Agent, environment, and lived temporality: A distributed-ecological perspective on the epistemological role of language

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The relationship between subject and object
The generative linguist's view

**EPISTEMOLOGY:**

- **Language** as the **object** of study;
- Focus on people's **knowledge of a language**;
- **Goal:** explain **language acquisition** given a specific cognitive theory of learning.
The cognitive linguist's view

**EPISTEMOLOGY:**

- **Language** as the *link* between subject and object;
- Focus on the contribution of language to people's *knowledge of the world*;
- **Goal:** address language as a product of the *interplay* between domain-general *cognitive principles* and *social interaction*, in order to understand the relationship between language, mind, and society.
A distributed–ecological view

• A good deal of overlap with the strand of Cognitive Linguistics which aims to include social factors in pursuing an explanation for language facts (Bernárdez 2005; Croft 2009).

• Integrates it with insights from Ecological Psychology (Reed 1997), Embodied Cognition (Gibbs 2005; Chemero 2009), Distributed Cognition (Hutchins 2005), and Dynamic Systems Theory (Thelen and Smith 1994; Kelso 1995).
A distributed-ecological view

- Language as a social institution which is employed by individuals and groups to act in the world (Torre 2015).

- The organism and its environment are inherently coupled in a single system and they are constantly engaged in an interaction which alters both poles.

- Language takes part in this interaction; thus, it is also affected by the interplay.
Linguistic symbols as constraints

- Language is a **dynamic system**, inherently fluid, fuzzy, emergent, and context-sensitive (e.g. Elman 1995);

- The meaning of linguistic symbols arises through usage as a material device to **constrain** the dynamics of an interaction (e.g. Hutchins 2005; Raczaszek-Leonardi 2013);

- Linguistic symbols **underdetermine** the message being conveyed, with the rest of the communication being provided by the context.
Replicability and selection

- A linguistic symbol will first be used to constrain the development of a specific interaction. If successfully re-used in following interactions, then it will be culturally selected as a conventional constraint on the dynamics of a range of situations;

- The system will then be characterized by a persistent tension between the conventional function of its symbols and the situational uniqueness of each specific frame of reference (e.g. Raczaszek-Leonardi 2013, 2014).
Writing

- Language **supports** wider cognitive and communicative practices, to enable interpersonal interaction and coordination;
- Writing is a convenient example of a **meaning-construction** process based on the agent–environment interplay;
- While language is primarily spoken, a socially shared writing system enables the members of a cultural group to **dilute** their interpersonal interactions over time, also reducing the distances between people (e.g. Torre 2014).
The time-scales of writing

- The writing system is a **socio-cultural apparatus** consisting in a set of inscriptions developed through the manipulation of resources of the environment at a **historical** time-scale;

- At a **cultural** time-scale, a linguistic symbol assumes specific constraining functions. The **form-function pairing** is not supposed to be fixed;

- The system is learned by the members of the community at an **ontogenetic** time-scale, through a socially-driven process.
The employment of external resources

- The development of this system is an example of the use of external resources in order to reduce people's cognitive workload, **objectifying** the form–function pairing of linguistic units.

- Writing enables the members of a socio-cultural community to **preserve** their cultural legacy without being bound by the limits of human memory; also, it enables them to **keep track** of any discovery and **pursue** new technological innovations, forms of social organization, and kinds of art and science practices.
The physical dimension of symbols

- “natural language symbols are capable of evoking certain meanings because they participate, as physical stimuli, in various forms of social life. In such social situations, they are very strong stimuli (most often verbal actions, embedded in other actions), capable of influencing the coordinating situation and modifying it.” (Raczaszek-Leonardi 2013);

- Developing a writing system means to **reify** linguistic symbols, making them durably visible (also touchable in some cases).
The normative aspect

- Belonging to a certain social group entails one's awareness of a set of rules and conventional behaviors. Norms organize social interaction. Language, as a social institution, is inherently normative (e.g. Itkonen 1997, 2008);
- This means that members of a community will learn the physical symbols which are part of the linguistic system together with their constraining functions, which can be stronger or weaker according to the case (e.g. Raczaszek-Leonardi 2014).
A single system

- Language
- Mental resources
- Bodily experience
- Cultural heritage
- Social organization
- Physical environment
Engraving

[Image of an engraved stone with the message: "Pasamos por aquí el 22 de noviembre de 1769. El capitán José de Arce, y él y su auxiliar, diedo Martín, fueron ayer a su antigua casa. Fosso se rodeó de 1636"]
Holy Scripture (Latin translation)
ΣΥΝΤΑΓΜΑ
ΤΗΣ
ΕΛΛΗΝΙΚΗΣ ΔΗΜΟΚΡΑΤΙΑΣ
ΚΕΦΑΛΑΙΟΝ Α'.
Θρησκεία και Έκσταση
"Αρθρον 1.
"Εφεύροντας δημοκρατίαν η Ελλάδα ἐν τῇ Α' ηγεμονίᾳ Θρησκευόμενης τῇ Χριστιανικῇ Επαρχίᾳ Εκκλησίᾳ, η Ορθόδοξας Επαρχία τῆς Ελλάδος θαμίζεται διαφωτιστικήν, διαφωτιστικής καταλήγει η από τὴν Επαρχίαν Θρησκευόμενην έπειτα καὶ καθότι ἂλλας ἀποδοχῶς, εἰς γένιαν τοῦ Ελλήνων, ἔπωσται διαφωτιστικὴν, καὶ ἐπὶ τῷ οἰκονομικώς καὶ σωματικῶς ἀφαιρέσεως πάντως ἀπὸ τῆς Επαρχίας τοῦ Εργαστηρίου, ἀρχίσεις καθαρών καὶ ἀπαξιωμάτων τῆς Επαρχίας, καὶ ἀρχικῶς τοῦ Εργαστηρίου, ἀρχικῶς τοῦ Εργαστήριου, εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστηρίου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστηρίου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηрίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστηρίου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριου. Καὶ αὖ ἐπὶ τῷ εὐθείᾳ τοῦ Εργαστηρίου, καὶ εἰς τῷ οἰκονομικῷ καὶ σωματικῷ τοῦ Εργαστήριο
Tattoo
Signal
Wall writing

THE UNIVERSITY IS NOTHING WITHOUT DIALOGUE.
Digital writing

On behalf of the Klikit-Linux community, we welcome you!

*for such
see if that link is better
I removed parentheses
yup, that one rocks
so if you could redo that last screenie, all would be cool
k
I'll redo and repost to make sure we have a good screenshot
I hadn't noticed, but it will be fixed shortly.
lol
The conference will be Saturday at 1:00 PM Pacific.
no prob
1 thing of note
got all but one timesone in with that time frame.
especially for you
Conclusion

- Language is a technological artifact which regulates the life of a community, by enhancing communication between its members.

- Although it can often be convenient, for explanatory purposes, to treat language as an entity in itself, it cannot be separated from its social, historical, and material contingency.

- Language is an integral part of a complex system which includes both internal (neural, conceptual), and external (cultural, material) resources.
Conclusion

- Language is therefore tightly coupled with cognitive, social, and ecological processes which unfold over time.

- The cognitive-linguistic notion of a dynamic network-shaped inventory of form-function pairings can be extended to encompass cognitive, social, affective, and pragmatic values not crystallized in a specific verbal pattern, and also external resources.

- The system as a whole evolves as a result of the persistent interaction of all these elements at different time-scales.
References


References


References


THANK YOU!

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