Some Maladaptive Traits of Natural Language

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One of the biggest issues in current biolinguistics concerns the discussion of the putative adaptive nature of human language. Thus, a range of authors defend the view that language is an eminently adaptive tool that evolved for communication purposes (*cf.* Pinker and Bloom (1990); Pinker and Jackendoff (2005); Givón (2009), and, basically, any major work of any functionalist trend), whereas on the opposite view, there is also a number of researchers who are sceptical to the adaptationist view and who defend an exaptationist origin of natural language (*cf.* Piattelli-Palmarini (1989); Uriagereka (1998); Hauser *et al.* (2002); Boeckx and Piattelli-Palmarini (2005); Chomsky (2005); Fitch *et al.* (2005)).

In this talk, I provide a number of arguments in favour of the exaptationist view by discussing the dysfunctional nature of some well-known features of natural language. The main goal will not be just to point towards some traits that have no clear evolutionary history but rather, to argue that, teleonomically, all these traits should be considered as maladaptive traits, given that they do not lead to the highest relative fitness among the possible candidates. In other words, they actually make language a *worse* tool for communication.

The traits that I will discuss include 'universal' features such as (i) the filler-gap dependencies generated by displacements, (ii) the movement of superfluous material, (iii) the ban on particular clitic or agreement clusters (the so-called Person Case Constraint), (iv) the morphological lacuna of verbal *Wh*-words, as well as some language-particular features. Due to space limitations, here I will only comment the four I just mentioned.

- *Displacement & Filler-Gap Dependencies*: As Chomsky and others have argued, the linearization 'dilemma' of displacement structures is resolved by a deletion of all but the highest copies, however, deletion of lower copies generates filler-gap dependencies and parsing difficulties. Here, we would have a scenario with a conflict between computational efficiency (remerge) and communicative efficiency (fully specified chains), the former being the one that is guaranteed to the detriment of communicative efficiency. This, I will argue, is a signature of the fact that language did not evolve for externalization and communication.

- *Generalized Pied-Piping*: Displacement affects more material than the specific target for the movement. A *Wh*-feature on *e.g.* an element can trigger the movement of the whole DP containing it, and in some languages like Basque it can even trigger the movement of CPs. This feature extends to answers, which have to match the *Wh*-phrase in the question in syntactic type, as can be seen in 1. Here, too, computational efficiency is guaranteed (attracting the closest element with the *Wh*/focus feature (after percolation)), not communicative efficiency (expressing just the sufficient information to identify the variable in the *Wh*-question).

    (1)   A. Which girl came late? (in a situation where we have to decide
                between a girl with a red coat and a girl with a blue coat)
            B. *Red./✓The girl with a red coat.

- *The lack of verbal Wh-words*: All natural languages appear to have *Wh*-words for arguments (*who, what*) and adjuncts (*where, why*). However, crosslinguistically, we find no purely monomorphemic verbal *Wh*-words like 2. This restricts the range of possible expressions of natural languages. Again, no clear functionalist scenario can be imagined for the development of such a lacuna; I will argue that it is due to a general formal requirement for DPs to get θ-roles.

> (2) Whxyzed Brutus Caesar?
> Wh.VERB Brutus Caesar
> *What type of event has Brutus as the subject and Caesar as the object?*

- *The Person Case Constraint*: In languages with agreement morphology or clitics, the combination of dative agreement/clitic with 1st or 2nd person accusative agreement/clitic is banned (3) (*cf.* Bonet (1994)). Again, this restriction on what are the possible expressions of natural languages has no possible communicative origin but a plausible computatinal one (*cf.* Ormazabal (2000)).

> (3) *Pedro le   me   envía.
> Pedro cl.3D cl.1A send
> *Pedro sends me to him/her/it*

The corollary of my presentation will be that there is a wide range of features of natural language that are maladaptive *stricto sensu* (*cf.* Crespi (2000)), and hence, natural language cannot be considered a tool evolved under communicative pressures, but rather the product of a complex emergence with exapted traits.

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