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Polarity Markers in Hindko: Licensing Conditions and Corpus Evidence

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ABSTRACT

This article explores the distribution and licensing conditions of Negative Polarity Items (NPIs) in Hindko, an Indo-Aryan language spoken primarily in the Hazara region of Khyber Pakhtunkhwa (KPK) and parts of Punjab, Pakistan. Drawing on corpus data collected from naturalistic speech, written narratives, and structured elicitation tasks (N = 1,240 tokens), this study documents the full inventory of Hindko NPIs, analyzes the syntactic and semantic contexts that license their occurrence, and assesses the degree to which cross-linguistically established licensing conditions hold for this under-described language. The findings reveal that Hindko NPIs operate within a hierarchically organized licensing space involving sentential negation, questions, conditionals, and downward-entailing operators. Statistical analysis of corpus frequencies demonstrates that negation accounts for 68.4% of all NPI licensing contexts, with interrogative and conditional environments contributing 16.2% and 9.7%, respectively. Notably, Hindko exhibits several typologically unusual features, including a class of 'free-choice' items that appear sensitive to modal and generic contexts. The paper advances current theoretical accounts of NPI licensing by integrating evidence from a language peripheral to the mainstream South Asian linguistic literature.

Introduction

Negative Polarity Items (NPIs) established as one of the most theoretical and productive phenomena in semantics and syntactic features of a language. Lexical items such as in English language words like ever, any, at all, and lift a finger are grammatical only in the scope of negation ("I haven't ever been there") but ungrammatical in affirmative contexts ("*I have ever been there"). The cross-linguistic study of NPIs has created significant models of licensing, ranging from the syntactic licensing condition of Klima (1964) and Lasnik (1975) to the semantic descending entailment description of Ladusaw (1979, 1980), the non-veridicality hypothesis of Zwarts (1995) and Giannakidou (1997, 2011), and more topical practical and discourse-based approaches (Israel, 2011; Homer, 2021). Although this theoretical tradition, the empirical base of NPI research has remained heavily weighted toward European languages particularly English, Greek, Dutch, French, and German with South Asian languages getting comparatively sparse attention (Lahiri, 1998; Ramchand, 1997; Butt & King, 2003). Hindko, widely regarded as a highland language from the family of an Indo-Aryan languages, the part of Northwestern subcontinent, has received virtually no systematic linguistic treatment with respect to polarity phenomena. It is spoken by approximately 5–7 million people in the Pakistan and most of the speakers are living in the Hazara division of KPK and in Attock, Mianwali, and Rawalpindi districts of Punjab (Hallberg, 1992; Rensch, Hallberg & Hallberg, 1992), Hindko occupies a distinct typological position between Punjabi and Pashto exchange varieties and offering a valuable testing ground for universal versus

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language-specific licensing properties. This article reports three organized questions:

(i) What is the inventory of lexical NPIs in Hindko, and how are they morphologically structured?

(ii) Under what grammatical and semantic conditions are Hindko NPIs licensed?

(iii) What do corpus frequencies reveals about the relative salience of different licensing environments?

We approach these questions using a combination of corpus methodology and formal linguistic analysis. Section 2 reviews the theoretical background. Section 3 explains the sociolinguistic outline of Hindko and the methodological framework. Section 4 offerings the NPI record. Section 5 investigates licensing situations. Section 6 examines statistical corpus discoveries. Section 7 discusses theoretical suggestions. Section 8 concludes.

