Executive summary

Research plan

The ELIN research project, co-financed by the NCCR in Affective Sciences and the Centre Interfacultaire en Sciences Affectives is an interdisciplinary enterprise that unites scholars from about twenty Swiss local and foreign institutions, as well as professionals from 5 international organizations (UNOG, UNCTAD, CIUTI, FIT, SWISSNEX Singapore) in an attempt to provide the international community with a cross-cultural insight into the role of emotion in conflict scenarios. The focus is on four central emotion concepts that are relevant in conflict and negotiation: ANGER, GUILT, SHAME and PRIDE. The project aims to produce a contrastive account of their meaning construction and verbal communication in eight relevant and widespread languages of the world: the 6 official languages of the UN (English, French, Spanish, Arabic, Chinese and Russian) together with German and Hebrew.

Our multidisciplinary approach incorporates research methods from the affective sciences, psycholinguistics, lexical semantics, cognitive linguistics, corpus linguistics, and critical discourse analysis applied to three subprojects:

- **Research line 1**: A contrastive semantic study of the most salient emotion terms in conflict scenarios, so as to uncover the subtle differences in their semantic space, including the dimensions that maximally polarize them, and an assessment of their impact on translation/interpretation practices in international communication;
- **Research line 2**: An extensive corpus-based cognitive linguistic study of the network of metaphors that provide the conceptual basis for the verbalization and representation of emotions in the languages under study, their connection with the semantic space of the literal emotion terms and their role in translation/interpretation strategies for international communication;
- **Research line 3**: Analysis of the culture- and language-specific discursive tactics used to verbalize emotional experiences in conflict scenarios and the elaboration of language- and culture-sensitive repertoires of communicative strategies for their management and resolution via relevant translation/interpretation techniques.

Studies and summary of results

Subproject 1

Subproject 1 aimed to investigate potential differences in the semantic profiles of the words that culturally different populations use to communicate their affective states in conflict situations. The semantic profiles were to be investigated by means of a web-based questionnaire (the ELIN questionnaire) in which native speakers would rate a number of relevant terms on a set of features concerning the words’ meaning. Therefore, the selection of (1) a representative set of terms, and (2) a representative set of features that would fit the task were of paramount importance. This motivated the design of a pre-study that had not been previously envisioned,
but was crucial to firmly ground our study theoretically and methodologically. In what follows we will first explain the nature and results of this pre-study, to be followed by a description of the characteristics and main results of the ELIN questionnaire per se.

**Pre-study**

In order to establish the structural organization of the lexical fields and the relative centrality of the terms in the 8 languages under study, a psycholinguistic pre-study was designed with a new questionnaire. The pre-study questionnaire comprised 20 emotion-eliciting situations designed to describe one of the 4 emotion categories investigated in ELIN (ANGER, SHAME, GUILT and PRIDE). With the help of our collaborators in the United Nations and other external organizations, five groups of native speakers of Russian, Spanish, French, German, and English filled in the questionnaire. The respondents were asked to free-list the emotion terms (nouns, adjectives or both) in their native language that would best capture the way they would feel in each of the situations. The methodology used to construct the situations is the Facet Approach, a method elaborated within the framework of Facet Theory (Guttman 1959). The construction of representative situations with cross-cultural validity constitutes in itself a valuable contribution to emotion research (for more details on the design process and structure of the questionnaire, see the working paper in this report).

The analyses of the data obtained in the psycholinguistic pre-study led to three main research outcomes. Firstly, we accomplished the main goal of identifying the most salient ANGER, SHAME, GUILT and PRIDE terms in the five languages investigated. Secondly, the results also revealed four culture-specific tendencies in how people label the emotions that arise in conflict-relevant situations. All of them are largely interpretable in the light of cultural variability in the conceptualization and expression of emotion in collectivistic (Russian and Spanish) vs. individualistic (French, German, English) cultures. Thirdly, the analyses revealed a certain degree of intra-categorical variation across languages (differences in how various languages lexicalize the general domains of ANGER, SHAME, GUILT and PRIDE, for example differences in terms of hierarchical structure) (for more details on these results, see the working paper).

