Thus, studying the influence of L1 prediction mechanisms on L2 anticipation might explain why learning and understanding L2 morphosyntax is so troublesome, and why attaining native-like morphosyntactic anticipation performance is more often than not impeded. In addition, understanding and processing an L2 is more cognitively taxing than speaking an L1 because the L2 overtakes the pool of executive functions usually applied in L1 anticipation [@linck2014working], especially at non-proficient levels. Given that the transfer happens in our brains and that L2 processing depletes cognitive resources, the L1 influence and our cognitive capacities are likely to interact with each other, such that both factors contribute to the difficulty of L2 morphosyntactic processing and anticipation.

Individual variability in cognitive capacities (i.e., WM) does not exert a great impact on linguistic anticipation in typical adult individuals in their L1, at least in simple morphological structures or in speech [@ye2008involvement].

The few online studies so far on the connection between WM and language anticipation generally suggest that WM variability is

Regarding gender, L2 German speakers may not be able to generate gender predictions [@hopp2016learning], while L2 Spanish speakers may be able to do so [@dussias2013gender], although only under specific linguistic circumstances [@lew2010real]. Contrary to gender, number is more difficult to anticipate, so only advanced speakers can make number predictions [Spanish, @marull2017second], and L2 case is not predicted [German, @hopp2015semantics; Japanese, @mitsugi2016use]. For verbal tense, only L2 learners at advanced levels of proficiency can generate predictions in Spanish [@sagarra2018suprasegmental], but learners of Central Swedish can already make predictions at an intermediate proficiency [@schremm2016implicit].

The studies above varied in whether morphosyntax was used as the cue, the outcome, or both. The L1s were also different, so L1 transfer could have interacted with the role of morphosyntax in determining whether the L2 speakers were able to generate gender morphosyntactic predictions. L2 proficiency and maybe even WM can also partially account for the ability to make L2 predictions. All these conditioning factors have often been entangled in research, so it is difficult to tease their influence apart. In gender anticipation, having a similar morphosyntactic system in the L1 can help generate predictions in the L2, even at lower levels of proficiency. This is the case of L1 Italian speakers anticipating gender suffixes in L2 Spanish at beginner stages [@dussias2013gender]. Extrapolating L1 knowledge is also the case of L1 English speakers using definiteness in articles to predict nouns at intermediate proficiency stages [@lew2010real]. And L1 transfer can also be seen in L1 English speakers generating predictions in L2 Dutch more efficiently when they use cue determiners that share similar forms with their L1 determiners [@liburd2014investigating]. In contrast, lacking such L1 system may hinder the generation of L2 predictions. This would be the case of L1 English speakers generating gender suffix predictions in L2 Spanish [@dussias2013gender].

Adding a phonological layer and increasing the L2 linguistic experience may aid in overcoming the morphosyntactic anticipation hurdle, especially when the structure to be predicted is absent in the L1. English is a poor language in terms of verbal morphology when compared to Spanish. However, when morphosyntax is cued phonologically through lexical stress, advanced L2 Spanish speakers overcome the obstacle and generate verb suffix predictions [@sagarra2018suprasegmental]. L2 speakers of Swedish are also able to generate tense suffix predictions based on tones at beginning and intermediate stages of proficiency [@schremm2016implicit].

There are a few considerations to bear in mind when studying phonological effects, as they are possible mediated by L1 transfer. While having a similar structure in the L1 can facilitate L2 anticipation, it does not guarantee any kind of anticipation success. Whereas advanced L2 Spanish speakers whose L1 is English learn to use lexical stress as a cue [@sagarra2018suprasegmental],

Similarly,. It is however an open question whether these populations learn to use lexical stress as

The question remains whether these three populations learn to use lexical stress as a cue.

Linguistic knowledge and experience affect language processing and anticipation, especially in L2ers. Evidence for that is French L1 speakers struggling to process L2 lexical stress in Spanish [@dupoux2008persistent], arguably because their French lexical stress encoding blocks acquisition of L2 lexical stress with different properties. However, even these non- or barely sensitive individuals display individual differences.

Cognitive differences should therefore also be considered when studying L2 acquisition, processing and anticipatoin beside linguistic factors.

The literature in L2 anticipation show that speakers can achieve some success in L2 anticipation depending on their L1, the cues they need to process, their level of proficiency, and maybe their WM capacities, but their performance will rarely be native-like [@perdomo2019prosodic]. A possible explanation for the varied results on L2 perception and anticipation might be found in what speakers are transferring from their L1 (acoustic knowledge vs. function knowledge) that interacts with the new L2 structures they need to encode. Whereas L2 speakers’ anticipation performance might depend on their ability to perceive the cues and what needs to be anticipated, asymmetries amongst studies and the lack of cognitive measures also difficult comparison of results. The lack of a common theoretical framework, the use of non-standardized measures to assess proficiency [self-assessment, @lew2010real], the variety of tasks [e.g., eye-tracking, @sagarra2018suprasegmental; vs. offline, @dupoux2008persistent], a variety of L1s [@hed2019neural], and the unclear distinction of variables [e.g., @schremm2016implicit] call for further research where the possible factors accounting for L2 anticipation patterns are better distinguished. Here, I focus on WM and on acoustic and function transfer of suprasegmental phenomena to anticipate verb endings in Spanish.

In the case that L2 speakers create the prosodic cue-morphosyntactic outcome mappings to L1 sound encoding transfer, the mapping may not always allow for native-like anticipation efficiency [@perdomo2019prosodic]. There has been no model accounting for the transfer of suprasegmentals and loss of efficiency, although the

but WM will not be responsible for individual variability [@otten2009does; @sagarra2018suprasegmental; @tanner2014erps].