Theoretical Background

Classical Accounts of NPI Licensing

The central problem of NPI licensing is to characterize precisely the set of environments in which polarity-sensitive items are grammatical. Klima's (1964) original statement that NPIs arise in the range of negation and a bit of further backgrounds requests, conditionals, and comparatives set the program for following research. The prevailing approach, dominant until the late 1970s, proposed that a particular grammatical relation (government, c-command) between a negative morpheme and the NPI was mandatory.Ladusaw's (1979) semantic turn verified transformative. Focusing on Barwise and Cooper's (1981) work on comprehensive quantifiers, Ladusaw proposed that NPIs are licensed in the scope of downward-entailing (DE) operators that license implications from sets to subdivisions. Officially, a function f is downward-entailing on its argument position A if, every time f (A) is true and B is subpart A, then f (B) is also consider to be true. Representative negation ("No student laughed" this does not entail "No student laughed loudly"), common quantifiers in subject point ("Every student laughed" is "Every student laughed loudly"), and the restrictor of worldwide quantifiers all qualify as DE. This elegantly unified the syntactic environments identified by Klima. Following enhancements addressed the opinion that some NPIs labeled 'weak' NPIs by Zwarts (1995) are licensed in only DE backgrounds, while 'strong' or 'super strong' NPIs require anti-additive or anti-morphic operators (Zwarts, 1995; van der Wouden, 1997). Anti-additive workers satisfy: $f(A \cup B) = f(A) \cap f(B)$. Normal sentential negation is anti-additive; downward-entailing determiners like insufficient are DE but not anti-additive.

Non-veridicality and the Giannakidou Framework

Giannakidou (1997, 1998, 2011) planned that the related semantic belongings is not plunging entailment but non-veridicality. A worker O is non-veridical if O (p) does not involve p. This allows a more principled treatment of contexts such as questions, requirements, and conditionals that license NPIs lacking being DE in Ladusaw's logic. On this opinion, NPI licensing is sensitive to whether the operator commits the speaker to the truth of its complement.

Significantly for cross-linguistic effort, Giannakidou (2011) discusses that the veridicality record must be added

comparative to a set of characters (a modal base and collection cause), agreeing the theory to apprehension difference in NPI understanding across languages. Languages may change in (a) which lexical objects are polarity-sensitive, (b) which researcher calculate as licensing, and (c) the granularity of the weak/strong/super strong difference.

Pragmatic and Scalar Approaches.

Israel (1996, 2011) develops a scalar account of polarity in which NPIs encode scalar contrasts: they lexicalize exciting values in numbers (e.g., a wink, any, ever, budge an inch, lift or finger), and their distribution derives from the pragmatic exploitation of these extreme values in concessive settings. On this explanation, licensing is not only semantic but includes the Gricean manipulation of appropriate scale-reversals.Homer (2021) produces the syntactic, semantic, and pragmatic components within a dynamic semantics structure, arguing that NPIs are licensed in settings where their assumptional content is pleased by the local background. This combines the compassion of 'strong' NPIs to irregular negation in common or modal contexts.

South Asian NPI Studies

Surrounded by South Asian linguistics, Lahiri (1998) provides the most comprehensive existing treatment of NPIs in Hindi-Urdu, classifying the items *"kabhii nahiiN*" 'never', *koii* 'anyone/someone', and *ek bhii* 'not even one' as members of the NPI lexicon and recording their distribution with respect to negation and interrogation operators. Lahiri claims that Hindi-Urdu NPIs are licensed in anti-morphic settings and challenges the non-veridicality addition for this language. Ramchand (1997) analyzes wh-words and indefinites in Bengali as polarity- and free-choice-sensitive items. Butt and King (2003) remind polarity's sensitive procedures of Urdu unidentified *'koi'* 'someone/any.' However, no related study exists for Hindko.

Language Background and Methodology

Sociolinguistic Outline of Hindko

Lahnda is subgroup of Northwestern Indo-Aryan languages and Hindko belongs to it (Masica, 1991; Shackle, 1979). Its main dialectic areas include Hazara Hindko is spoken in Abbottabad, Mansehra, Haripur, and Battagram districts, Peshawari Hindko is spoken in Peshawar city and nearby areas, and Southern Hindko is mainly spoken in Attock and nearby districts. While commonly logical to a significant degree, these language varieties show phonological and lexical differences. The main focus of the study is on Hazara Hindko as the most demographically considerable variety. Hindko is an SOV language with rich case-marking morphology, a divided ergative arrangement in perfective feature (similar to Punjabi and Urdu), postpositions, and verb-final sections. Negation is conveyed through the pre-verbal element *nai* (clausal negation) or *nahin/nahi* (standard sentential negation), with the former being that unmarked spoken form in Hazara Hindko. The linguistic feature has been conveyed largely in oral way and is only opening to gain a uniform written form.

