

## PARSEME follow-up initiatives

SentOp Action

### Expression of **Sentiments** and **Opinions**

#### Proposer's name and affiliation :

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#### Nature of the follow-up initiative (project, workshop, network, book, etc.) :

Project COST

#### Challenge

The expression of sentiments and opinions is an important societal issue in the increasingly web-connected world, as the expression of the individual and its relation to the communities s/he belongs to are at the very core of democratic society. But it is also an important challenge from a practical viewpoint, in view of multiple applications on a multitude of domains -- from politics to economics, from interpersonal relations to consumers' preferences and trends.

Human interaction is nowadays mediated through many automatic agents and computer systems, and large databases record interpersonal communication and relations. Many of these forms of linguistic expression are only available in natural language and its unstructured information makes it difficult to directly access the individual expression of sentiments and opinions about all aspects of human society. This is a very demanding challenge for both Linguistics and Natural Language Processing (NLP) communities. In this domain:

- the linguistic expression of sentiments and opinions is embodied in a variety of lexico-syntactic constructions (not only many types of predicative structures in different parts of speech -adjectives, verbs, nouns, adverbs-, but also many **multiword expressions** from a variety of types, from compound parts-of-speech to different types of idioms and other frozen expressions).
- the structure underlying the semantic field of sentiments is still very much fuzzy (lexical semantic background such as the linguistically-oriented affective lexica linguistically-oriented SentiWordNet and, WordNet-Affect)) or are inspired in psycholinguistic theories of the language organization within the human mind [Plutchik 1980, 2001; Lakoff/Johnson 1980] or are derived from strictly formal approaches, taken from syntax and related domains [Anscombre 1995, Leeman 1995, M. Gross 1995, Balibar-Mrabeti 1995, Mathieu 2006; Asher et al. 2009; Tutin et al. 2006, Martin and White, 2005].
- the NLP community strives to capture these linguistic forms Different methods combine symbolic and lexically-based methods with machine learning-based approaches, in order to capture these expressions in running text.

## Topic, scope and objectives

### Sentiments and Opinions

The Action main objective is the establishment of long-lasting collaboration among a multilingual community of researchers and specialists on sentiment analysis and opinion mining, based on the common ground that will derive from sharing information and expertise within the COST framework.

### Others objectives

- common framework for the development of linguistic resources (mostly lexicons and annotated corpora)
- evaluation initiatives towards a better assessment of the current state-of-the-art language resources and tools (better definition of current areas of specialization and interest and the identification of the main actors in the field)

This Action will contribute, through the survey of available linguistic resources, the comparison of methods and techniques, as well as the intense networking among specialists and stakeholders, to a comprehensive awareness of the relevant inter- and multilingual categories having impact on sentiment analysis and opinion mining, as well as providing better, cost-effective and faster methods for the production and reuse of linguistic resources. The accumulative endeavour of lexicon and corpus creation will benefit from the pooling together of already existent resources, avoiding waste of funding and research effort in duplicating available tools and resources, and reinforcing the adaptation of existing materials to new, even unforeseen, applications. Industry stakeholders will be able to a more productive interaction with relevant key-actors in the field, fine-tuned with their needs and specific goals or difficulties. A better awareness of the important societal challenges posed by artificial intelligent systems aimed at opinion mining and sentiment detection will emerge, with clear impact on decision-makers, particularly regulatory agencies.

### Partners already involved

France, Cyprus, Italy, Belgium, Portugal, Serbia, Russia, Spain, [Brezil][Canada]

- estimated number and types of partners needed

All states of Europe

- **possible funding (e.g. European project, bi-lateral project) : European**

- **deadlines for setting up a proposal**