María del Mar Sánchez Ramos & Celia Rico Pérez. 2020. *Traducción automática. Conceptos clave, procesos de evaluación y técnicas de posedición*. Granada: Editorial Comares, Colección Interlingua 245. 128 pages. ISBN 978-84-9045-946-1

A recent report by Memsource (February 2021), the translation technology giant, notes that, in 2020, the number of projects using post-edited machine translation has outnumbered, for the first time in history, those using human translation. While it is true that this marks a milestone in our discipline, the exponential increase in the demand for multilingual communication is not new. In fact, the translation industry confirms this year after year (Casacuberta/Peris 2017). This increase is characterised by two key parameters: first, the urgency with which transnational corporations need translation to carry out their business activity; and second, the technological developments that have allowed language service providers not to lag behind in the race for competitiveness and productivity.

It is precisely in this context of change, subject to advances in IT and computing, where the work we are reviewing, *Traducción automática. Conceptos clave, procesos de evaluación y técnicas de posedición* [Machine Translation. Key concepts, quality assessment and post-editing techniques], finds an opportunity to reach out to generations of translators who are witnessing how their profession is rapidly changing and seems to have little to do with how it was traditionally understood.[1]

Faced with these positions, the work we are reviewing presents itself as a beautiful pedagogic exercise, an initiation rite that obliges us to face issues as thorny as the quality of professionally translated texts and the fact that there might be more than one acceptable quality standard. Are all texts the same? Should translation always seek the maximum standard of quality? Chapter by chapter, the authors reflect on the key concepts that underpin machine translation and explain its inner workings from an educational standpoint. In fact, after every chapter the authors provide the readers not only with several bibliographical references so they can delve in depth into each topic, but also a glossary with key terms; an assessment questionnaire, and a number of questions to awake critical, thoughtful reflection in the reader about the work they have in their hands.

From the earliest rule-based systems to the most recent advances in artificial neural networks (ANN), the authors outline a true genealogy of machine translation, pre-editing and post-editing, with particular emphasis on quality and other elements, such as controlled languages, which allow better results when using a machine translation engine.

The volume is divided into five different chapters that have been arranged, metaphorically speaking, as a conceptual map. The first one addresses the central element of the work (machine translation) and it serves as the main axis for the remaining chapters. This seems to be a particularly effective arrangement because it allows the reader to form a clear and logical idea of how to approach the work.

The first chapter, "La automatización de la traducción: definición y evolución de la traducción automática" (The automation of translation: definition and evolution of machine translation), introduces the volume and traces the history, successes and failures of machine translation, starting with the very first theoretical speculations in the 17th century on how translation could eventually be "mechanised". The main idea of this chapter appears to be how the processing capacity of computers has been, in part, responsible for setting the pace for machine translation, which, in its relatively short history, has experienced moments of glory and moments of gloom. The former,

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1   See, as the authors note in their book, the lament of Pym (2013: 489) that, *stricto sensu*, machine translation post-editing is not really translation, nor does it require the competences traditionally attributed to a translator.

with the optimism of the fifties regarding the technological advances of the day. The latter, with the slow, inexact results achieved by the earliest systems based on bilingual dictionaries and grammatical rules. The arrival of Google Translate in 2006, a system based on statistical methods, and more importantly its rebirth in 2016 as a system based on artificial neural networks (ANN), provides clear evidence of the efforts of the discipline to improve results.

The second chapter, "Sistemas de traducción automática" (Machine translation systems), introduces the reader to the different types of machine translation engines, of which the authors explain the advantages and disadvantages. Presented in chronological order, the authors examine rule-based machine translation systems (RBMT), which start from linguistic premises and codify information through dictionaries and grammatical rules; statistical systems supported by corpora that calculate the probability of a sentence being translated in a certain way; example-based systems, where translation is produced by analogy compared to a larger corpus; hybrid systems that aim to smooth over the shortcomings of corpus-based engines, and neural network-based systems that employ artificial intelligence methods, such as deep learning, and artificial neural networks.

After establishing the context and the key characteristics of machine translation, Chapter 3, "La evaluación de los sistemas de traducción automática" (Quality assessment of machine translation systems), reflects on the concept of quality and the way in which its perception can differ in the industry and the academia. The idea of not always aspiring to excellence is a controversial one which the authors examine in a detailed manner, explaining when and how, according to the final purpose of the translation, one can negotiate with the client the level of quality of the final text.

Next, the work presents the main rubrics used for quality assessment in machine translation: both manual, with the added costs they entail (time, economic resources, training of those who use the rubric, etc.); and automatic, that is, the result of comparing a particular translation to a reference translation. Notably, the authors contextualise each rubric so that the reader can understand when and how they can be useful (fluency and precision vs. error-based analysis, for instance).

Chapter 4, "Lenguajes controlados y preedición" (Controlled languages and pre-editing), addresses the intralingual restrictions (lexical, grammatical, syntactical) that may be applied to achieve a better quality in machine translation. The authors begin the chapter by referring to the origins of controlled languages, such as Simplified Technical English, and how they can improve the readability and comprehension of technical texts. After this, the work focuses on pre-editing, and presents a panoramic view of the most common guidelines for the treatment of texts before machine translation (use of concise sentences, standardisation of terminology, etc.). The authors speak of the possibility of having a true "controlled translation environment" (Balasov 2020; Torrejón/Rico 2002) characterised, from start to finish, by the treatment of the source text before translation (controlled language), machine translation and, finally, post-editing rules to achieve the desired quality standard.

Chapter 5, "La posedición" (Post-editing), delves into post-editing rules, from the earliest mention in scientific literature (Wagner 1985) to the present day (Nunes Vieira 2019). According to the authors, the year 2014 stands out as the moment in which post-editing began to gain momentum in Translation Studies given its importance in professional forums, training courses, journal articles, job offers, post-editing being regarded by translation agencies as a value-added service, etc. After exploring different approaches, the authors highlight the need to follow clear style guides (O'Brien 2011) and to negotiate with the client the quality of the post-edited target text (TAUS 2016), especially in those cases where human translation would be the preferred option.

The negotiation of quality leads the authors to distinguish between two types of post-editing: full post-editing, which requires a comprehensive, thorough revision of the target text, and light post-editing, which is normally used for internal purposes. The authors present a number of

examples of both types and even cases where post-editing would be unnecessary (despite the constant temptation of the translator to try to improve their target text).

The chapter concludes with the analysis of two post-editing guides (TAUS 2016; GALE 2012), which could help the post-editor identify which segments to focus on as well as the time that should be invested, the type of corrections that should be carried out and the quality expected; together with the competences post-editors should develop. This is particularly interesting for degrees in Translation and Interpreting, since reflecting on the competences required to post-edit successfully might help them shape their curriculum accordingly, in line with current (and future) market demands.

In summary, *Traducción automática. Conceptos clave, procesos de evaluación y técnicas de posedición* is an essential work that helps guide the readers within today's translation industry and the challenges that it poses. Far from conventionalisms and approaches that are unnecessarily theoretical, the authors have found the perfect balance between an informative work and a rigorous compendium of key concepts that underpin machine translation. Without a doubt, due to its characteristics and content, the work will awaken the interest not only of educators and translation students but also of professionals in the industry and researchers interested in getting to know the inner workings and particularities of machine translation.

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