**ELIN questionnaire**

The ELIN questionnaire is a natural heir of a study previously running at the Swiss Center for Affective Sciences, the GRID Project, in which most of the core members of ELIN team were involved. In the GRID Project, a questionnaire is used to study the meaning of 24 important emotion concepts representative of the whole emotional spectrum across languages and cultures. The construction of the ELIN questionnaire relied heavily on the GRID design and results. First, the same methodological approach was used as in GRID (componential approach, see Scherer 2005, 2009). Second, statistical analyses on the GRID data were performed to select the set of features that best discriminate between ANGER, SHAME, GUILT and PRIDE cross-linguistically. Finally, a semantic analysis of the emotional domains (aided by the external ELIN collaborators in the various languages) and a review of the relevant linguistic and anthropological literature provided additional features important to further discriminate among types of ANGER, SHAME, GUILT and PRIDE. In its final version, the ELIN questionnaire comprised 95 features in 6 emotion components: 25 features related to event appraisal, 11 to bodily experiences, 13 to expression (vocal, gestural, and facial), 13 to action tendencies, 10 to subjective feelings, and 3 to
regulation. In addition, 16 more features addressed more general issues about emotion conceptualization, like social acceptability and frequency. The ELIN questionnaire is available upon request from the ELIN team.

The ELIN was administered in a controlled Web study ([http://cms.unige.ch/cisa/grid/elin](http://cms.unige.ch/cisa/grid/elin)) in which participants were asked to rate the likelihood with which each emotion feature could be inferred from the meaning of the words. Each participant saw between 3 and 5 terms, always belonging to the same emotion category so as to enhance the possibility of identifying semantic differences between the words. With the help of our external collaborators, the questionnaire was administered in 7 languages and 12 countries: Spanish (Spain and Colombia), French (Switzerland and France), English (Australia and US), German (Germany and Switzerland), Russian (Ukraine and Russia), Hebrew (Israel), and Chinese (Singapore and China).

The results have been analyzed in two ways so far. First, hierarchical cluster analysis and multidimensional scaling was employed in an analysis of the ANGER category in Russian (Russia and Ukraine) and Spanish (Spain and Colombia). This allowed us to reconstruct the structure of the domain, which, contrary to the expectation, is not divided into high-intensity and low-intensity terms. Additionally, the emergent clustering suggests that linguistic similarity effects are fairly large, and prevail over cultural differences; nevertheless, interesting differences were also observed in the meaning of a single word in two different countries. Correlation profiles were also calculated, which have a bearing on translation practice, as they allow us to determine the closest translation equivalents between languages, even for highly culture-specific terms. What is more, we can establish which features are responsible for a difference in meaning between two words, either within a language or across languages.

In a second set of analyses we merged all samples (all languages and countries) to investigate the overall semantic structure of conflict-relevant emotions. The analyses reveal interesting differences between individualistic and collectivistic cultures in the representation of SHAME. Interesting cross-cultural patterns emerged also in the relative position of FRUSTRATION with respect to ANGER and SHAME/GUILT (for more details on all these results, please see the working paper).

Subproject 2

Subproject 2 aimed to investigate the figurative construal of lexicalized varieties of ANGER, SHAME, GUILT and PRIDE (e.g. English anger, indignation, frustration) in a corpus-based cognitive study of the role of metaphor in emotional meaning construction across languages and cultures.

The work unfolded in 4 stages, following one of the most established procedures in cognitive corpus linguistics: Metaphorical Pattern Analysis (Stefanowitsch 2004, 2006). First, relevant comparable corpora were acquired and the metaphorical instances of a random 1000-hit sample of expressions containing each of the words selected in the pre-study was manually extracted. Secondly, an inventory of conceptual metaphors was produced on the grounds of this data for each of the analyzed emotion terms. Thirdly the frequencies of individual metaphors per term were quantified and submitted to distributional statistical analyses. This allowed us to uncover central metaphors for each particular emotion lexeme in the languages under study. Finally, contrastive statistical analyses were run to identify how translation equivalents (e.g.,
Russian *gniev* “anger” and Spanish *ira* “anger”) were metaphorically construed (see working paper for more details on the methodology).

