

# Neural networks and the complexity of the translation process

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It has been argued that Translation Process Research has reached a point in which some parts of the process may have become predictable (Carl, Bangalore, and Schaeffer 2016). However, current Translation Process Research can be challenged for involving essentially reductionist approaches.

At the same time, the surprising outputs of machine translation systems based on neural networks enjoy an aura of success, to the point that they are said to have redefined the present and the future of the translation profession (Joscelyne 2018). Surprisingly, these approaches have developed without a theory of the translation process or even of translation itself, and their hidden layers are often described as producing impossible-to-explain outputs, even an interlingua, presented in terms of an emergent phenomenon (Johnson et al. 2016).

Regardless of discussions on the (im)possibility of translation, a process that happens between two complex systems (natural languages) carries necessarily some level of complexity. The success of neural networks in dealing with this complexity is probably associated with the way they learn from bilingual data, by focusing on features such as non-linearity and entropy. But can we expect neural approaches to machine translation to bring us the best models for the complexity of the translation process? And can they be the tools we need in computer support systems to predict the next step in a translation process?

Beside the approaches used by Translation Process Research to extract knowledge on the translation process, from the observable layers of translation product and process data, this presentation will focus on how neural networks deal with this data. Finally, this presentation will propose a discussion on which approaches to complexity provide us with the most adequate terms and techniques to better understanding the translation process, while admitting we can only observe parts of its whole.

## REFERENCES:

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