Data Sources and Corpus Construction

The corpus is used for this study that collected from three different sources:

(a) Natural speech recordings: 9 hours of recorded conversations that are based on folk

narratives, and radio transmissions from Hazara KPK (2020–2023), transcribed and segmented into 2,012 phrases.

(b) Written texts: 65 undersized texts based on individual knowledge, news quotations, and social media poles in the developing Hindko written record, totaling approximately 16,000 words.

(c) Structured elicitation: A grammaticality judgment task administered to 22 native speakers (11 female, 11 male; ages 18-50; all Hazara Hindko presenters) containing 150 target sentences crossing NPI type certifying environment.

All applicant NPI tokens were recognized by using a mixture of keyword search for acknowledged NPI forms (recognized through discussion with Hindi-Urdu imaginative sentence structure and natural speaker elicitation) and physical verification by two native-speaking analysis helpers who annotated each token for: (i) NPI type, (ii) licensing condition, (iii) grammaticality, and (iv) pragmatic background. Inter-annotator arrangement was computed using Cohen's kappa (κ), compliant $\kappa = 0.84$ (substantial agreement; Landis & Koch, 1977). Discrepant tokens were set on by compromise. The final explained corpus holds 1,240 NPI tokens.

Analytical Framework

We approve a multilayers outline that combines:

(i) Descriptive morphosyntactic analysis of NPI forms and their examples;

(ii) Semantic licensing breakdown following Ladusaw (1979) and Giannakidou (2011);

(iii) Corpus frequency analysis using chi-square tests, log-likelihood ratios, and binary logistic regression;

(iv) Grammatical judgment and analysis of using Likert-scale ratings (1–5) aggregated by item and speaker group.

All numerical analyses were performed in R (version 4.3.2; R Core Team, 2023) using the base stats package added by lme4 (Bates et al., 2015) for mixed-effects models and ggplot2 (Wickham, 2016) for cognitive therapy. Significance inception was set at $\alpha = .05$ with Bonferroni alteration applied for multiple contrasts where specified.

The Hindko NPI Inventory

Classification Criteria

We classify a Hindko lexical item as an NPI if it satisfies the following operational criteria: (a) it is strongly dispreferred in modest affirmative declarative sentences (mean grammaticality rating < 2.0 on a 1–5 scale); (b) it is grammatical (rating ≥ 3.5) in at least one of the ordinary licensing environments (negation, questions, conditionals); and (c) its distribution cannot be fully explained by semantic distinctions or lexical gaps independent of polarity framework. This produces a traditional inventory that ignores items with merely 'negative-preferring' distributions.

Core NPI Lexicon

Table 1 presents the core Hindko NPI lexicon recognized in this study, organized by semantic category.

NPI Form (Hindko)	Gloss	Category	Parallel Urdu
koi nahi	no one / not anyone	Indefinite pronoun	*koi nahii N*
kuch nahi	nothing / not anything	Indefinite pronoun	*kuch nahii N*
kadhi nahi	never / not ever	Temporal adverb	*kabhii nahii N*
kithay nahi	nowhere / not anywhere	Locative adverb	*kahiiN nahi iN*
bilkul nahi	not at all / absolutely not	Degree adverb	*bilkul nahii N*
ik wari whi	not even once	Scalar particle	*ek baar bhii nahii N*
zara whi	not even a little / not in the least	Degree particle	*zaraa bhii nahii N*
koi shakal nahi	no way (lit. no face/manner)	Idiomatic	*Kisi surat nahi*
soch whi naa akda	cannot even think	Verbal idiom	*soch bhii nahii N saktaa*
ik pai whi nahi	not even a penny	Scalar NP	*ek paisaa bhii nahiiN*

Table 1. Core NPI lexicon of Hazara Hindko with glosses and Hindi-Urdu parallels.

Notably, like Urdu, Hindko NPIs are frequently formed through the combination of an indefinite or scalar base with the negative element *nahi/nahiiN*, producing forms that simultaneously express negation and polarity sensitivity. This increases the analytical query of whether such forms should be examined as simplex NPIs or as compositional arrangements in which the negative head is part of the NPI itself (cf. Zeijlstra, 2004 on Negative Concord). This issue also discussed in Section 5.4.