Stage 1 has been completed for all emotions words in four languages: Russian, Spanish, German and French. Stages 2-4 have been completed only for ANGER words in the first three languages. Our results fall into three groups: a) salient metaphors for the construal of a specific ANGER concept, b) salient metaphors that differentiate two subtypes of ANGER in one language, and c) salient metaphors that differentiate between translational equivalents. In what follows we will illustrate these results with a few examples, but a more comprehensive account will be reported at three conferences and workshops (see 1-3 in ‘Conferences and Workshops’) and in two research papers currently in preparation by two ELIN team members (see 13 & 15 in ‘Publications’).

**Salient metaphors for the construal of a specific emotion concept**

Across all languages tested so far, all ANGER terms are characterized by the conceptual metaphor **ANGER IS A PRESSURIZED FLUID IN THE BODY CONTAINER**. It is the most frequent one. This constitutes quantitative empirical evidence of a popular claim in Conceptual Metaphor Theory regarding the alleged universal centrality of this mental representation. Beyond that, some emotion terms in each language are also characterized by other metaphors. Russian *RAZDRAZHENIE* ‘irritation’, for example, is significantly more likely than other terms to be construed as being in the whole body and voice, as opposed to other body parts – like the stomach, chest, or eyes. Spanish *IRA* ‘anger’, on the contrary, is significantly most frequently associated to the eyes.

**Salient metaphors that differentiate two subtypes of anger in one language**

Spanish *IRA* and *RABIA* share a number of preferred metaphorical representations: PRESSURIZED FLUID IN THE BODY CONTAINER, INSANITY and PRESSURIZED FLUID IN THE BODY CONTAINER. However *IRA*, unlike *RABIA*, is also significantly represented as a FORCE OF NATURE and FIRE. Since the meaning foci (Kövecses 2000) of these two metaphors are violence and lack of control (NATURE) and intensity (FIRE), *IRA* seems to be represented in our minds as a stronger and more damaging form of anger than *RABIA*. Another contrast can be found in Russian. While the Russian concept of *RAZDRAZHENIE* ‘irritation’, for example, is significantly more likely than other terms to be construed as being in the whole body and voice, as opposed to other body parts – like the stomach, chest, or eyes. Spanish *IRA* ‘anger’, on the contrary, is significantly most frequently associated to the eyes.

**Salient metaphors that differentiate between translational equivalents**

Bilingual dictionaries frequently quote Russian *ZLOST*, German *WUT* and Spanish *IRA* (all of them meaning ‘anger’) as translation equivalents. However, in comparison to Russian *ZLOST*, German *WUT* is significantly less frequently associated to ILLNESS. Another problem is that Spanish *IRA* is associated to FORCE OF NATURE more than *ZLOST*. In fact, judging from the set of most representative conceptual metaphors, the best translation equivalent for Spanish *IRA* is the
Russian term GNIEV ‘anger’. A translation of IRA as ZLOST’ would inevitably miss the strong component of violence and uncontrollability that is intrinsic to IRA by virtue of the FORCE OF NATURE metaphor. Similarly, a translation of ZLOST’ as WUT would miss the association of the Russian term with disrupted bodily functions.

Subproject 3

Subproject 3 focused on emotional meaning construction in conflict and negotiation discourse, and its challenges for translation/interpretation in international communication. The research within this subproject followed two distinct directions: (1) linguistic variability in the indirect discursive representation of conflict emotions and (2) emotion representation in conflict report across languages. In the first case, linguistic variability was investigated using the scenario questionnaire reported in research line 1. In addition to asking informants to label the situations using fitting emotion words, they were also asked to provide examples of how the same emotions could be conveyed in discourse in a polite, indirect way.

The data has been coded and analyzed in several ways (see working paper). In general the results suggest a very low consensus across our languages as to the strategies with which emotional content is indirectly signaled in discourse. Moreover, the patterns in which people cohere across languages are the opposite for the lexical and the discursive representation of emotional content. In the former, ANGER is the least consensual category in lexicalization patterns across languages, while PRIDE is the most consensual one. By contrast, in the indirect representation of emotions in discourse, ANGER is the most consensual category, while PRIDE presents the greatest variability. A possible explanation can be found in the cognitive complexity of the two emotions and their respective pragmatic implications in discourse (see working paper for more details).

