On free choice bất kỳ in Vietnamese

Tue Trinh

University of Nova Gorica

The 6th International Symposium on Vietnamese Linguistics
Ca' Foscari University of Venice
27/02/2026

1 Groundwork

2 Vietnamese

3 Loose ends

The word *any* means the same as *a* but has a more limited distribution

(1) a. John did not read a book$_{a,b,c}$ $\neg(a \vee b \vee c)$

b. John did not read any book$_{a,b,c}$

(2) a. John read a book$_{a,b,c}$ $a \vee b \vee c$

b. #John read any book$_{a,b,c}$

Klima (1964), Fauconnier (1975), Ladusaw (1979), Gajewski (2008), Chierchia (2013)

(3) ANY-Condition
A DP of the form [any NP_D] is acceptable only if it is dominated by a sentence S which becomes **weaker** when D is replaced by a **subset** D' of D

This means that [any $book_{a,b,c}$] is acceptable only if it is contained in a sentence S which verifies the following

(4) $[_S$ ... any $book_{a,b,c}$ ... $] \Rightarrow [_S$ ... any $book_{a,b,c}$ ... $]$
$\Rightarrow [_S$ ... any $book_{a,b}$ ... $]$
$\Rightarrow [_S$ ... any $book_{a,c}$ ... $]$
$\Rightarrow [_S$ ... any $book_{b,c}$ ... $]$
$\Rightarrow [_S$ ... any $book_{a}$ ... $]$
$\Rightarrow [_S$ ... any $book_{b}$ ... $]$
$\Rightarrow [_S$ ... any $book_{c}$ ... $]$

Kadmon and Landman (1993), Crnič (2019)

(5) $\underbrace{\text{John did not read any book}_{a,b,c}}_{\neg(a \vee b \vee c)} \Rightarrow \underbrace{\text{John did not read any book}_{a,b}}_{\neg(a \vee b)}$

(6) $\underbrace{\text{John read any book}_{a,b,c}}_{a \vee b \vee c} \not\Rightarrow \underbrace{\text{John read any book}_{a,b}}_{a \vee b}$

There are counter-examples to the ANY-Condition

(7) #not everyone read any book$_{a,b,c}$
even though: $\neg$(everyone read $a \vee b \vee c$) $\Rightarrow$ $\neg$(everyone read $a \vee b$)

(8) John is allowed to read any book$_{a,b,c}$
even though: $\Diamond(a \vee b \vee c) \not\Rightarrow \Diamond(a \vee b)$

Vendler (1967), Chierchia (2013)

We assume that sentences must be parsed with a covert exhausfication operator, *exh*, which is akin to *only*

(9) #some Italians come from a warm country

$$\underbrace{[_{S'}\ exh\ \underbrace{[_{S}\ \text{some Italians come from a warm country}]}_{some}]}_{some \wedge \neg all}$$

(10)#John has an even number of children. He has three children.

$$\underbrace{[_{S'}\ exh\ \underbrace{[_{S}\ \text{He has three children}]}_{three}]}_{three \wedge \neg four}$$

Krifka (1995), von Fintel and Fox (2002), Fox (2007), Magri (2009), Chierchia et al. (2012)

(11) $exh(S) = S \wedge \bigwedge\{\neg S' \mid S' \in IE(Alt(S), S) \cap R\}$

a. $Alt(S) = \{S' \mid S' \text{ is an alternative of } S\}$

b. $R = \{S' \mid S' \text{ is relevant}\}$

c. $IE(C, S) = \bigcap\{M \mid M \text{ is a maximal subset of } C \text{ such that } \{\neg S' \mid S' \in M\} \cup \{S\} \text{ is consistent}\}$

(12) $exh(S) \approx S$ is the best answer to the question under discussion

Fox (2007), Chierchia et al. (2012)

Obligatory *exh* may prevent S from satisfying the ANY-Condition.

(13) $\underbrace{[_{S'}\ exh\ \underbrace{[_{S}\ \text{not everyone read any book}_{a,b,c}]]}_{\neg(\text{everyone read } a \vee b \vee c)}}_{\neg(\text{everyone read } a \vee b \vee c) \wedge (\text{someone read } a \vee b \vee c)}$

Recursive *exh* may enable S to satisfy the ANY-Condition.

(14) $\underbrace{[_{S''}\ exh\ \underbrace{[_{S'}\ exh\ \underbrace{[_{S}\ \text{John is allowed to read any book}_{a,b,c}]]}_{\Diamond(a \vee b \vee c)}}_{\Diamond(a \vee b \vee c)}]}_{\Diamond a \wedge \Diamond b \wedge \Diamond c}$

Fox (2007), Chierchia (2013)

1 Groundwork

2 **Vietnamese**

3 Loose ends

Vietnamese has two forms of [any NP]: simple and complex

(15) a. quyển sách nào
book any

b. bất kỳ quyển sách nào
BK book any

Bruening and Tran (2006), Trinh (2020)

When there is no negation, the complex form is required.

