Semantic Predicates in the business language

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In recent years, the interest in the use of language for business has grown. It is recognized that the hidden persuasive linguistic potential improves the company positioning in the public consciousness.

The language of business world is multifarious: we try to identify the features and the behaviour, considering the evolution that has suffered primarily with globalization of markets.

Business activities are so complex that they require the application of several disciplines at the same time and therefore the use of specific languages and technical terminology.

The language of business

Introducing the matter relating to the business language, we must consider two fundamental aspects that make the analysis rather complex.

❖*Sublanguages*. To describe professional activities belonging to different business sectors: banking, trading, accounting, communication, logistic, administration etc.

❖*Terminology*. No one could say that business has a specific and limited vocabulary. The study of language in business contexts is highly interdisciplinary.

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Business documents

Every strategic document is a stream of decisions and actions whereby it does not just describe reality but performs it in the same moment in which they are representing it.

The language of business is partially the language of Economics, using many words that have a dramatic nuance ("crisi economica" as "economic crisis") or military origin ("manovra finanziaria" as "budgetary manoeuvre") as shown Piparantainen (2001).

The most striking feature of the business language in the Italian is the presence of foreign words and expressions, especially of English origin so abounding of technicalities and terms that are often incomprehensible to the experts.

Lexicon-grammar framework

To do Linguistic Analysis we have applied Lexicon-Grammar (LG) theoretical and practical framework, which describes the mechanisms of word combinations and provides a complete description of natural language lexical and grammatical structures.

❖Lexicon formalization

❖Simple sentences as basic analysis units

❖Selection restriction and co-occurrence rules

LG was based on the works by Maurice Gross during the '60s, and subsequently applied to Italian by Annibale Elia, Maurizio Martinelli and Emilio D'Agostino.

Semantic predicates

A set of lexical-syntactic structures defines the value of semantic predicates, while the arguments selected by each semantic predicate are given the value of actants, subjects included (Elia et al., 2010).

The features of each verbs are expressed by the application of the rules of co-occurrence and selection restriction, through which verbs select semantically their arguments to construct acceptable simple sentences.

EX. Transfer Predicates have a "giver", an "object to transfer" and a "receiver", as in the sentences:

Mario (giver) gives a cake (object to transfer) to Juliet (receiver)

Juliet (receiver) receives a cake (object to transfer) from Mario (giver)

NooJ experiments

We provide an example of business document automatic analysis based on LG framework: we will analyze a corpus of Business Plans recognizing a set of semantic predicates used in business language.

Semantic predicates recognition

N0 V N1 a N2	offrire	proporre	presentare	assicurare	garantire
N0 V N1 (Ni= um, Ni di Nj= um)	soddisfare	accogliere			
N0 V N1 Loc N2	posizionare	immettere	inserire	introdurre	
N0 V a N1	mirare	ambire	puntare		
N0 V N1= -um	sviluppare	accrescere	espandere	incrementare	potenziare

Communication predicates

Agent issuer   **L'azienda** garantisce la massima genuinità dei prodotti al cliente

                      The company guarantees the highest genuineness of the products to the customer

Topic / Message   L'azienda garantisce **la massima genuinità** dei prodotti al cliente

                      The company guarantees **the highest genuineness of the products** to the customer

Benef. /Receiver   L'azienda garantisce la massima genuinità dei prodotti **al cliente**

                      The company guarantees the highest genuineness of the products **to the customer**

Creative predicates

N0 V N1= -um

Agent Creator **L'azienda** accresce il fatturato

The company increases the turnover

Topic/ Object of creation L'azienda accresce **il fatturato**

The company increases the turnover

Causative locative predicates

N0 V N1 Loc N2

Agent

L'azienda immette un prodotto innovativo nel mercato

The company introduces an innovative product into the market

Place

L'azienda immette un prodotto innovativo **nel mercato**

The company introduces an innovative product **into the market**

About analysis

The examples presented are only classification principles, but such verbs with their uses, appear extremely frequent in business language.

We created a local grammar on the base of the most frequent simple sentence form that we found in the corpus.