The second direction of research in Subproject 3 looked at emotion representation in conflict reports across languages. This was done through the analysis of UNOG materials (specifically, the peacekeeping documents of the Security Council, verbatim reports). The work was planned in three stages: compilation of corpora of verbatim reports, qualitative analysis and coding, and quantitative data analysis and coding. The first stage has been finished and the second is underway in English, Russian, Spanish and French. The analysis has revealed several types of non-equivalence in rendering emotional content in diplomatic translation, including lexical (connotative differences, mostly in intensity of the words used), grammatical (word order, theme/rheme structure, voice, mood), and stylistic problems (e.g., omission of quotation marks in translation can in some cases fail to convey the irony that was there in the source text), among others. In the last programmed stage, specific text-analysis software (LIWC, Linguistic Inquiry and Word Count) would be used to compare the word use in the verbatim reports. Using this quantitative approach will allow us to calculate the degree to which diplomats speaking different languages use specific categories of words.

Evaluation of the results and future lines of research

For 21 months the ELIN project has been an example of integrative disciplinary work. Linguistics, psycholinguistics, emotion psychology and translation have closely cooperated in
three simultaneous research lines investigating conflict-relevant emotion lexicons, emotion concepts and emotion discourse in several languages using varied methodologies (corpus analysis, self-report questionnaires, discourse analysis, etc.). A project of this size requires the participation of many and varied collaborators capable of contributing both disciplinary skills and native-speaker participants for the studies. Since the beginning of the enterprise, the number of interested parties that have joined the project as external collaborators, giving it visibility and sustainability, has continuously increased. These include both individual scholars and organizations:

- **Dr. Ng Bee Chin.** Acting Head, Division of Linguistics and Multilingual Studies, School of Humanities and Social Sciences, Nanyang Technological University, Singapore (Subproject 1, Chinese in Singapore, data collection/administration)
- **Dr. Song Yafei.** Dean of College of Foreign Languages, Guangxi University, China (Subproject 1, Chinese in China, data collection/administration)
- **Dr. Zhang Jie.** Lecturer, Graduate School of Translation and Interpretation, Beijing Foreign Studies University (Subproject 1, Chinese in China, data collection/administration)
- **Dr. Osnat Argaman.** Lecturer, Hebrew Language Department, Haifa University (Subprojects 1 and 2, Hebrew, data collection/administration/research)
- **Dr. Paula Niedenthal.** Research Director of CNRS, Université Blaise Pascal, France (Subproject 1, French in France, data collection/administration)
- **Ms. Magdalena Rychlowska.** PhD Student, Psychology, Université Blaise Pascal, France (Subproject 1, French in France, data collection/administration)
- **Dr. Raphaël Micheli.** Lecturer, Section de français moderne, Université de Lausanne (Subproject 3, French, data collection/research)
- **Dr. Anna Gladkova.** Lecturer, School of Arts, University of New England (Subproject 1, English in Australia, data collection/administration/research)
- **Ms. Nicole Nord.** PhD student, Case Western Reserve University, US (Subproject 1, English in US, data collection/administration)
- **Dr. Michael Eid.** Professor, Freie Universität Berlin, Germany (Subproject 1, German in Germany, data collection/administration)
- **Ms. Tanja Kutscher.** PhD student (Subproject 1, German in Germany, data collection/administration)
- **Ms. Kathrin Berty.** PhD student, Institut für Übersetzen und Dolmetschen, University of Heidelberg (Subproject 1, German, data collection)
- **Dr. Nicole Carnal.** Lecturer, Zürcher Hochschule für Angewandte Wissenschaften, Institut für Übersetzen und Dolmetschen (Subproject 1, Swiss German, data collection).
- **Dr. Natalia Sigareva.** Associate professor, Herzen State Pedagogical University, Saint-Petersburg, Russia (Subproject 1, Russian pre-study, data collection/administration)
- **Dr. Iraide Ibarretxe.** Lecturer, University of Zaragoza, Spain (Subproject 1, Spanish in Spain, data collection/administration)
- **Dr. Julio Santiago.** Lecturer, University of Granada, Spain (Subproject 1, Spanish in Spain, data collection/administration)
Two more research projects have linked their efforts to the ELIN study. Our collaborator Prof. Bee Chin Ng, from Nanyang Technological University in Singapore, has obtained a project entitled ‘Bilingual Emotion, Bilingual Cognition’ which stems from ELIN Subproject 1. Additionally, one of the members of the core ELIN team, Cristina Soriano, has joined the international research project "Conceptual metaphors: Language, thought and brain”, led by Prof. Santiago at the University of Granada, which looks at conceptual representation from an experimental perspective.

