

Scalar Implicature in English: A Pragmatic Investigation of Quantifiers in Natural Discourse

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Abstract

This study aims to investigate scalar implicature as it relates to the use of quantitative language in everyday speech. According to Grice's Cooperative Principle, Horn's Neo-Gricean Approach, and Levinson's Generalized Conversational Implicature, scalar implicature occurs when a speaker uses a weaker scalar expression that leads the hearer to infer a stronger unstated meaning. The research examines quantitative terms/expressions such as "all", "most", "many", "some", and "few"; these terms frequently convey conversational implicature when used or interpreted by speakers and listeners. A qualitative descriptive research methodology was used to analyze all of the naturally occurring spoken and written data obtained from conversations, interviews, media discourse, online communication, and literary texts. Scalar implicature can be very context-dependent, and if the context changes, so may the inferred meaning, as determined by the speaker and the hearer, respectively. This study contributes to the existing body of pragmatic research by providing a discourse-based analysis of scalar implicature in real-life situations of English conversations.

Keywords: Scalar Implicature; Pragmatics; Quantification; Conversational Implicature; Natural Discourse.

الإستلزام المترج في اللغة الإنكليزية: دراسة تداولية لأدوات التحليل الكمي في الخطاب الطبيعي

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المستخلص

تهدف هذه الدراسة إلى دراسة الإستلزام المترج في اللغة الإنكليزية وعلاقته بإستخدام اللغة الكمية في الكلام اليومي. فوفقاً لمبدأ (غرايس) التعاوني ومنهج (هورن نيو-جرايس) والإستلزام الحوارية ل (ليفنسون). إذ يحدث الإستلزام المترج عندما يُعبّر المتحدث عن جملة بتعبير قياسي أضعف مما يدفع المُستمع إلى إستنتاج معنى أقوى. يتناول البحث المصطلحات والتعبير الكمية مثل: "الكل"، "معظم"، "كثير"، "بعض" و "قليل". إذ غالباً ماتوفر هذه المصطلحات استلزاما حوارياً عند

إستخدامها أو تفسيرها من قبل المتحدثين أو المستمعين. وإطبقت هذه الدراسة منهجية بحث وصفية نوعية لتحليل جميع البيانات الشفوية والمكتوبة التي تم الحصول عليها بشكل طبيعي من: المحادثات و المقابلات و الخطاب الإعلامي و التواصل عبر الإنترنت و النصوص الأدبية. فقد يكون الإستلزام المتدرج شديد الارتباط بالسياق ، فإذا تغير السياق قد يتغير المعنى المُستنتج وفقاً لما يُحدده المستمع والمتحدث على التوالي. وتسهم هذه الدراسة في إثراء البحث التداولي القائم من خلال تقديم تحليل قائم على الخطاب للدلالة الكمية في سياق المحادثات الإنكليزية الواقعية.

الكلمات المفتاحية: الاستلزام المتدرج، التداولية، التقدير الكمي، الاستلزام الحوارية، الخطاب الطبيعي.

Introduction

Meaning is often conveyed by language users well beyond what is stated explicitly. One pragmatic phenomenon that is particularly relevant to this area of study is called scalar implicature, which is when a speaker produces a weak scalar expression that implies a stronger unstated meaning. Few, some, many, most, and all are considered the most scalar expressions in English. Context of interpretation is a decisive choice in interpreting the generated meaning of these expressions, rather than their literal meaning.

Even though scalar implicature is considered a key phenomenon in pragmatics, its investigation and interpretation still depend on several contextual factors such as speaker intention and hearer inference. The majority of the body of literature has examined the employment of scalar implicature theoretically and experimentally, but few studies have focused on its use in natural (authentic) discourse. Thus, further research is necessary to examine scalar expressions within "real-life" communicative events.

The current study will examine scalar implicature in English (natural) discourse by conducting a pragmatic analysis of quantifier use. Specifically, this research will examine how scalar implicatures are generated and interpreted, with particular emphasis placed on the roles contextual factors have on the meanings of the implicatures generated. This study aims to determine the methods by which scalar implicatures develop in English and in everyday life. The effects of quantifiers on the generation of implicatures. The influence of context on the way we interpret scalars. The study is important to both pragmatics and discourse analysis sub-fields because it demonstrates how we use scalars to generate meaning in real-life conversations, as well as how scalars, semantics, pragmatics, and context work together.

