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## Apresentação

### Challenges for Research on Reading, Writing, Interpreting, and Translation:

In honor of Márcia Schmaltz (1973\*-2018†)

Desafios na Pesquisa de Leitura, Escrita, Interpretação e Tradução:  
uma homenagem a Márcia Schmaltz (1973\*-2018†)

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Márcia Schmaltz

Available at: <https://marciaschmaltz.wordpress.com>. Accessed on: 10 June 2019.

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## First words

*“... e de seu cajado nasceu uma imensa floresta de pessegueiros, repleta de frutos cheirosos e suculentos, que saciam a sede de quem luta para atingir um objetivo, sem nunca desistir.”*

Anonym, from *Shan’haijing*. Translated into Portuguese by  
Schmaltz & Capparelli.

Free translation: *“... and from his staff a huge forest of peach trees was born, full of fragrant and juicy fruits that quench the thirst of those who strive to reach a goal, without ever giving up.”*

It was with great sorrow that we learnt of the premature death from lung cancer of our dear colleague Márcia Schmaltz on September 7th, 2018, at the age of 45. She was a kind, brave, brilliant, tenacious woman, teacher, translator, researcher, mother, spouse and friend who left us too early, way before we could ever express our deep gratitude for her generous contribution to the world.

She was born in Porto Alegre, Brazil, and lived for six years in Taiwan. She graduated in Language and Literature from Faculdade Porto-Alegrense de Educação, Ciências e Letras in 2001. She obtained her MA in Language and Literature from Universidade Federal do Rio Grande do Sul in 2006, her diploma in translation from Beijing Language and Culture University in 2006, and her PhD in Linguistics from University of Macau in 2015.

She published a range of literary translations (see a partial list in the Appendix). The translation *Histórias da mitologia chinesa* earned her and her mother Janete Luiza Schmaltz two awards: Xerox/Livro Aberto in the category translation in 1999, and Prêmio Açorianos de Literatura. She also produced several specialized/technical translations.

She worked as a Chinese-Portuguese interpreter and translator for governmental institutions and companies. Some of them included: the Brazilian

Ministries of Defense, Technology, Industry and Commerce, Mines and Energy, and Foreign Affairs; Petrobras; Eletrobras; and banks Caixa Federal and Banco do Brasil.

She worked as a lecturer in the University of Macau from 2008 to 2015, where she also completed her PhD studies. Towards the beginning of this period, Márcia Schmaltz started querying the translation process from an experimental perspective.

By then, she became a great enthusiast of cognitive translation studies in general and translation process research (TPR) in particular (see ALVES; HURTADO, 2009), and focused her efforts on tapping into the cognitive aspects of translating linguistic metaphors from Chinese into Portuguese. She decided that triangulating (see ALVES, 2003) using eye tracking, key logging and verbal protocols would be the best approach to understanding problem solving for the translation of linguistic metaphors.



From right to left: Igor A. Lourenço da Silva, Márcia Schmaltz, and Norma Barbosa de Lima Fonseca at the I Congreso Internacional Traducción, Interpretación y Cognición, in Mendoza, Argentina.

Source: Da Silva's personal records.

That was the beginning of her quite long, hard road to figuring out how to process user activity data with Chinese script alongside Roman script as collected through the keylogging and eye tracking software Translog-II (see Carl, 2012). Not only did she learn and develop a method that was unique from everything she had done before and also demanded statistics and programming skills, but she also engaged in exchanges with TPR scholars who sometimes doubted her skills and sometimes helped her through. The English language was a barrier that she refused to accept: she spoke, she presented, and she asked for constant feedback.

She proved to be a tenacious researcher who never thought of giving up on her quest, even though that also meant manually processing tons of data and seeking the help of others. In the end, it all paid off, as she managed to successfully complete her quest and deliver her PhD dissertation (see SCHMALTZ, 2015).