Both research projects take up important conclusions derived from the ELIN work. In the first case, the results of Subproject 1 in the examination of language vs culture factors in emotion conceptualization made it obvious that bilingual speakers need special attention. On the one hand, they are unique cases where two languages and one culture coexist, on the other, there is evidence that their specific conceptual representations constitute “blended” images in which both languages influence each other (Pavlenko 2005). These effects have already been observed in the ELIN study (e.g. 1), and merit closer attention in a world where bi- and multilingualism are becoming increasingly widespread. The second research project will take the results of ELIN Subproject 2 one step further and explore, from an experimental perspective, the cognitive implications of a different metaphorical representation in emotion types. In light of the ELIN findings, it seems pertinent to investigate, for example, whether two varieties of anger like Spanish RABIA and IRA are automatically associated in processing to different conceptual domains conveying different degrees of intensity and damage potential (e.g., FIRE, FORCES OF NATURE). If these associations were automatic, translators aiming for equivalence would have to choose emotion terms granting the same conceptual associations, or resort to emotion imagery themselves, while linguists, psychologists and even therapists would have to take into consideration the emerging cognitive effects associated to using one or another emotion term in a language.

In light of the ELIN results, more topics line up in the agenda that merit further attention. They include the role of metaphorical language in conflict negotiation (cognitive consequences of conceptualizing conflict in one way or another, e.g. as a JOURNEY, as a FIGHT, etc), or the role of word use in conflict negotiation (the influence of the use of specific categories of words such as negative/positive lexis on the negotiation outcomes). A new collaboration has also been established with Dr. Díaz Vera (University of Castilla La Mancha, Spain), who will be visiting the Swiss Center for Affective Sciences in June 2011 for 3 months to study, in collaboration with the ELIN researchers, the metaphorical construction of conflict emotions in English throughout history. Finally, we would like to emphasize the PhD project of our doctoral student, Caroline Lehr, which will address the possible loss in “affective equivalence” that a text can undergo in translation. This will be done using an experimental approach, where various source texts will be translated by two teams of professionals instructed to focus either on the cognitive or on the affective aspects of the text. The emotional impact of said texts will then be rated by
homogeneous native speaker reader groups to test the assumption that the affective impact of texts is mainly modified when there is need for repeated elaboration and considerable shifts in translations.

The ELIN project has always had an ambitious agenda, maybe too ambitious for a 21-month project. As a consequence, the effort has yielded a wealth of data, some of which has not yet been fully analyzed. The results of the ELIN project will continue to generate publications and insight for a long time. Among the future contributions of the project we count a full analysis of the database in Subproject 1 for the production of a detailed semantic profile of conflict-relevant emotions within and across cultures, the production of a translation primer (summary of dos and don’ts and translation mistakes in light of the ELIN results), and a quantitative investigation of emotional content in diplomatic discourse across languages.

Still, many results are already available and have a direct bearing on the academic and professional practices of several interest groups. For example, the ELIN project (Subproject 1) has contributed to generate awareness on cultural differences in the conceptualization of emotions relevant in conflict settings, where members of different cultures (e.g. collectivistic vs individualistic) “read situations differently” and express their emotional state according to their specific cultural rules. The ELIN (Subproject 1) has also provided empirical quantitative and qualitative evidence of the semantic distance between similar terms within and across languages, with obvious consequences in translation practice. For example, awareness has been raised of semantic differences between the same term in two countries sharing a language, as well as semantic differences between terms traditionally considered as translation equivalents. We have also started to uncover (Subproject 3) that diplomatic discourse, even when highly ritualized (as in the verbatim reports of the US Security Council), is not devoid of emotional language, and that translations from the original language sometimes fail to convey the same emotional intent. We have observed that the lexical expression of emotion is more similar across languages than the indirect expression of emotion in discourse (Subproject 3); cultural rules are much more influential in the latter, while broad cross-cultural cognitive patterns are observable in the former. We have also uncovered strategies used to indirectly express conflict emotions in discourse (Subproject 3). The ELIN (Subproject 2) has also uncovered systematic differences in the way very similar emotion concepts are represented in the mind via metaphor; these implicit associations are claimed to have an impact on reasoning and it is interesting to see how some of them appear cross-culturally, while others clearly differentiate between concepts in a way consistent with the expectations derived from the lexical meaning of the words (Subproject 1). By crossing culture and language as two independent variables in the design of our studies, we have been able to provide empirical insight about the relative importance of one and the other in the shaping of meaning. Similarly, the multilingual orientation of the whole project allows us to measure universality vs language/culture specificity at various levels, such as the cognitive complexity of the various conflict emotions, their structural organization, their metaphorical associative patterns and their discursive expression.