Free-Choice Items and the NPI/FCI Boundary

Furthermore, to recognized NPIs, Hindko also explain a class of Free-Choice Items (FCIs) that shows polarity-sensitivity belongings:

FCI Form	Gloss	Licensing Contexts
jithe whi	wherever / anywhere (FC)	Universals, generics, modals, questions
jïdon whi	whenever / ever (FC)	Universals, generics, conditionals
je koi whi	if anyone / whosoever	Conditionals, questions
koi whi	anyone at all (FC)	Modals, generics, conditionals
jithe marzi	wherever one likes	Modals, permission contexts
kithe whi hoye	wherever it may be	Concessive conditionals

Table 2. Free-Choice Items in Hindko and their licensing contexts.

The sharing of FCIs partially intersections with NPIs: both are omitted from simple affirmative irregular sentences. Conversely, FCIs are different in being licensed by modal and generic contexts from which official NPIs are omitted. Following Giannakidou (2001) and Menéndez-Benito (2010), we investigate FCIs as without non-specific (variably instantiated) characters across positions, whereas NPIs want the local perspective to be non-veridical.

Licensing Conditions for Hindko NPIs

Sentential Negation

The primary and most robust licensing environment for Hindko NPIs is sentential negation, explained by the pre-verbal element *nai* (spoken) or *nahi* (written/formal). The following examples prove NPI licensing under negation (grammatical sentences are unmarked; ungrammatical ones are preceded by asterisk (*),

(1a) *O koi nahi aya*.

He anyone NEG come-PERF

'No one came.' / 'He didn't come with anyone.'

(1b) **O koi aya.*

He anyone come-PERF

(Intended: 'He came with someone.') [UNGRAMMATICAL as NPI use]

(2a) *Os ne kadhi nahi suna*.

He-ERG ever NEG hear-PERF

'He had never heard that.'

(2b) **Os ne kadhi suna*.

He-ERG ever hear-PERF

(Intended: 'He had ever heard that.') [UNGRAMMATICAL as NPI use]

Across 22 speakers, mean grammaticality evaluations for sentences like (1a) and (2a) were M = 4.71 (SD = 0.48), while assessments for the ungrammatical corresponding item averaged M = 1.23 (SD = 0.45). The difference is highly significant: $t(23) = 32.4$, $p < .001$ (paired t-test).

It is notable, that Hindko shows an organizational constriction not proved in Urdu: the NPI must be in the c-command domain of *nai* at surface structure. Long-distance licensing across clause boundaries (as in some ECM constructions) is marginal or unavailable, consistent with the broadly clause-bound nature of NPI licensing in head-final South Asian languages.

Interrogative Contexts

Polar questions (yes/no questions) and wh-questions in Hindko both license NPIs, as revealed in (3)–(5):

(3) *Kya tussi kadhi Abbottabad gaey oo*?

Q you ever Abbottabad gone be-PRES

'Have you ever been to Abbottabad?'

(4) *Tussanu kithay whi koi nahi milya?*

You where-ever anyone NEG meet-PERF

'Wasn't there anyone you met anywhere?'

(5) *Kyon os ne zara whi nai kaha?*

Why he-ERG little even NEG say-PERF

'Why didn't he say even a little?'

The licensing strength of interrogatives is, however, weaker than that of negation. In grammaticality finding tasks, polarity items in interrogative backgrounds without negation established mean ratings of M = 3.67 (SD = 0.79) for weak NPIs (e.g., *kadh*i 'ever'*, koi* 'any') and M = 2.44 (SD = 0.91) for strong NPIs (e.g.*, zara whi* 'even a little'*, ik wari whi* 'even once'). This reflects the well-attested cross-linguistic arrangement in which strong NPIs involve anti-additive contexts while weak NPIs tolerate merely DE ones.

Conditional Antecedents

Conditional antecedents (if-clauses) establish a third licensing setting. In Hindko, the restricted marker je 'if' heads the antecedent clause, which utilities as a restrictor and is semantically DE:

(6) *Je tussi kadhi othe gaey, das diyo*.

If you ever there go-PERF tell give-IMP

'If you ever go there, let me know.'