The present study is only concerned with the generation of scalar implicatures in English and limits itself primarily to looking at the way humans use scalar expressions (all, most, many, some, and few) in a naturalistic environment. Additionally, the current research adopts a qualitative approach to studying how people create scalar implicatures through conversation or writing.

Pragmatics

Pragmatics is a subfield of linguistics that analyzes how meaning and context relate to one another when spoken or heard in a conversation. For Levinson (2000), “pragmatics refers to relations between language and context, which form the foundation of a theory of understanding language alone”. Pragmatics is a broad ability to use language in context to achieve certain goals (Fried et al., 2023). In a similar vein, George Yule concurs that pragmatics refers to what a speaker means when they communicate and how that meaning is interpreted based on situational context (Levinson, 1983; 1996).

Conversational Implicature

Implicature is derived from the use of context, which means that the context will provide more information than just what the words actually state. The originator of the cooperative principle/implicature, H. P. Grice, suggests that it leads you to understand something implied in a conversation based on several maxims (Grice, 1975). However, Thomas states that implicature includes contextual clues from both the environment and the maxims when inferring meaning (Thomas, 1995).

Scalar Implicature

Scalar implicature is a type of conversational implicature generated through scalar expressions ordered according to informational strength. Laurence R. Horn explains that scalar implicature occurs when the use of a weaker scalar term implies the negation of a stronger alternative (Horn, 1989). Based on Grice's (1975) seminal work, the Neo-Gricean approach is based on the hypothesis that implicatures arise from the concept and the conveyed meaning relates to the hearer's conceptions about what is said and what a speaker actually said (Marti and Romoli, 2022).

For example:

some \rightarrow not\ all

Stephen C. Levinson considers scalar implicature one of the clearest examples of generalized conversational implicature in communication (Levinson, 2000).

Quantifiers

Linguistic expressions that show a quantity/amount are considered quantifiers. Quantifiers specify how many of a collection of items there are (Huddleston and Pullum 2002).

Some common examples of quantifiers are:

- all
- most
- many

- some
- few

These expressions frequently participate in scalar implicature generation.

Natural Discourse

Unlike made-up examples, natural discourse uses real-life situations when people talk/ communicate either by speaking or writing. It has been defined by Widdowson (2007) as the use of language to communicate between people in a variety of contexts and social situations.

For this study, natural discourse will consist of conversations, interview data, communications in media, literature, and communications on the internet.

Theoretical Background

Pragmatics and Conversational Implicature

Pragmatics is an area of concern in linguistics which deals with how people intend to communicate using a particular language. The significance of pragmatic study lies in its purpose of interpreting the meanings implied by a speaker and how those meanings may be understood differently by the person receiving the utterance, or "hearer". Levinson (1983) defines pragmatics as the examination of the link between language and context, that is, how people use both in communication to convey their understanding of the world.

Similarly, Yule (1996) states that pragmatic study involves the analysis of what a speaker intends to convey through an utterance to help the speaker make an inference about how the hearer will interpret the utterance. In this respect, the study of pragmatics provides insight into how we use words and how we may make inferences based on context and prior knowledge.

Grice's (1975) theory of Conversational Implicature is one of the most significant theories related to pragmatics. H. P. Grice (1975) proposed the Cooperative Principle, which asserts that the successful communication of a message depends on the intentions of the speaker being consistent with those of the hearer. The Cooperative Principle consists of four maxims of conversation by which speakers are ordinarily expected to abide for effective communication to take place:

- Quantity
- Quality
- Relation
- Manner

Scalar implicature relies heavily on the Maxims of Quantity in that speakers should supply the audience with the right amount of information; i.e., they



shouldn't give too much or too little Information. Because speakers may choose to use a weaker term over a more precise term, many times listeners create additional unmentioned inferences.

For example:

some \Rightarrow not\ all

When a speaker says:

“Some students passed the exam.”