**Publications and knowledge transfer**

It was part of the goals of ELIN to be useful to both the academic and the professional community working in the field of international communication. For that reason a special effort
was made to communicate the results of our research through workshops, publications and conference participations. The original plan to celebrate a summary conference in Geneva at the end of the project in 2010 was substituted by the organization of a larger set of workshops in which the preliminary results of the research could be presented more dynamically. A second goal for the workshops was to facilitate interdisciplinary communication from early on in the design of the studies.

With this goal in mind, in September 2008, a 2-day workshop took place as a kick-off event for Subproject 2. Under the title "Metaphor and Emotion: Theoretical, Practical and Experimental Perspectives", the workshop aimed to address several important theoretical and empirical questions concerning the role of metaphor in the verbal and nonverbal representation of affective phenomena. The workshop consisted of two plenary lectures and 10 workshop presentations illustrating 7 distinct methodological approaches to the study of emotion metaphors (cognitive linguistics, cognitive psychology, psycholinguistics, experimental cognitive linguistics, cognitive corpus linguistics, classics, and literary criticism).

On 6 May 2009, we celebrated the workshop “Emotions in Translation: Lost or Found?”, designed to address the linguistic and cultural translatability of emotions, broadly conceived. The workshop featured speakers from several disciplines, including sociolinguistics, psycholinguistics, classical languages research, history of religions, literary criticism, linguistics, and translation studies. The members of the ELIN team presented the results of the pre-study in Subproject 1 (see 9 in ‘Conferences and workshops’). In addition to academic presentations, a round-table on applied aspects of translating emotion was organized, including Marie-Josée de Saint-Robert (Head of the Languages Services Department, UNOG); Hannelore Lee-Jahnke (ETI, University of Geneva); Caroline Lehr (ETI, University of Geneva); Latifa Saint-Roch (Arabic Translation section, UNOG; Xiaolan Feng (Chinese Translation Section, UNOG); and Benoit Kremer (Association Internationale des Interprètes de Conférences, AIIC).

In August 6-8, 2009 the symposium “Measuring the meaning of emotion words: a cross-cultural and interdisciplinary approach”, organized by Klaus Scherer and Johnny Fontaine, took place at the 2009 conference of the International Society for Research on Emotion (ISRE 2009). Two more members of the ELIN team presented results from the ELIN-GRID questionnaire (6).

Presentations at conferences and workshops


The ELIN questionnaire (Subproject 1) is a natural heir of the GRID Project. Consequently, several lines of work carried out by ELIN members originally in the framework of the GRID Project are centrally relevant for ELIN. For example, several chapters have been written for the GRID book (11) that contextualize the ELIN-GRID approach in the broad domain of the multi-disciplinary research on emotion terms (psychology: 11; linguistics: 12; linguistic anthropology: 2). Relevant to the ELIN commitment to ANGER as one of the central conflict-relevant emotions, the GRID book includes a study on the literal and metaphorical conceptualization of the emotion in English and several varieties of Spanish (13). Additionally, given the commitment of ELIN to disentangle language and culture as two interrelated, but potentially distinct variables affecting variation in emotional meanings, two more research papers have been contributed to the GRID volume on this topic (1, 10). These and other research efforts by the ELIN members that are part of the ELIN and GRID research agenda and are included below.


(15) Soriano, C., Ogarkova (in preparation). “Types of anger and their metaphors: MPA in English, German, Spanish and Russian” (preliminary title of the manuscript).

References