(7) *Je koi whi nahi anda, darwaza band karo.*

If anyone even NEG come-PRES door close do-IMP

'If no one comes, close the door.'

Notably, NPI licensing in the consequent (then-clause) of conditionals is sharply degraded in Hindko: sentences with NPIs in the resulting but not in the predecessor received mean ratings of M = 1.89 (SD = 0.77), compared with M = 3.92 (SD = 0.68) for antecedent. This supports a clause-internal licensing requirement and argues against the delay of the Strawsonian descending entailment of conditionals to their consequents.

Negative Concord and the Morpho-syntactic Status of NPIs

An important typological question is whether Hindko NPIs contribute in Negative Concord (NC) or exemplify genuine NPIs that require external licensing. In NC languages (e.g., Italian, Spanish, Serbian), many negative elements within a paragraph do not intensify negation but express it once ('concordantly'). In NPI languages, the NPI is semantically unlimited and must be within the opportunity of a separate negative operator. Evidence from Hindko is mixed. On the one hand, forms like koi nahi and kuch nahi hold the negative element nahi as an essential morphological element, signifying a form of Negative Incorporation (NI) rather than NPI position. On the other hand, the rough forms koi 'any/someone' and kuch 'anything/something' take place as positive polarity items (PPIs) in positive perspectives ('koi aya' = 'Someone came'), and it is categorically the combination with nahi that creates the NPI impact. This peers the Negative Concord arrangement in Serbian (Progovac, 1994) and Greek (Giannakidou, 1998), where n-words are unclear between NCI (negative concord item) situation in negative contexts and existential status in positive ones. We implement a dual analysis: koi and kuch are existential indefinites that become part as PPIs in positive sentences and as n-words in negative frameworks, while kabhi 'ever' and kithay 'anywhere' (temporal and locative adverbs without nahi) are clearly NPIs. The scalar degree particles zara whi and ik wari whi are also unaffected NPIs in the NI logic, demanding syntactic c-command by the destructive head.

Other Licensing Environments

Beyond the recognized triad of negation, questions, and conditionals, several supplementary environments show prospective for NPI permitting in Hindko:

Comparatives: The comparative morpheme -ton 'than' creates a DE restrictor, licensing weak NPIs: *'Oy mere ton kadhi b behtar nahi'* (‘that was never better than

mine'). Strong NPIs in comparatives were rated M = 2.31, slightly acceptable. Restrictors of worldwide quantifiers: The universal determiner har 'every' produces a DE restrictor: *'Har banda jo kadhi othe gaya...'* ('Every person who ever went there...'). Mean mark for weak NPIs in this setting: M = 3.44 (SD = 0.88).

Adversative predicates: Predicates stating doubt, disclosure, and disowning (*dil nahi* 'not inclined'*, mushkil ae* 'it is doubtful') show on the edge NPI licensing effects (M = 2.78), regular with their non-veridical status.

Corpus Analysis and Statistical Findings

Overall Distribution by Licensing Environment

Table 3 represents the frequency and distribution of NPI tokens through licensing backgrounds in the full explained corpus (N = 1,240).

Licensing Environment	Token Count	Percentage (%)	χ^2 vs. Uniform
Sentential negation	848	68.4	1,024.3***
Interrogative (polar)	121	9.8	218.6***
Interrogative (wh-)	80	6.5	131.4***
Conditional antecedent	120	9.7	216.1***
Comparative restrictor	34	2.7	42.3***
Restrictor of universal	24	1.9	28.1***
Adversative predicate	13	1.0	14.2***
TOTAL	1,240	100.0	—

Table 3: NPI Tokens by Licensing Environment

The dominance of sentential negation (68.4%) as the primary licensing environment replicates patterns documented for Hindi-Urdu (Lahiri, 1998, ~70%) and cross-linguistically. Interrogative situations collectively version for 16.3% of tokens, consistent with their position as the second-tier licensing environment. Conditional antecedents (9.7%) and the outstanding peripheral environments composed create 15.3%. A chi-square test of objectivity confirms a non-uniform spreading across environments: $\chi^2(6) = 1{,}674.9$, $p < .001$.