### **Moving on...**

*Os últimos raios de sol iluminavam o rosto de Kuafu, que lamentou não ter conseguido realizar o que havia planejado. Deu um longo suspiro, largando o cajado, e fechou os olhos para sempre.*  
Anonym, from *Shan'haijing*. Translated into Portuguese by Schmaltz & Capparelli.

Free translation: *The last rays of sunlight illuminated the face of Kuafu, who regretted not being able to accomplish what he had planned. He took a long breath, dropping his staff, and closed his eyes forever.*

This rather plain account falls short of telling the whole story and the several challenges that Márcia Schmaltz had to face, but her experience within cognitive translation studies in general and TPR in particular is a source of inspiration to us all. This is why we have decided to pay this homage to her in this issue of *Domínios de Lingu@gem*. In our opinion, there could be no better way to do that than collecting

original papers on the challenges and applications to/of empirical and experimental research on reading, writing and interpreting/translating, a path that she herself took during the last decade of her life.

A growing area of inquiry in translation studies, psycholinguistics and multilingualism alike is the cognitive processes that underpin humans' ability to translate, read, and write. Such processes, usually investigated by analyzing how an individual responds to a stimulus, are commonly accessed indirectly, through methods that hint at aspects of our perception, attention and memory, among others (see BADDELEY; HITCH, 1994; ERICSSON *et al.*, 2018).

Particularly, several studies have focused on cognitive effort. This term has not always been clearly defined, but it is often associated with the allocation of additional cognitive resources to perform a task and sometimes measured/identified through extreme/deviant values for any task-related parameter. In the search for behavioral patterns among subjects located at various points in the novice-expert continuum, researchers, whether they use the term or not, interpret default/automatic procedures or behaviors as instances that require less cognitive effort, while deviations from default behaviors are counted as instances of greater cognitive effort.

For example, research based on analyzing pauses during translation may seek to identify systematic size of segments located between pauses and indicate that the greater the number of pauses or the longer the duration of pauses, the greater the likelihood of cognitive effort. Such a phenomenon may be triggered by difficulties imposed by the source text and particularities of the linguistic pairs, by some working condition (e.g., with or without time pressure, the input of machine translation, or matches in the translation memory system) and/or by limitations of the translator him/herself (e.g., no previous experience in a domain).

The notion of cognitive effort was originally developed in psychological studies. It refers to the mental work involved in decision making, more specifically to

work related to the intense use of cognitive resources for information processing (LEE; SWINNEN; SERRIEN, 1994). One of the most important findings from studies on cognitive effort is that effort tends to be avoided because it involves the use of limited resources by nature (GARBARINO; EDELL, 1997). In other words, humans tend to be “cognitive misers” (FISKE; TAYLOR, 1984, p. 12), i.e., they spend only the necessary effort to make a satisfactory, rather than optimal, decision. Based on this assumption, in translation process research, an individual’s deviant behaviors in relation to his/her own performance throughout a task or in relation to the performance of other individuals may be interpreted as instances of cognitive effort and tend to show, respectively, translation problems and different translator profiles.

Translation is a particular case in point because it involves both reading (i.e., understanding) and writing (i.e., producing) a text. Reading requires that the individual recognize the letters, avoids distraction with irrelevant stimuli, and remember words that have already been processed, etc. (see JAKOBSEN; JENSEN, 2008; ALVES; PAGANO; DA SILVA, 2011). In turn, writing requires, for any purposes, planning, organization of thoughts and information, remembering previous sentences and paragraphs, etc. (see SCARDAMALIA; BEREITER, 1991).

In the last decade or so, we have seen a marked increase in research that takes a variety of approaches in the reading, writing and interpreting/translating domains (see ALVSTAD; HILD; TISELIUS, 2011; SCHWIETER; FERREIRA, 2014). Approaches have varied in theoretical assumptions or in materials and methods. When it comes to theoretical frameworks, we find, for instance, interfaces across fields, including studies of expertise and expert performance, translation studies, and psycholinguistics, and also different perspectives within the same field (i.e., cognitive linguistics, systemic-functional linguistics). Regarding materials and methods, we see studies tapping into different profiles (from novice and field specialists to experts), tasks, conditions, text types, and language pairs, and employing different or combined methods, including

eye tracking, key logging, verbal protocols, Functional Magnetic Resonance Imaging (fMRI) and electroencephalogram (EEG).

