



GST 39 – The Productive Co-ordination Process

Formal Description

Productive co-ordination is supported by a translation and comparison process in which propositions expressed in different disciplinary languages are decompressed into plain language, recompressed using a common systems idiom, and compared through their underlying systems structures. The process seeks to reveal similarities, differences, complementarities, and contradictions that may be obscured by specialised terminology and representation.

Plain English Explanation

Different disciplines often describe related parts of reality using different specialist languages. Comparing their original statements directly can therefore be difficult or misleading.

The productive co-ordination process uses a simple sequence: Decompress → Recompress → Compare.

First, each proposition is rewritten in plain English. This decompression step makes its intended meaning clearer and reduces dependence on specialist terminology.

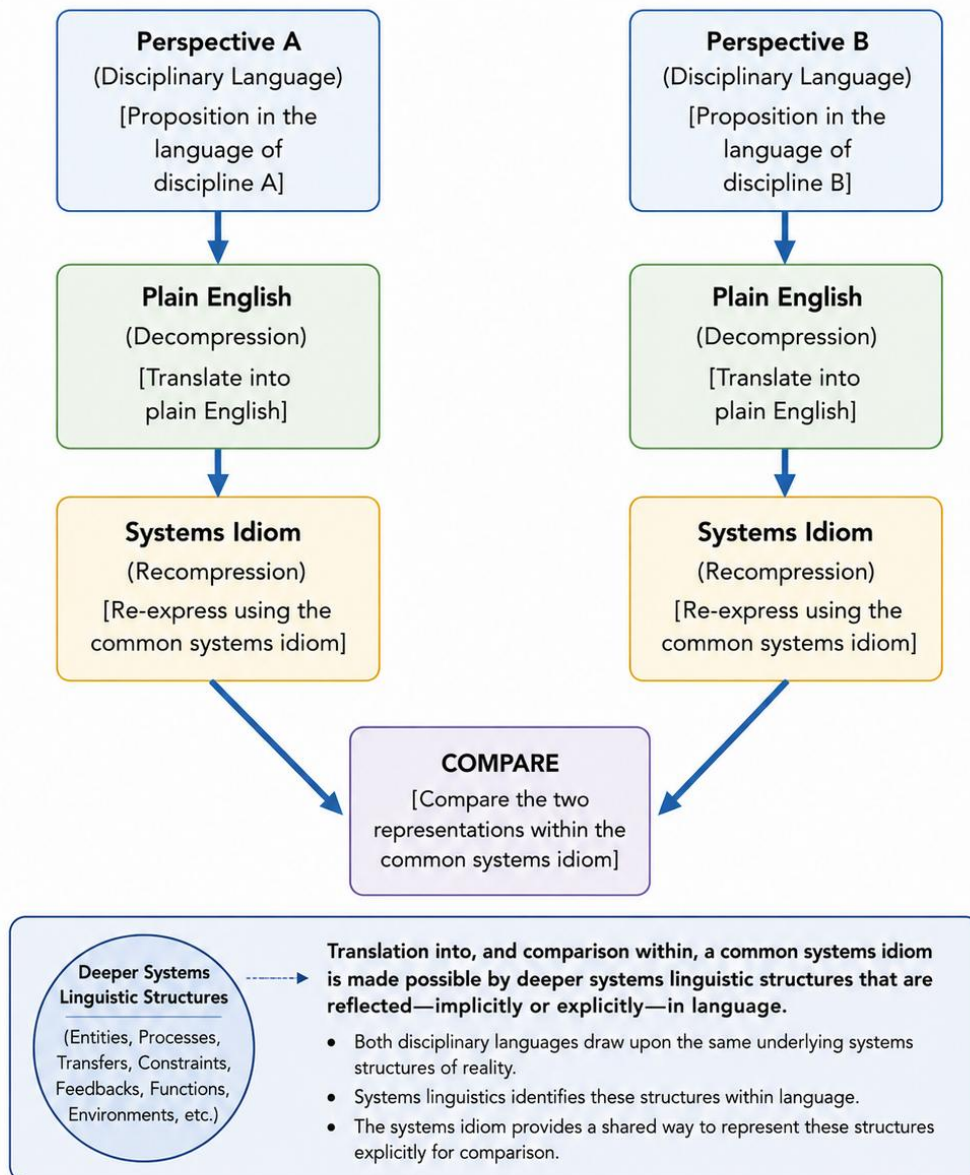
Second, the proposition is recompressed using a common systems idiom. The analyst identifies systems structures such as entities, processes, transfers, constraints, and feedbacks. Other concepts, including function, environment, and emergence, may also be included where relevant.

Finally, the translated systems representations are compared. The aim is not to force agreement. It is to discover more clearly where perspectives overlap, where they differ, and how they may relate to one another.

The original disciplines do not need to abandon their own languages. The systems idiom provides an intermediate representation that makes comparison easier.

**Figure 1. Productive Co-ordination through Systems Translation**

Perspectives expressed in different disciplinary languages are first decompressed into plain language and then recompressed into a common systems idiom. Comparison is subsequently performed on the translated representations rather than on the original disciplinary terminology.



Productive co-ordination through systems translation.



Example – Economics and Sociology

An economics proposition may state: “Markets allocate resources through price signals.” A sociological proposition may instead describe how shared expectations influence interaction, co-operation, and exchange.

After decomposition, both propositions can be analysed using systems concepts. The analysis may identify people or organisations as entities; exchange and interaction as processes; resources and information as transfers; prices, norms, and institutional rules as constraints; and reinforcing or regulatory feedbacks.

The perspectives are not assumed to be identical. Translation simply makes their underlying structures easier to compare and may reveal common concerns that were less visible in the original disciplinary language.

Provenance and Links

The process draws upon established traditions concerned with communication, interdisciplinary understanding, and the comparison of different representations of reality.

Relevant contributors include:

- Ludwig von Bertalanffy – General Systems Theory and the search for common principles across disciplinary boundaries.
- Kenneth E. Boulding – communication between specialised disciplines and the role of General Systems Theory in overcoming disciplinary isolation.
- Jerome Bruner – modes of representation and the relationship between representation and understanding.
- Claude Shannon – information and the formal study of communication.
- Herbert A. Simon – bounded rationality and the cognitive limitations that make simplification and structured representation necessary.

The detailed productive co-ordination methodology is developed in Systems Linguistics: Representation, Compression and Productive Co-ordination and Productive Co-ordination (Challoner, 2026).

Practical Exercise

Choose two statements about the same or a related phenomenon from different subjects, professions, or viewpoints.

1. Write each statement in its original form.
2. Rewrite each statement in plain English.
3. Identify the main entities, processes, transfers, constraints, and feedbacks described.
4. Compare the two systems representations.

Do the perspectives appear more similar or more different after translation? What has the process revealed?