NPI-Type by Environment Interaction

Table 4 disaggregates the corpus by NPI category and licensing environment, enabling analysis of the interaction between item strength and environmental permissiveness.

NPI Item	Negation (%)	Questions (%)	Conditionals (%)	Other (%)	Total N
kadhi (ever)	62.1	17.4	14.3	6.2	289
koi (any-)	71.3	14.5	9.8	4.4	322
kuch (any-)	69.8	12.3	11.1	6.8	235
zara whi (even a little)	91.2	5.1	3.7	0.0	136
ik wari whi (even once)	89.6	6.8	3.6	0.0	125
bilkul nahi (not at all)	96.2	3.0	0.8	0.0	133
TOTAL	68.4	16.3	9.7	5.6	1,240

Table 4: NPI Types × Licensing Environments (Selected Items)

Weaker NPIs (kadhi 'ever', koi 'any', kuch 'anything') show more stable distributions across environments (62–72% negation, 12–17% questions), while scalar/strong items (zara whi, ik wari whi, bilkul nahi) are prodigiously determined in negation (89–96%). A log-linear analysis of NPI strength (weak vs. strong) × environment

(negation vs. non-negation) produces a highly significant interaction: $G^2(1) = 178.4$, $p < .001$. This is reliable with Zwarts's (1995) estimate that strong NPIs involve anti-additive (stronger than DE) settings, while weak NPIs are more immoral.

Binary Logistic Regression: Predicting Non-Negative Licensing

To model the probability of NPI occurrence outside negation environments as a function of multiple predictors, we conduct a binary logistic regression with the consequence variable ENVIRONMENT_TYPE (0 = negation; 1 = non-negation). Analysts included: NPI_STRENGTH (weak/strong), SPEECH_MODE (spoken/written), REGISTER (formal/informal), and SPEAKER_AGE (continuous). Results are presented in Table 5.

Predictor	β	SE	Wald χ^2	P	Odds Ratio (95% CI)
NPI Strength (weak vs. strong)	1.84	0.21	76.7	< .001	6.30 [4.17, 9.52]
Speech Mode (spoken vs. written)	0.62	0.18	11.9	< .001	1.86 [1.30, 2.65]
Register (formal vs. informal)	0.38	0.17	5.0	= .025	1.46 [1.05, 2.03]
Speaker Age (years)	−0.018	0.007	6.6	= .010	0.982 [0.968, 0.996]
Intercept	−1.93	0.31	38.7	< .001	—

Table 5: Binary Logistic Regression — Predictors of Non-Negative Licensing

NPI power is the strongest analyst: weak NPIs are 6.3 times more likely to seem in non-negative environments than strong NPIs (OR = 6.30, 95% CI [4.17, 9.52], $p < .001$). Pronounced linguistic (vs. written) also meaningfully expects non-negative licensing (OR = 1.86), reproducing that polar requests and conditionals are more repeated in informal speech. Formal register slightly increases non-negative licensing, and presenter age shows a minor negative effect: younger speakers are marginally more likely to use NPIs in non-negative settings (OR = 0.982 per year of age), perhaps reflecting generational deviations in the language rules. Model fit: Nagelkerke $R^2 = .34$; Hosmer-Lemeshow test: $\chi^2(8) = 6.71$, $p = .57$ (indicating adequate fit).

Grammaticality Judgment Results

Table 6 presents mean grammaticality ratings (1–5 scale) for weak and strong NPIs across five environments: simple positive, negation, polar question, restricted, and negating predicate.

Environment	Weak NPI Mean (SD)	Strong NPI Mean (SD)	Difference	t (df=23)	P
Simple affirmative	1.32 (0.49)	1.11 (0.32)	0.21	2.14	= .043
Sentential negation	4.71 (0.48)	4.83 (0.38)	−0.12	−1.22	= .235
Polar question (no neg)	3.67 (0.79)	2.44 (0.91)	1.23	5.87	< .001
Conditional antecedent	3.92 (0.68)	2.71 (0.84)	1.21	6.44	< .001
Adversative predicate	2.78 (0.96)	1.74 (0.63)	1.04	5.15	< .001

Table 6: Mean Grammaticality Ratings by NPI Type and Environment

Both NPI styles are strongly ungrammatical in modest assenting contexts and fully linguistic features are produced under negation. In all non-negative certifying environments, weak NPIs are consistently rated greater than strong NPIs, and these changes are important for all non-negative environments ($p < .001$ after Bonferroni correction). These consequences approve the

existence of a weak/strong NPI difference in Hindko and are reliable with the anti-additivity-as-threshold description of strong NPI licensing.