(16) a. #Nam đọc quyển sách nào
Nam read book any

b. Nam đọc bất kỳ quyển sách nào
Nam read BK book any

(17) a. Nam không đọc quyển sách nào
Nam not read book any

b. Nam không đọc bất kỳ quyển sách nào
Nam not read BK book any

(18) a. #Nam được đọc quyển sách nào
Nam may read book any

b. Nam được đọc bất kỳ quyển sách nào
Nam may read BK book any

Neither form allows the plural marker *những*

(19) a. #Nam đọc những quyển sách nào
Nam read PL book any

b. #Nam đọc bất kỳ những quyển sách nào
Nam read BK PL book any

(20) a. #Nam không đọc những quyển sách nào
Nam not read PL book any

b. #Nam không đọc bất kỳ những quyển sách nào
Nam not read BK PL book any

(21) a. #Nam được đọc những quyển sách nào
Nam may read PL book any

b. #Nam được đọc bất kỳ những quyển sách nào
Nam may read BK PL book any

When *những* is replaced by a numeral, the complex form is required, and no negation is allowed

(22) a. #Nam đọc hai quyển sách nào
Nam read two book any

b. %Nam đọc bất kỳ hai quyển sách nào
Nam read BK two book any

(23) a. #Nam không đọc hai quyển sách nào
Nam not read PL book any

b. #Nam không đọc bất kỳ hai quyển sách nào
Nam not read BK PL book any

(24) a. #Nam được đọc hai quyển sách nào
Nam may read PL book any

b. Nam được đọc bất kỳ hai quyển sách nào
Nam may read BK PL book any

(25) a. book = {a, b, c}
b. PL book = {ab, ac, bc, abc}
c. two book = {ab, ac, bc}

(26) a. $Alt(\text{book}_D) = \{\text{book}_{D'} \mid D' \subseteq D\}$
b. $Alt(\text{PL book}_D) = \{\text{PL books}_{D'}, \text{book}_{D'} \mid D' \subseteq D\}$
c. $Alt(\text{two book}_D) = \{\text{two book}_{D'}, \text{book}_{D'} \mid D' \subseteq D\}$
d. $Alt(\text{any NP}) = \{\text{any } X \mid X \in Alt(\text{NP})\}$

(27) *bất kỳ* indicates a second *exh*

Nguyễn (1975), Trinh (2020)

To explain: when there is no negation, the complex form is required

(28) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam read any book}_{a,b,c}]}_{a \vee b \vee c}]]$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{a \vee b \vee c}$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{a \wedge b \wedge c}$

a. S' = #Nam đọc quyển sách nào
b. S'' = Nam đọc bất kỳ quyển sách nào

(29) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam may read any book}_{a,b,c}]}_{\Diamond(a \vee b \vee c)}]]$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\Diamond(a \vee b \vee c)}$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\Diamond a \wedge \Diamond b \wedge \Diamond c}$

a. S' = #Nam được đọc quyển sách nào

b. S'' = Nam được đọc bất kỳ quyển sách nào

(30) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam not read any book}_{a,b,c}]}_{\neg(a \vee b \vee c)}]]$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\neg(a \vee b \vee c)}$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\neg(a \vee b \vee c)}$

a. S' = Nam không đọc quyển sách nào

b. S'' = Nam không đọc bất kỳ quyển sách nào

To explain: neither form allows pluralization

(31) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam read any PL book}_{a,b,c}]}_{ab \vee ac \vee bc \vee abc}]]$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{(ab \vee ac \vee bc) \wedge \neg abc}$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{(ab \vee ac \vee bc) \wedge \neg abc}$

a. S' = #Nam đọc những quyển sách nào

b. S'' = #Nam đọc bất kỳ những quyển sách nào

(32) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam may read any PL book}_{a,b,c}]}_{\Diamond(ab \vee ac \vee bc \vee abc)}]]$

$\underbrace{\underbrace{\quad\quad}_{\Diamond(ab \vee ac \vee bc) \wedge \neg\Diamond abc}}_{\Diamond(ab \vee ac \vee bc) \wedge \neg\Diamond abc}$

a. S' = #Nam được đọc những quyển sách nào

b. S'' = #Nam được đọc bất kỳ những quyển sách nào

(33) $[_{S''}\ exh\ [_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam not read any PL book}_{a,b,c}]}_{\neg(ab \vee ac \vee bc \vee abc)}]]$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\neg(ab \vee ac \vee bc \vee abc) \wedge (a \vee b \vee c)}$

$\underbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}_{\neg(ab \vee ac \vee bc \vee abc) \wedge (a \vee b \vee c)}$

a. S' = #Nam không đọc những quyển sách nào

b. S'' = #Nam không đọc bất kỳ những quyển sách nào

To explain: when there is a numeral, the complex form is required but no negation is allowed

