Parsing paratactic relations with a Multi-Dimensional Construction Grammar: 
The case of antithetic constructions

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In my precedent work I introduced a Multi-Dimensional Construction Grammar (MDCxG) framework. The model is illustrated by a set of descriptions of French spontaneous speech constructions, based on corpus studies of written and spoken productions, and represented into the Property Grammars formalism (see for example BLACHE’s paper in CSLP-05 procs). Its main particularity among other CxG models (as well as among other grammar models in general) is that it contains both syntagmatic and paradigmatic constructions. Syntagmatic constructions are characterized by hypotactic (i.e. head-dependent) relations between their constituents, whereas paradigmatic ones make it possible to introduce constructs in which constituents are connected by paratactic relations, i.e. of equivalence or reciprocal dependency (as defined in the Pronominal Approach by BLANCHE-BENVENISTE et al.). This elementary distinction led to original formalizations of diverse phenomena, such as disfluencies (see GUÉNOT in TALN-05 procs) and coordination (see GUÉNOT in TALN-06 procs).

Coordination phenomena gathers many different kinds of constructions that can be more or less constrained and present specific lexical, syntactic, semantic, prosodic and/or pragmatic properties. What I propose here is the description of Antithetic constructions (1).

1. a. une recette appréciée par petits et grands pour 6 pers. 500 g de rhubarbe (...)
   b. Cette notion concerne aussi bien la source d’un comportement (son origine), que les moyens qui sont employés, et le ou les buts qui sont visés (les intentions).

For the description of the phenomenon, I primarily based my work on MURPHY’s one about Antonym construction (in ICCG3 procs and Constructions SV1-8/2006), which I adapted to French language and I extended to enumerations (1b), and to the coordination of clauses and of different categories’ constituents. Then I formalized this description into MDCxG, and I finally integrated the construction into my grammar for French (verifying this does not require any ad hoc representation, and does not cause any incoherence in the resource considered as a whole).

The construction inherits Coordination’s constraints: (i) a common syntactic function co-assumed by its different constituents, (ii) the possibility of being syndetic or asyndetic, (iii) of relating elements from different categories, and (iv) of being partly elliptic. Among coordinations, they can be identified by a set of constraints coming from different domains: (i) lexical properties that constrain the lexemes’ choice, (ii) syntactic ones that applies on the order of constituents (and can be more or less fixed), and (iii) semantic ones that requires semantic incompatibility between constituents and their sharing of a same semantic field. The conjunction of these different constraints leads to a pragmatic effect of constrast between the constituents, even if their own semantic properties do not oppose them a priori.

I will finally show how the extension of the grammar with the description of such a precise phenomenon can have consequences beyond the single considered description, up to more general constructions (here, coordinations and paradigmatic constructions in general); in other terms, how the enhancement of a very local part of a grammar can bear consequences up to the global coherence of the grammar itself, as a set of interactions between descriptions.