The hearer usually infers that not all students passed. This implicature arises because the speaker selected the weaker scalar expression “some” rather than the stronger alternative “all”.

Conversational implicatures refer to those meanings (implied) derived from context and cooperation that both the speaker and hearer assume will occur. According to Jenny Thomas: "The basis of conversational implicature is the intention of the speaker and the interpretation of the hearer; it does not rely on the literal semantic meaning" (Thomas 1995). Conversational implicature differs from semantic entailment in two ways: it can be cancelled by subsequent clauses, and it is dependent on the context of the conversation. For example:

(some have) passed their exam (of the students) - in fact - all of them have. The second clause cancels the original statement that not all of the students passed because of the presence of an inclusive or exclusive determinative (all). This illustrates how conversational implicature gives meaning to language through pragmatic extrapolation, while semantic meanings convey fixed meanings to language.

Thus, the study of conversational implicature continues to be one of the fundamental constructs within the study of pragmatics. Through conversational implicature, speakers are able to indirectly communicate their messages, and hearers can use the context of conversation and cooperation to derive meaning from the speaker.

Scalar Implicature

Conversational implicature has many types, with scalar implicature being one of the most significant forms of implicature in pragmatics. Scalar implicature occurs when a speaker produces an expression of lesser strength upon hearing it, therefore allowing the listener to conclude that the alternate expression of greater strength cannot be true. Thus, scalar implicature illustrates the interplay between the semantic and pragmatic meanings in the context of the communication process.

As Laurence R. Horn (1989) explains, scalar implicature arises from lexical scales (enter code here) which are structured according to information strength. Examples of these scales concerning 'strength' include:
all > most > many > some > few

Within these scales, stronger expressions logically entail weaker ones. Consequently, when speakers select weaker scalar terms, hearers often infer that stronger alternatives do not apply.

One common example of scalar implicature is:

some \rightarrow not all

When a speaker says:

“Some students attended the lecture.”

When someone hears “some”, they generally understand that there were other students who were not included in the number stated. By saying “some” (the weaker of “all”), the speaker has made an indirect suggestion that there are more students than were stated.

According to Levinson (2000), scalar implicature is an example of a generalized conversational implicature, as many of these arise from ordinary conversation. Scalar implicature depends upon a relationship with Grice's Maxim of Quantity. Grice's Maxim of Quantity states that a speaker will provide sufficient information. Therefore, it is assumed by the hearer that if a speaker made an indirect suggestion to the hearer that they are saying something less than maximally informative (i.e., using “some” instead of “all”), they are indicating that they do not intend the stronger meaning. Scalar Implicature displays a difference between the meanings of ‘some’ as interpreted through semantic and pragmatic meaning.

In semantic terms, the variable(some) represents a quantity more than (zero), while in pragmatic terms, it suggests that it represents a quantity(some) that is less than (all). Hence, the scalar interpretation of a given use of the term depends upon the amount of contextual inferences available and thus cannot be derived completely from the literal meaning of the term.

Cancellability is another significant characteristic of scalar implicatures. Conversational implicatures can be cancelled through both explicit cancellation and contextual cancellation. For example:

“Some students passed the exam; therefore, all students passed.”

An instance where the implicature of “not all” was cancelled by the second clause. This serves as evidence that scalar implicatures do not consist of fixed semantic meanings; rather, they are contextual pragmatic inferences.

Modal verb and adverb of frequency scalar implicatures are examples of the same, such as:

must > should > may

and:

always > frequently > sometimes

With both of these types of scalars, weaker terms imply that stronger versions were not meant to be communicated.

Thus, scalar implicature is a continuing topic in pragmatics because it provides insight into how listeners arrive at implied meanings by interpreting contextually, cooperating in conversation, and using inferential reasoning during communication exchange.

Quantifiers and Scalar Expressions

Quantifiers are words that describe how much of a thing exists, how many things exist, or how many there are. They express quantity or an amount in language and are thus very important in language pragmatics because they often create additional meanings that aren't expressed through direct references to numbers. Examples of common quantifiers include:

- all
- most
- many
- some
- few

Quantifiers are defined as expressions that indicate a quantity associated with noun phrases by Rodney Huddleston and Geoffrey K. Pullum (Huddleston & Pullum, 2002).