(34) $\underbrace{[_{S''}\ exh\ \underbrace{[_{S'}\ exh\ \underbrace{[_{S}\ \text{Nam read any two book}_{a,b,c}]}_{ab \vee ac \vee bc}]}_{ab \vee ac \vee bc}]}_{ab \wedge ac \wedge bc}$

a. S' = #Nam đọc hai quyển sách nào

b. S'' = %Nam đọc bất kỳ hai quyển sách nào

(35) $[_{S''}\ exh\ [_{S'}\ exh\ \overbrace{\overbrace{[_{S}\ \text{Nam may read any two book}_{a,b,c}]}^{\Diamond(ab \vee ac \vee bc)}}^{\Diamond(ab \vee ac \vee bc)}]]$

$\overbrace{\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad}^{\Diamond ab \wedge \Diamond ac \wedge \Diamond bc}$

a. S' = #Nam được đọc hai quyển sách nào

b. S'' = Nam được đọc bất kỳ hai quyển sách nào

(36) $[_{S''}\ exh\ [_{S'}\ exh\ \overbrace{\overbrace{\overbrace{[_S\ \text{Nam not read any two book}_{a,b,c}]}^{\neg(ab \vee ac \vee bc)}}^{\neg(ab \vee ac \vee bc) \wedge (a \vee b \vee c)}}^{\neg(ab \vee ac \vee bc) \wedge (a \vee b \vee c)}]]$

a. S' = #Nam không đọc hai quyển sách nào
b. S'' = #Nam không đọc bất kỳ hai quyển sách nào

1 Groundwork

2 Vietnamese

3 **Loose ends**

(37) a. %Nam đọc bất kỳ hai quyển sách nào
Nam read BK two book any

b. Nam được đọc bất kỳ hai quyển sách nào
Nam may read BK two book any

(38) $\underbrace{\text{Nam read BK two book any}}_{ab \wedge ac \wedge bc} = \underbrace{\text{Nam read BK book any}}_{a \wedge b \wedge c}$

(39) $\underbrace{\text{Nam may read BK two book any}}_{\Diamond ab \wedge \Diamond ac \wedge \Diamond bc} \neq \underbrace{\text{Nam may read BK book any}}_{\Diamond a \wedge \Diamond b \wedge \Diamond c}$

$\rightarrow$ Manner?

(40) A: $\underbrace{\text{Nam đọc hai quyển sách nào?}}_{Q=\{ab,ac,bc\}}$

B: $\underbrace{\text{Nam không đọc hai quyển sách nào cả!}}_{\neg(ab \vee ac \vee bc)\ \cancel{\wedge(a \vee b \vee c)}}$

Bruening, Benjamin, and Thuan Tran. 2006. Wh-questions in Vietnamese. Journal of East Asian Linguistics 15:319–341.

Chierchia, Gennaro. 2013. Logic in Grammar. Oxford: Oxford University Press.

Chierchia, Gennaro, Danny Fox, and Benjamin Spector. 2012. The grammatical view of scalar implicatures and the relationship between semantics and pragmatics. In Semantics: An International Handbook of Natural Language Meaning, ed. Paul Portner, Claudia Maienborn, and Klaus von Heusinger, 2297–2332. Berlin: De Gruyter.

Crnič, Luka. 2019. Any: Logic, likelihood, and context. Language and Linguistic Compass 13:1–20.

Fauconnier, Gilles. 1975. Pragmatic scales and logical structure. Linguistic Inquiry VI:353–376.

von Fintel, Kai, and Danny Fox. 2002. Pragmatics in Linguistic Theory. MIT Classnotes.

Fox, Danny. 2007. Free choice disjunction and the theory of scalar implicatures. In Presupposition and Implicature in Compositional Semantics, ed. Uli Sauerland and Penka Stateva, 71–120. Palgrave-Macmillan.

Gajewski, Jon. 2008. NPI *any* and connected exceptive phrases. Natural Language Semantics 16:69–110.

Kadmon, Nirit, and Fred Landman. 1993. *Any*. Linguistics and Philosophy 16:353–422.

Klima, Edward S. 1964. Negation in English. In The Structure of Language: Readings in the Philosophy of Language, ed. Jerry A. Fodor and Jerrold J. Katz, 246–323. Englewood Cliffs: Prentice Hall.

Krifka, Manfred. 1995. The semantics and pragmatics of polarity items. Linguistic Analysis 25:209–257.

Ladusaw, William. 1979. Polarity Sensitivity as Inherent Scope Relations. Doctoral Dissertation, University of Texas Austin.

Magri, Giorgio. 2009. A theory of individual-level predicates based on blind mandatory scalar implicatures. Natural Language Semantics 17:245–297.

Nguyễn, Tài Cẩn. 1975. Từ loại danh từ trong tiếng việt hiện đại. Hanoi: Nhà xuất bản Khoa học Xã hội.

Trinh, Tue. 2020. Bipartite exhaustification: Evidence from Vietnamese. In Monotonicity in Logic and Language (TLLM 2020), ed. Dun Deng, Fenrong Liu, Mingming Liu, and Dag Westerståhl, 207–216. Berlin: Springer.

Vendler, Zeno. 1967. Linguistics in philosophy. Ithaca: Cornell University Press.