



GST 36 – Linguistic Compression

Formal Description

Linguistic compression is the process by which information is communicated using fewer words, concepts, or symbols than would be required to represent all relevant detail explicitly. It enables efficient communication but often relies upon shared assumptions, context, and prior knowledge. As a result, linguistic compression is both a source of communicative efficiency and a potential source of misunderstanding.

Plain English Explanation

Human communication would be impossibly slow if every statement contained all the information necessary to make its meaning completely explicit.

Instead, people routinely rely upon linguistic compression.

When speaking or writing, we assume that listeners or readers already possess certain knowledge, understand the context, and can fill in missing details for themselves. As a result, much of what we mean is often implied rather than stated directly.

For example, when someone says:

"The meeting went well."

they rarely explain:

- who attended,
- what was discussed,
- what "well" means,
- what objectives were achieved,
- why the outcome matters.

The listener reconstructs much of this information from context.

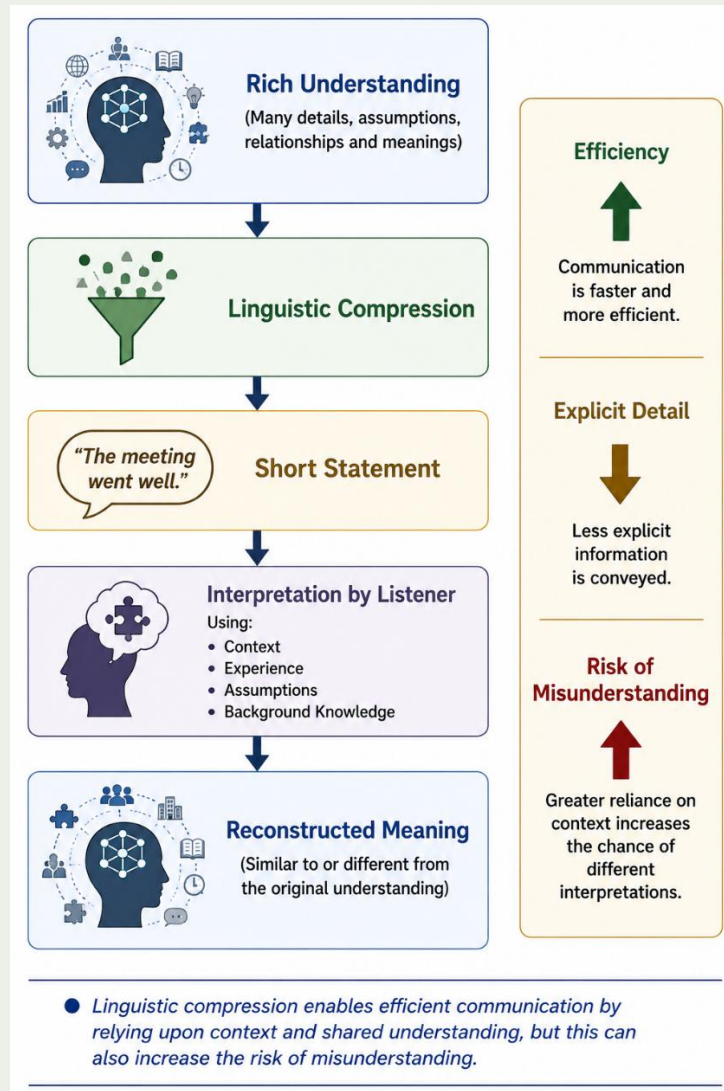
Linguistic compression makes communication faster and more efficient. Without it, conversations would become unnecessarily long and repetitive.

However, linguistic compression also creates opportunities for misunderstanding. Different people may possess different assumptions, experiences, and background knowledge. As a result, they may reconstruct different meanings from the same statement.

The problem becomes even greater when communication occurs between cultures, disciplines, organisations, or specialist communities. Each group often develops its own compressed terminology and shared assumptions. Terms that appear clear within one group may be confusing or misleading to outsiders.

Scientific and technical language often illustrates this phenomenon. Specialists frequently use highly compressed concepts that summarise large bodies of knowledge. Such language can be extremely efficient among experts but difficult for non-specialists to understand.

Linguistic compression therefore performs an essential function in communication, but it also contributes significantly to misunderstanding, disagreement, and communicative failure.



Example 1 – Everyday Conversation

A friend says, "I'll see you later."

The exact time, place, and circumstances may be left unstated because both people assume a shared understanding.

Example 2 – Professional Language

An engineer may refer to "fatigue failure" using only two words. Behind this phrase lies a large body of specialised knowledge concerning materials, loading, and structural behaviour.

Example 3 – Organisational Communication

A manager states that a project is "on track." Different team members may interpret this statement differently depending upon their expectations and assumptions.

Example 4 – Public Debate

Words such as "freedom," "fairness," or "sustainability" often compress large and complex ideas. Different individuals may attach different meanings to the same terms.



Provenance and Links

The study of linguistic compression draws upon linguistics, cognitive psychology, communication theory, information theory, and systems science.

Relevant contributors include:

- Claude Shannon – information and communication.
- Herbert Simon – complexity and cognitive simplification.
- Paul Grice – conversational implication and implied meaning.
- George Lakoff and Mark Johnson – conceptual metaphor and meaning.
- Ludwig Wittgenstein – language and use.
- Jerome Bruner – cognition, language, and representation.

Related topics include communication, information theory, cognition, abstraction, metaphor, interpretation, and knowledge representation.

Practical Exercise

Choose a short statement that you have recently heard or read.

Examples might include:

- a news headline,
 - a political slogan,
 - a social media post,
 - a workplace communication,
 - an everyday conversation.
1. Write down the statement.
 2. List information that is implied rather than explicitly stated.
 3. Identify assumptions that the speaker may be making about the audience.
 4. Consider how different people might interpret the statement differently.
 5. Rewrite the statement with more of the implied information made explicit.

Reflect on the advantages and disadvantages of linguistic compression in this example.