Informational strength determines how scalar expressions are hierarchically organized. Laurence R. Horn states that stronger scalar expressions logically entail weaker ones (Horn, 1989). An example of a scalar hierarchy would be:

all > most > many > some > few

Because stronger expressions include the meanings of weaker ones, hearers often infer that stronger alternatives are not intended when weaker expressions are used.

For example:

some \(\rightarrow\) not\ all

Semantically, “some” means at least one or more. Pragmatically, however, it often implies “not all.” This interpretation depends on assumptions of informativeness and conversational cooperation.

Quantifiers may also perform different communicative functions in discourse. Speakers sometimes use weaker scalar expressions to:



- avoid overstatement
- reduce commitment
- maintain politeness
- express indirectness

For instance, saying:

“Many students understood the lesson.”

may imply that not all students understood it.

Scalar relations are not limited to quantifiers only. They may also appear in modal verbs and frequency expressions such as:

must > should > may

and:

always > often > sometimes

Pragmatic interpretation of these expressions is also established via scalar inference. The context will affect the scalar interpretation in that the implicature may be strengthened, weakened, or cancelled based on the communicative circumstances. Therefore, quantifiers and scalar expressions continue to play an essential role in determining conversational implicature and the implied meaning of natural discourse.

Neo-Gricean Approaches to Scalar Implicature

Neo-Gricean theory built upon Grice's theory of conversational implicature to systematically explain how the generation of implicatures occurs between people during communication. Focus was placed upon informativeness, economy, and interpretation of context for pragmatic inferences. Laurence R. Horn (one of the primary Neo-Gricean theorists) introduced the Q-Principle and R-Principle as components of this particular theoretical framework. The Q-Principle refers to the notion of informativeness in that it requires speakers to convey the most informative content possible to their audience(s). As Horn (1989) indicated, speakers who utilize less informative or 'weaker' scalar expressions prompt the hearer to assume that the speaker did not intend to convey 'stronger' scalar equivalents.

For example:

some \Rightarrow not\ all

This implicature arises because the speaker selected “some” instead of “all.”

Horn also explains scalar relations through lexical hierarchies such as:

all > most > many > some > few

These scales represent differences in informational strength between scalar expressions. An additional significant Neo-Gricean scholar is Stephen C. Levinson, who developed generalized theories of conversational implicature,

specifically relating to scalar implicatures, as being automatic by means of pragmatic heuristics and presupposed cooperative behavior (Levinson, 2000). Additionally, Neo-Gricean perspectives are also aligned with Relevance Theory (Sperber and Wilson, 1995), which asserts that the way that hearers assess the significance of an utterance is by searching for the most contextually relevant meaning while exerting the least cognitive effort. Collectively, these approaches assert that scalar implicature relies on contextually determined inference, informativeness, and hearers' interpretations and not merely on the literal semantic meaning.

Literature Review

Due to the way that hearers elicit inferences based on scalar expressions in communication, scalar implicature is an aspect of pragmatics and discourse analysis that has attracted a great deal of academic interest. Scalar implicature has been studied from many perspectives, including Gricean Pragmatics, Neo-Gricean Theory, Relevance Theory, as well as through psycholinguistics.

One of the earliest and most significant studies of scalar implicature was performed by Laurence R. Horn in *A Natural History of Negation* (1989). Horn looked into how scalar implicatures arise through the use of lexical scales and through the assumption of informativeness. He explained that hearers use the fact that speakers have chosen for a weaker scalar expression to infer that the speaker has made a choice for a stronger interpretation that was not explicitly stated (Horn, 1989).

Stephen C. Levinson also discusses scalar implicature in *Presumptive Meanings* (2000). Levinson maintains that scalar implicature is generated by the automatic process of generalized conversational implicatures as a result of using pragmatic heuristics and making cooperative assumptions in the process of communication (Levinson, 2000).

In Relevance Theory, Dan Sperber and Deirdre Wilson also discuss scalar interpretation. They approach scalar interpretation as a function of contextual relevance and inferential reasoning in the utterance. Sperber and Wilson argue that the hearer uses the context of the utterance to select from among the possible meanings, and selects the most relevant meaning relative to that context (Sperber & Wilson, 1995).

