Pedagogical complexity and sociolinguistic resilience in Mesoamerican language learning: the CPEW matrix (reloaded)

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In some way heuristics of fractals study, Complexity Theory is more than math’s. Contrasting Euclid’s geometry (linear, static, and continuous in a well defined order), Mandelbrot’s work proposes a new philosophical and mathematical synthesis (1987, [1983] 2), where objects are dynamic, non-linear, and irregular, giving a place to study uncertainty, chaos, scales and change. These components are also present in human relationships. They should be considered in natural language study, specially if it is based on fieldwork.

This new approach, as compared to Euclidian and linear approaches, brings a series of Intellectual tools which can prove strikingly useful in resolving bilingual education problems faced by minoritized languages and linguistic communities endowed with a high dialectal diversity.

These intricate patterns of corpus elaboration and cultural revival and legitimation through CPEW are linked, at least, by the following interconnected features: a) hypercomplexity; b) non-linearity, as a result of experience, particularly watching, listening, writing and reading participant’s mother tongues, which is often unexpected on non-literary languages communities; b) fluidity, instead of deterministic rules of education linearly imposed; c) meaning, which implies the negotiation of educational Mesoamerican content in interaction, out of a simplex canvas. Participants to the CPEW build together a particular and unique participation framework, making visible their language and culture, but also developing a critical as well as an emancipatory pedagogy put into practice, his et nunco.

In this way, the CPEW methodology promotes a pedagogy of freedom. Finally, as has been suggested earlier in this poster, these workshops tend to infinity, as fractals and fractal models, because they can be applied to a non finite set of sociolinguistic contexts and ecological situations, being neither universal nor static, but rather reflexive and self-organizing, as they work as a dynamic process and a resilient creative system, resorting to both learning systems and decision systems. Even more, they contribute to understand sociolinguistic variation from a complex perspective.

What is Complexity Theory?
Complexity Theory is not only a holistic metaphor, as has been applied by some social approaches in language planning, even if this metaphor is useful to understand that several variables converge in this kind of phenomena.²

Complexity Theory is not only geometry, as some fractals fans wonder on the study of universal structures, inspired from Mandelbrot’s work (1975 [1985]).³

Considering these works and debates of “indigenous” educational policies in Mexico, the CPEW team decided to methodology, as study language and culture, in time. At the same time, native language learning and sociolinguistic resilience. Fabio Petritinno, one team member, describe this methodology as complex to conceive, but simple to apply.

1. Foundation Myths, called “Sun & Moon”
2. Contemporary narratives, including: a) Invisible Communities; b) Dialogues of animals; and c) Description of animals using different person subject agreement and/or tense or aspect.

This activities or “módulos” (i.e. framing chunks) are our fractals as they help us to work out the frames of action of our co-participative workshops. These frames can be reproduced iteratively at different levels, taking different complex and unexpected shapes…

Notes
1. CPEW workshops (Co-Participative Educational Workshops) our focus is to stimulate diachronic processes making written and oral texts interact. The texts and didactic units in indigenous languages are worked out by native speakers of Mesoamerican languages during the CPEW sessions. Most of them are school teachers who support and get involved in training in formal components of bilingual education.

2. We refer to Fons and Van der Veer (2010) to use our terms: Complexity Theory, pedagogy and critical education.

3. Fons and Van der Veer (2010) refers to as a) non-lineal, b) self-organizing, c) non-deterministic, d) dynamical, e) produced, f) emergent, g) reconfigurable, h) complex but simple.

Diagnostic: as an example of this methodologies application to the Mesoamerican context through the study of Latin American languages families spoken in Mexico. Source: INALI 2009. On this map, the 11 languages families, at least 70 linguistic groups. These families are compared with Mandelbrot’s fractals and his operational methodology.

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Based on modern and ancient narrative, the CPEW methodology offers, and continues to develop, the following activities trough a critical approach:

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Mexicaan context:
11 languages families, at least 70 lingustic groups.
Native speakers: approximately 7 millions.

1. Mesoamerican sacred mountains myth

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