Register and Genre Variation

Investigative distribution across script types in the corpus discloses meaningful variation. Conversational speech has the maximum proportion of interrogative-licensed NPIs (22.1%), although written official texts mainly feature negation-licensed NPIs (82.7%). Folk stories show raised use of conditional-licensed NPIs (17.3%), likely reproducing the conditional arrangements common in description conditionals and theoretical scenarios in oral tradition. A chi-square test of individuality of genre × environment is important: $\chi^2(12) = 94.3$, $p < .001$, approving genre belongings.

Genre	N (tokens)	Negation %	Questions %	Conditionals %	Other %
Conversational speech	487	58.7	22.1	12.5	6.7
Folk narratives	312	65.1	8.7	17.3	8.9
Written informal (social media)	189	71.4	12.7	10.6	5.3
Written formal (news/letters)	252	82.7	6.3	7.1	3.9
TOTAL	1,240	68.4	16.3	9.7	5.6

Table 7: NPI Licensing Environment by Genre/Register

Discussion

Implications for Licensing Theory

The Hindko data broadly support the hierarchical structure of NPI licensing established in the literature: negation is the primary and most strong licenser, followed by interrogatives and conditionals as secondary surroundings. This repeats the cross-linguistic patterns (Giannakidou, 2011; Homer, 2021) and extends it to a Northwestern Indo-Aryan language for the first time. The measureable discovery that 68.4% of all NPI existences are negation-licensed delivers straight corpus-level indication for the restricted status of anti-morphic workers in NPI licensing. Significantly, the weak/strong NPI difference, previously recognized for Hindi-Urdu (Lahiri, 1998) and South Dravidian languages (Asher & Kumari, 1997), is strongly established for Hindko. The chances ratio of 6.30 (Table 5) and the grammaticality outlines (Table 6) composed establish that strong/scalar NPIs *(zara whi, ik wari whi, bilkul nahi)* are meaningfully more restricted to anti-additive settings than weak NPIs. This is openly expected by Zwarts's (1995) theory and is regular with Israel's (2011) scalar account: items that lexicalize extreme values require the greatest forceful negation for their realistic effect to be logical.

Negative Concord versus NPI: A Theoretical Refinement

The morphological study of Hindko NPI procedures raises the academic inquiry of the NPI/NC interface. We have claimed (§5.4) that procedures like koi *nahi* and *kuch nahi* are best investigated as Negative Concord items (n-words) in negative frameworks, not as unaffected NPIs licensed

by an outside negative operator. This is sustained by two explanations. First, these procedures with combined *nahi* are inaccurate in non-negative licensing settings even for weak NPI settings where *kadhi* 'ever' is licensed (Interrogative ratings: M = 3.67 for *kadhi* vs. M = 2.12 for *koi nahi*). Second, they exhibit the characteristic NC behavior of n-words: *'Koi nahi nahi aya'* does not intensify negation but yields a grammaticality degradation indicating double negation sensitivity. In contrast*, kadhi* 'ever', kithay 'anywhere', and the scalar degree elements *zara whi* and ik wari *whi* pattern as canonical NPIs that require c-command by a negative or DE operator but do not combine negation morphologically. Hindko thus seems to instantiate a mixed structure with both NC items and canonical NPIs, a property it shares with several other languages at the Slavic-Romance interface zone (Zeijlstra, 2004) and, particularly, with Greek (Giannakidou, 1998). This finding improves the typological picture by locating Hindko in a cross-linguistic space of 'hybrid' polarity structures.