Scalar implicature has also been studied experimentally, in particular, by Ira Noveck, who showed that hearers infer scalar implicature through pragmatic processing that goes beyond literal meaning processing; Noveck found that in many cases where the hearer produces an implicature, the hearer first processes the literal meaning and then produces the implicature (Noveck, 2001).

Although most researchers have greatly valued the importance of these research areas, many authors have continued to focus their studies primarily upon theory or experimental pragmatics through use of one specific context. Therefore, the current research will attempt to analyze behaviors through an examination of authors' use of quantifiers within naturally occurring communication.

Theoretical Framework

The current research uses a pragmatic approach based on Grice's and Neo-Grice's theories of conversational implicature to analyze the way that scalar expressions generate additional meaning in natural discourse. The analysis of scalar expressions as a form of conversational implicature relies heavily on the fact that H.P. Grice's Cooperative Principle requires speakers to be informative enough when they provide information (Grice, 1975). Scalar implicature occurs when a speaker uses a weaker scalar expression to express something very different in meaning than another scalar expression that is stronger. For instance, "some" can be said to mean "not all."

In addition, the analysis of scalar expressions will also be using Laurence R. Horn's Q-Principle, as well as scalar hierarchies that may be summarized as follows: all>most>many>some>few. Furthermore, the use of Stephen C. Levinson's theory of generalized conversational implicature and the Relevance Theory proposed by Dan Sperber and Deirdre Wilson also assist in the analysis of scalar expressions.

Using the above theories, the pragmatic nature of scalar implicature is shown to be an interpretive phenomenon that is contextual and dependent on the following: informativeness, contextualization, and inferences made by the hearer.

Methodology

Research Design

This study employs a qualitative descriptive research design to explore the use of scalar implicature in English natural language. The research is centred on studying implied meaning, context-based interpretation of, and making inferences with respect to the pragmatic use of scalar implicature rather than making a numerical assessment.

Descriptive analytical methods will be used to describe how individuals use scalar expressions based on Grice's and Neo-Gricean pragmatic theories. Given that scalar implicature requires context and the use of inference by the hearer, it is necessary to evaluate genuine spoken and written texts as opposed to using examples that are disconnected from their context.

The primary focus of this research will be to investigate how the following four scalar expressions are used:

all>most>many>some>few

The study is premised upon the theories of Grice, the theories of Horn and Levinson regarding their theory of Generalized Conversational Implicature, in addition to Relevance Theory.

Data Collection

In this study, we survey the actual use of English conversation and writing in the real world. We will use real-world communication (including spoken and written) because scalar implicature greatly relies on the context of use, the intention of the speaker, and the inferencing of the hearers.

Data collected for this study will consist of:

- conversations
- interviews
- podcasts
- television dialogues
- online discussions
- newspaper articles
- literary texts
- social media interactions
-

Particular attention is given to scalar expressions such as:

all > most > many > some > few

Only discourse samples containing clear scalar implicatures are selected for analysis.

Sampling Procedures

The study uses a purposive sampling method to select some examples of discourse that contain scalar expressions that can strike conversational implicatures. The sample was selected based on pragmatism and not random sampling.

The sample for the study will be taken from examples of real-world spoken and written English language discourse, with sampling that includes conversations, interviews, Pods, TV, and many forms of literature and online communication.

Several criteria are applied to select examples of discourse, among them: (i) Availability of scalar expressions. (ii) The discourse should be rich with contextual information. (iii) Being authentic communication. Also, the collected samples are classified according to scalar expression type, discourse source, contextual environment, and pragmatic function.

Data Analysis Procedures

The study adopts a qualitative pragmatic discourse-analytical methodology to examine scalar implicature in a natural setting. The analysis is intended to establish a basis for identifying scalar expressions within the sample data and explain how implied meanings are produced, using contextual inference and conversational reasoning.

Particular attention is given to scalar expressions such as:

all > most > many > some > few

Several analytical procedures such as: scalar expression identification, semantic meaning explanation, stronger lexical alternative identification, implied pragmatic meaning determination, contextual factors examination, and communicative function explanation are conducted to ensure the selection of discourse samples.