Many of these studies have offered reflections on the applicability of their results to classroom and learning contexts and have provided noteworthy theoretical and methodological implications, allowing improved data collection procedures, instruments, and comparability across studies. In this special issue of *Domínios de Linguagem*, we have brought together a set of original studies that offer applications of empirical research and underscore the challenges of conducting experiments in reading, writing, and translation. Below, we provide a brief overview of the papers that appear in this issue.

The first paper by Bruno de Azevedo and Lêda Maria Braga Tomitch presents a framework for analyzing vocabulary activities in a foreign language. In the study, the authors compare how vocabulary and reading are presented in foreign language textbooks. Within these analyses, there are several variables investigated including word frequency, cognate status, introduction of vocabulary in multiple contexts/activities, and the level of cognitive processing that is exerted by the activities.

The second study by Ana María Díaz Ferrero presents a didactic analysis on semantic errors in digital journalistic texts that have been translated from Portuguese into Spanish. The author focuses on interferences that arise from false cognates and chooses five terms that exemplify errors of meaning or misunderstandings in meaning. She concludes that immediatism, lack of lexicon mastery or underestimating of the differences between two similar languages (i.e., Portuguese and Spanish) can lead to an erroneous interpretation of the meaning in the original text, eventually resulting in inaccurate texts that fail to account to the original news.

In the third paper authored by Marileide Dias Esqueda and Flávio de Sousa Freitas, the authors provide a synthesis of the development of research on machine interpreting (speech-to-speech translation). They begin the article by reviewing early

research which first aimed to understand how human speech was processed and how it was produced by the machine. These studies laid the groundwork for subsequent techniques and approaches to investigating how computational system processes, represent, and produce human speech. From this, the authors discuss the need to consider the speaker's intention that characterize the context and communicative purpose of the discourse. They offer implications for the future evolution of the discursive intention in machine interpreting software.

The fourth paper by Carlito Antonio Companhia investigates categorical selection patterns during interlingual translation. The authors draw on a corpus of 114 sentences produced by 40 undergraduate students in a translation program in Mozambique. Their analyses suggested that interlingual translation presents linguistic difficulties for the students. Specifically, these challenges seem to manifest themselves in the establishment of categorical selection properties of lexical items at the level of prepositional, nominal, and phrasal arguments.

In the fifth article by Tania Liparini and Camila Braga, the authors present results from a longitudinal study on strategic and instrumental subcompetences in translator training. The study identifies key strategies for solving translation problems as used by the participants and draws on PACTE's (2003) holistic model of translation competence which describes the underlying knowledge system utilized in translation. Analyses were conducted on data collected from Translog and Camtasia and were classified by type of pause (orientation and revision) and type of support (internal-external; simple-dominant). The results indicated that participants' instrumental and strategic subcompetences were underdeveloped, suggesting that they are unable to properly utilize them to create accurate translations. The authors conclude the paper by discussing implications for translator training.

The sixth paper by Cecília Franco Morais and Marileide Dias Esqueda is a study exploring the role that domain knowledge plays in simultaneous interpreting. From



the questionnaires and audio-recordings, which allowed for analyses to be conducted on variables representing cognitive effort, the results revealed changes in declarative and procedural knowledge after being exposed to training in simultaneous interpreting. However, these moderate changes were insufficient to avoid a high level of cognitive effort.