By conducting some experiments with NooJ, it is possible to label predicates and arguments to question the machine, with respect to the nature of the attendant, and of the main themes.
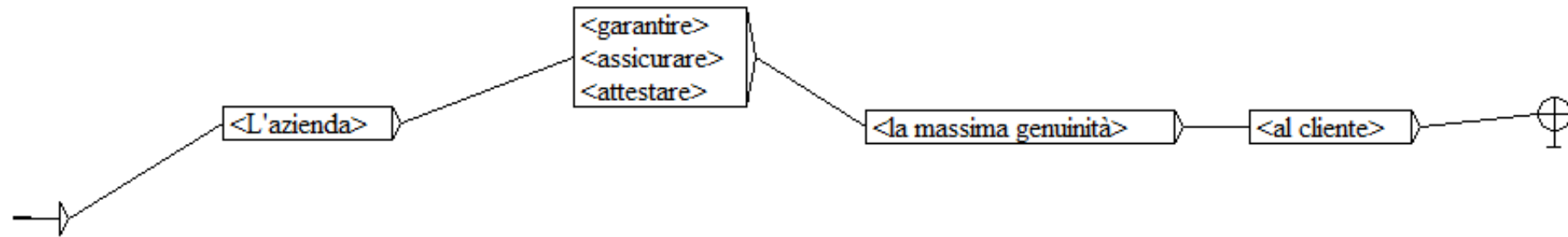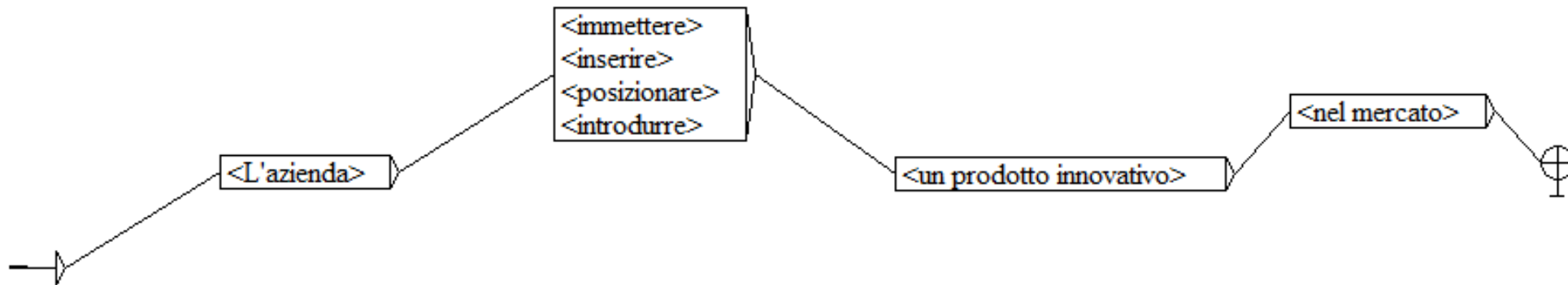
Local Grammars
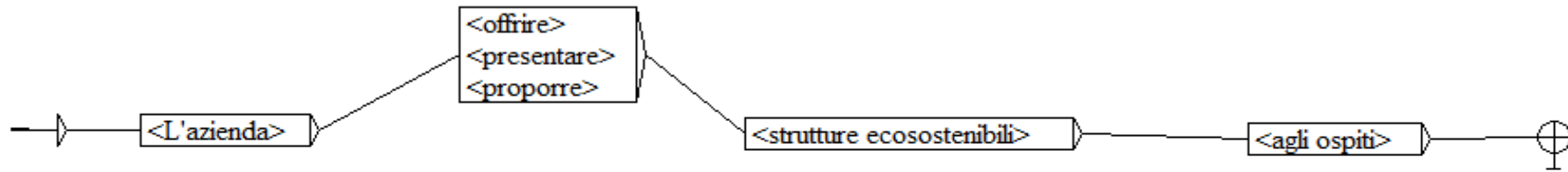
Local Grammars

Local Grammars

Conclusions

To be competitive in the market and face innovation challenges, companies need to acquire specific knowledge, growing and communicating outside their values.

The study in semantic predicates could be used to analyse the process arguing content of a text unlabelled in advance, such as business plans, emails, and business formal communications.

❖Semantic predicates recognition

❖Business semantic predicates labelling

❖Local grammars

❖Question answering system

Thank you.

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