For example:

some \Rightarrow not\ all

The analysis relies on Grice's Cooperative Principle, Horn's Q-Principle, Levinson's theory of generalized conversational implicature, and Relevance Theory.

Analytical Model

The present study adopts a pragmatic analytical model based on Gricean and Neo-Gricean theories of conversational implicature. The model combines:

- Grice's Cooperative Principle
- Horn's Q-Principle
- Levinson's generalized conversational implicature theory
- Relevance Theory

The model analyzes scalar expressions according to informational hierarchies such

as:

all > most > many > some > few

The analytical model includes:

1. Identifying the scalar expression.
2. Explaining semantic meaning.
3. Identifying stronger alternatives.

4. Determining implied meaning.
5. Examining context.
6. Explaining pragmatic function.

Example:

some \Rightarrow not\ all

The model also examines contextual interpretation, cancellability, and communicative functions of scalar implicature.

Validity and Reliability

Through organized data selection, interpretation of context, and consistent analytical procedures, validity and reliability have been ensured. The research draws on real-world discourse and established pragmatic theory to interpret scalar implicatures accurately. By utilizing consistent analytical methods for all discourse occurrences, we can achieve reliability. Each scalar term will be examined via its semantic value, by identifying any stronger forms (potentially) of expression, considering its context (where spoken), and analyzing its role in communication. Additionally, this study reduces the level of subjectivity introduced into the analysis through reliance on Gricean and Neo-Gricean models of pragmatic analysis.

Data Analysis and Discussion

This chapter practically analyzes scalar implicature in English natural discourse. The analysis aims to identify scalar expressions and demonstrate how contextual inference and conversational reasoning can generate implied meanings.

The chapter provides an application of the analyzed model used in the study to explore the connection between semantic/conceptual meaning and pragmatic meaning. The analysis of each discourse example includes:

1. The scalar expression used.
2. Its semantic meaning.
3. The stronger lexical alternative.
4. The implied pragmatic meaning.
5. Contextual interpretation.
6. The communicative function.

Particular attention is given to scalar expressions such as:

all > most > many > some > few

The analysis also investigates the role of context, speaker intention, and hearer inference in scalar interpretation. The findings are discussed according to Gricean and Neo-Gricean pragmatic theories.

Analysis of Scalar Implicature in Natural Discourse

Scalar implicatures frequently occur in authentic communication because speakers often use weaker scalar expressions to convey indirect meanings. Hearers interpret these meanings through assumptions of cooperation and informativeness.

Example 1

“Some students completed the assignment.”

Semantic Meaning

The sentence means that at least several students completed the assignment.

Stronger Alternative

all > some

Implied Meaning

some $\rightarrow$ not all

Contextual Interpretation

The hearer infers that not all students completed the assignment because the speaker selected the weaker scalar term “some.”

Pragmatic Function

- reducing explicitness
- avoiding overstatement
- indicating partial participation

Example 2

“Most participants agreed with the proposal.”

Semantic Meaning

The majority of participants agreed.

Stronger Alternative

“All participants agreed.”

Implied Meaning

The hearer infers that not all participants agreed.

Pragmatic Function

- maintaining accuracy
 - avoiding exaggeration
 - implying limited disagreement
-

Example 3

“Few students understood the lecture.”

Semantic Meaning

Only a small number of students understood the lecture.

Implied Meaning

The majority of students did not understand the lecture.

Pragmatic Function

- indirect criticism
- expressing insufficiency
- emphasizing limitation

Discussion of Findings

Based on the analysis, it was found that there are strong relations between the notion of scalar implicature as it relates to our understanding of both contextual inference and conversational reasoning. This supports Grice's perspective that listeners can comprehend what was intended by speakers using assumptions relating to conversational cooperation and informativeness.