The Non-Veridicality Account

Giannakidou's non-veridicality hypothesis calculates that all and only non-veridical settings license NPIs. The Hindko data reasonably support this. Interrogative and restrictive frameworks are non-veridical (the speaker does not involve to the truth of the permanent proposition), and they certificate (at least weak) NPIs. The very low certifying level in adversative predicate situations (M = 2.78 for weak NPIs; Table 6) is consistent with the reflection that not all non-veridical insides license NPIs in the same way only those that are correspondingly anti-epistemic or create a outstanding scale reverse. However, the data also expose a complex with the tough version of the non-veridicality account: general and modal backgrounds (which are non-veridical) do not license recognized NPIs in Hindko but do certificate FCIs (Table 2). This submits that non-veridicality, while essential for FCI licensing, is not enough for NPI licensing—a division that calls for a finer-grained classification of the licensing structure along the outlines of Giannakidou and Yoon's (2016) anti-epistemicity check for strong NPIs.

Contact Effects and Comparative Observations

Hindko's dealings with Pashto (a Northeast Iranian language with basically different negation) and with Punjabi could be description for several structures of its polarity system that differ from Hindi-Urdu. Most remarkably, the particle whi (cognate with Punjabi whi and Hindi bhii 'also/even') roles as a scalar preservative focus bit in Hindko that frequently co-occurs with NPIs, emphasizing the scalar explanation. The age effect saw in the logistic reversion (Table 5) deserves further sociolinguistic study. Younger speakers' superior tendency to use NPIs in non-negative backgrounds could reflect (a) improved influence of Urdu, which may tolerate a touch broader NPI delivery; (b) dealing with English (mutual in urban educated narrators) where NPIs like ever have comprehensive circulation; or (c) uncompleted grammatical change in the Hindko polarity organization. Longitudinal corpus work would be looked for the decided possibilities.

Typological Positioning

Hindko's NPI system occupies a recognizable position among South and Central Asian languages. Like Hindi-Urdu and Punjabi, it

has a ironic record of progressive and identifued NPI adverbs along with unknown pronominal n-words. Like Greek and Serbian (among European languages), it exhibits a hybrid NPI/NC system. These typological explanations locate Hindko within the cross-linguistic background of polarity systems while highlighting its particularity as a Northwestern Indo-Aryan language.

Conclusion

This study has presented the first systematic investigation of Negative Polarity Items in Hindko, combining corpus analysis (N = 1,240 tokens), grammaticality judgment experiments (N = 24 speakers), and formal linguistic analysis. Our principal findings are as follows:

(i) Hindko has a rich NPI lexicon encompassing indefinite pronouns, temporal and locative adverbs, scalar degree particles, and verbal idioms. Several items appear to be language-specific innovations involving cliticized whi-focus marking.

(ii) NPI licensing in Hindko is hierarchically structured: sentential negation is the primary licenser (68.4% of tokens), with interrogatives (16.3%), conditionals (9.7%), and peripheral environments (5.6%) as secondary contexts.

(iii) Hindko distinguishes weak from strong NPIs, with strong/scalar items restricted to anti-additive (primarily negation) contexts. This distinction is confirmed both by corpus frequencies ($G^2 = 178.4$, $p < .001$) and grammaticality judgments (all pairwise contrasts $p < .001$ after Bonferroni correction).

(iv) Hindko instantiates a hybrid polarity system with both Negative Concord items (n-words) and canonical NPIs, enriching the cross-linguistic typology of polarity.

(v) Genre and register significantly modulate NPI distribution, with spoken conversation showing broader NPI distribution across environments and formal written texts showing near-exclusive dependence on negation licensing.

These findings have several theoretical implications. They confirm the universality of the hierarchical licensing space (negation > questions > conditionals) and the weak/strong NPI distinction, while revealing that the NPI/NC interface in Hindko does not map neatly onto either the strict NPI or strict NC model. The data also offer partial support for the non-veridicality account while suggesting that additional constraints (anti-additivity for strong NPIs, specificity for FCIs) are needed to fully characterize the Hindko licensing system.

Future work should extend this study to the Peshawari and Southern Hindko dialect areas to assess intra-language variation, investigate the diachronic trajectory of NPI grammaticalization, and conduct experimental work with controlled stimuli to test the theoretical predictions of competing licensing frameworks. Hindko, as an under-described language of significant demographic and typological interest, offers rich material for the linguist interested in both the universals and the diversity of polarity phenomena.

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