through imperatives (Rundblad & Chen, 2015, pp. 14, 25). This yields a hypothesis for comparative testing. Genres that address a reader about circumstances the reader cannot check at the time (economic forecasting, medical prognosis, advice columns) should show the same redistribution, and genres that report a future without addressing a reader should not.

6 Limitations

The sample is purposive and the number of producers small. Producer could not be controlled for in the written columns, whose source addresses were not retained, so their date and provenance criteria cannot be checked text by text. The news control cannot represent Turkish news reporting as a whole, and part of the preventive and reassuring contrast follows from the difference in communicative purpose (Section 3.1). Agreement was measured against a model rather than a second human coder, and because it is moderate at the fine level (κ = .58), inference rests on the macro level. The reported-speech

and expectation-source fields rest on the author's coding alone, and reported and voiced speech in the horoscope texts were checked on marked instances and a sample. Secondary functions were adjudicated only where primary labels differed, which limits confidence in estimates of multifunctionality. A second human coding of the expectation-source field and a second, reader-addressed control genre are the obvious next steps.

7 Conclusion

Turkish horoscopes negate about twice as often as Turkish news, mainly to ascribe lacks and inabilities, to warn the reader off courses of action and to reassure. News negates less, more often to report absence, and largely in quoted speech. Hedging is seldom the point of a negative.

In a genre addressed to readers who cannot reply, the expectation a negative cancels can be made rather than found: some reassurances introduce the very worry they dispel, and negation more generally constructs a reader whose worries, failings and temptations the text then manages. Coding where cancelled expectations come from makes this visible, and comparison with the model annotator shows that such coding is hardest where it depends on what a text takes for granted.

Online Resources. 1: fine categories, diagnostics, boundary examples, decision tree. 2: seventeen-category distribution by subcorpus; formal type by primary macro function. 3: data file, per-text rates, the author's and the model's codings before adjudication, the adjudication record, the author's reported-speech and expectation-source codes, and the Python scripts that reproduce every figure in the article.

Declarations

Author Contribution

H.K. designed the study, supervised the collection of the corpus, checked and corrected the transcripts, developed the annotation scheme, coded all negation candidates, adjudicated the coding disagreements, carried out the statistical analysis, and wrote and reviewed the manuscript.

Acknowledgement

The author thanks Deniz Can Gökbulut, Orkun Berk Akbulut, Zehra Zena Boztürk and Aslı Aksu for their help with collecting the texts.

Data Availability

The annotation data supporting the findings of this study are included in the supplementary information of this article (Online Resource 3): the data file with all 972 candidate rows, the author's and the model's codings before adjudication, the adjudication record, per-text rates, the reported-speech and expectation-

source codes, and the Python scripts that reproduce every figure. The full texts of the corpus are not publicly available because they reproduce copyrighted material from news websites, astrology websites and social media platforms, but they are available from the author on reasonable request for non-commercial research purposes.

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