The seventh paper by Gleiton Malta reports and discusses data elicited through retrospective verbal protocols collected upon a (re)translation task. The researcher provided the participants with three stimuli (a source text and two previous published translations) that they could use freely to produce a target text. The author concludes that such protocols are still valuable to understand the translation process as it can provide us with information that is often difficult to access through other data collection instruments (e.g., eye tracking and key logging) or help us corroborate the results obtained through them.

Bernardo Kolling Limberger and Ana Paula Biasibetti in the eighth article offer insights on methodological issues involved in reading processing. They specifically focus on the use of PsychoPy in a Stroop task and a lexical decision task. The authors provide a step-by-step protocol on how to design the tasks along with some of the strengths and weaknesses of using PsychoPy, an open-code, free and user-friendly piece of software. Besides, they provide insights on how to implement the study and process the collected data.

In the ninth study, James Musselman, Kristen Ellis and Pedro Craveiro had five graduate students and one undergraduate student translate an 80-word-long text on politics from English into Spanish using key-logging software Inputlog. They examined several relations to draw conclusions about cognitive effort during translation, namely: self-reported L1 and verbal fluency scores in L1 and L2; verbal fluency score and perceived level of task difficulty; degree of satisfaction with the target text and perceived level of task difficulty. They also investigated total task time,

total pause time, number of pauses, and mean time of pauses. Their results pointed to some correlations and to the usefulness of pauses as indicative of cognitive effort.

The tenth paper by Claudia Marchese Winfield and Norma Barbosa de Lima Fonseca analyzes the influence of reading purpose and translation experience on summary and translation tasks. They tested the hypothesis that professional translators and undergraduate students produce translated texts and summaries of different quality. They also investigated the time each group spent on the tasks. They found that translation experience, reading purpose and task repetition influence both quality and time spent on task.

In the eleventh study, Kyoko Sekino revises the notion of micro and macro translation units and the importance of context in translation by using application MicroUnitsAPP to analyze the data of one single participant. She identifies 96 micro translation units, 70 of which were part of one single macro translation unit. She points out that context gained relevance after the participant completed such 70 units, as his process became more linear and faster.

Finally, in the twelfth paper, Norma Barbosa de Lima Fonseca, Cecília Gomes Frugoli and Fabio Alves both report on a study and pay homage to Márcia Schmaltz. They analyze the translation process of professional translators and translation students in a translation task involving a news text in the language pair Chinese Mandarin => European Portuguese. Materials and methods included answering a profile questionnaire, translating on Translog, and providing free retrospective verbal protocols upon translation. The results showed that the professional translators were faster than students, but they were unclear as to differences in their levels of meta-reflection. Most importantly, as the authors themselves state:

In this article, we honor Dr. Márcia Schmaltz (1973-2018) presenting the results of her latest research while she was a postdoctoral fellow at the Postgraduate Program in Linguistic Studies (PosLin) at UFMG. In addition, we provide in Annex B a target text in European Portuguese

translated by the researcher from the source text in Mandarin Chinese [...]. As such, we provide the reader of this article with a sample of how the translator unveiled China to Portuguese-language speakers.<sup>1</sup> (FONSECA; FRUGOLI; ALVES, 2019, p. 784)

These twelve studies may take different approaches, but their common thread is their keen interest on methods that may well contribute to our understanding of how humans write, read, interpret, and translate. We are certain that these twelve studies will have important implications in the field and hopefully will encourage new research avenues, methods, and theories.

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<sup>1</sup> Our translation to: “Neste artigo, homenageamos a profa. Dra Márcia Schmaltz (1973-2018) apresentando os resultados da última pesquisa coorientada por ela quando cursava o pós-doutorado no Programa de Pós-Graduação em Estudos Linguísticos (PosLin), na UFMG. Ademais, fornecemos, no Anexo B, um texto-alvo em Português europeu traduzido pela pesquisadora, a partir do texto-fonte em Chinês mandarim utilizado para o desenvolvimento da pesquisa aqui relatada, proporcionando ao leitor deste artigo uma amostra de como a tradutora divulgava a China aos falantes de português.”

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