In addition, Horn's Neo-Gricean perspective on the way in which scalar implicatures are accounted for may be seen to support the use of lexical hierarchies in this area, such as:

- all > most > many > some > few

In conclusion, at least four types of communicative functions can be identified for scalar expressions in discourse:

- reducing commitment
- avoiding directness

- maintaining politeness
- implying criticism indirectly

Moreover, the results of the analysis indicate that scalar implicature is extremely context-variable and can be amplified, diminished, or revoked depending upon conditions of communication. Scalar implicature is, therefore, a dynamic, pragmatic phenomenon, created from the connection between the context in which it is created (i.e., the immediate context), the speaker's motivation for constructing an utterance, and the hearer's interpretation of the message, in normal conversation.

Conclusions, Limitations and Recommendations

The research examined how scalar implicature is manifested in English natural language use by analyzing the usage of both the quantifiers and scalar terms from a pragmatic perspective. Through the results of this investigation, the author argues that scalar implicature can provide a pragmatic category of communication, whereby speakers provide additional meanings or constructs that extend beyond the literal language supplied to the hearer. The indications are clear that these unique terms, such as;

all > most > many > some > few

frequently generate conversational implicatures in authentic communication.

The study also reveals that scalar implicature depends heavily on:

- contextual interpretation
- speaker intention
- hearer inference
- assumptions of informativeness.

This study supports both Gricean theories and Neo-Gricean theories, most significantly Grice's Cooperative Principle and Horn's Q-Principle, respectively. Furthermore, the evidence from this study supports the conclusion that scalar implicatures serve many communicative purposes, including politeness, indirectness, and a lowered degree of commitment. In conclusion, the evidence from this study supports the notion that scalar implicature is a context-dependent pragmatic product rather than being fixed in semantic value.

Based on the findings of the study, the researcher recommends conducting more discourse-oriented studies to investigate scalar implicature in authentic communication, examining scalar implicature in political discourse, media discourse, and online communication, focusing more on pragmatic competence and implied meaning, investigating scalar implicature cross-culturally in different languages, and further studies may combine qualitative and quantitative approaches in analyzing scalar implicature.



References

- Carston, R. (2002). *Thoughts and Utterances: The Pragmatics of Explicit Communication*. Oxford: Blackwell.
- Fried, D., Tomlin, N., Hu, J., Pathel, R., & Nematzadeh, A. (2023). Pragmatics in language grounding: phenomena, tasks, and modeling approaches. *Findings of the Association for Computational Linguistics*, 1261912640. <https://doi.org/10.18653/v1/2023.findings-emnlp.840>
- Geurts, B. (2010). *Quantity Implicatures*. Cambridge: Cambridge University Press.
- Grice, H. P. (1975). Logic and conversation. In *Syntax and Semantics* (Vol. 3, pp. 41–58). https://doi.org/10.1163/9789004368811_003
- Horn, L. R. (1984). Toward a new taxonomy for pragmatic inference: Q-based and R-based implicature. In D. Schiffrin (Ed.), *Meaning, Form, and Use in Context* (pp. 11–42). Washington, DC: Georgetown University Press.
- Horn, L. R. (1989). *A Natural History of Negation*. Chicago: University of Chicago Press.
- Huddleston, R., & Pullum, G. K. (2002). *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Levinson, S. C. (1983). *Pragmatics*. Cambridge: Cambridge University Press
- Levinson, S. C. (2000). *Presumptive Meanings: The Theory of Generalized Conversational Implicature*. Cambridge, MA: MIT Press.
- Marty, P., & Romoli, J. (2022). *Presupposed free choice and the theory of scalar implicatures*. *Linguistics and Philosophy*, 45(1), 91-152. <https://doi.org/10.1007/s10988-020-09316-5>
- McCarthy, M. (1991). *Discourse Analysis for Language Teachers*. Cambridge: Cambridge University Press.
- Noveck, I. A. (2001). When children are more logical than adults: Experimental investigations of scalar implicature. *Cognition*, 78(2), 165–188.
- Sperber, D., & Wilson, D. (1995). *Relevance: Communication and Cognition* (2nd ed.). Oxford: Blackwell.
- Thomas, J. (1995). *Meaning in Interaction: An Introduction to Pragmatics*. London: Longman.
- Widdowson, H. G. (2007). *Discourse Analysis*. Oxford: Oxford University Press.
- Yule, G. (1996). *Pragmatics*. Oxford: Oxford University Press