Modals and the Construction of Epistemic Stance
by Native- and Non-Native Speakers

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This paper describes a corpus-based analysis of native/non-native speaker (NS/NNS) variation in the distribution and function of modals and their role in the construction of epistemic stance, and addresses NNS instructional needs. Our corpus was 320 research articles (RAs) from 2007/2008, 160 NS and 160 NNS, across eight disciplines: Chemistry, Computer Science, Materials Science, Neuroscience, Economics, Language and Linguistics, Management, and Psychology.

Epistemic stance is an expression of commitment to the truth of a proposition (Hyland, 1999). It is represented by mechanisms which convey "personal feelings, attitudes, value judgments, or assessments" (Biber, 2006) and also levels of certainty (Reilly, Zamora, & McGivern, 2005). In RAs epistemic stance is part of the important function of claiming and confirming membership of the discourse community of other academics and researchers, and therefore in constructing identity.

Three different functional categories of modals have been described as performing a valuable role in the construction of epistemic stance: Possibility/Ability, *can*, *could*, *may*, and *might*, Obligation/Necessity, *must*, *should*, *(have) to*, *need to*, and *(be) supposed to*, and Prediction, *will*, *would,* and *(be) going to* (Biber, Johansson, Leech, Conrad, & Finegan. 1999; Reilly *et al.,* 2005). Modals have been described as by far the most common stance markers in the spoken university registers of classroom teaching and management, and the written registers of course management and texbooks (Biber, 2006). However, very little research seems to have investigated either NS/NNS variation, or their use in the RA. We suggest the area is increasingly important due to the fast-growing numbers of research writers around the world, particularly NNS.

The corpus was analysed using WordSmith Tools, followed by manual checking of the function of every occurrence. We also checked inter- and intra-rater agreement. Results indicate that modals are important for the construction of epistemic stance -- they were nearly twice as common as boosters. Numerous statistically significant (p<.05) NS/NNS (and discipline) differences were found. A major finding was that NNS significantly underused Prediction modals, particularly in Chemistry and Materials Science but also in Computer Science, Neuroscience, Economics, Management, and Psychology. Additionally, Chemistry, Computer Science, and Economics NNS overused Possibility/Ability, and Management and Chemistry NNS underused Obligation/Necessity. There were also many marked differences with individual modals, though the use of synonyms within functional categories might operate here.

A closer examination of the corpus was then undertaken to investigate these differences. It was observed that NNS Chemistry and Materials Science authors sometimes used *can* and *could* incorrectly, and also develop claims in a different way, describing their research in a much more narrative and descriptive style. Their conclusion sections also appear to contain much less reflection and discussion than NS.

Conclusions are that modals perform an important role in the construction of stance. However, NNS are less aware of certain genre conventions. Many may lack the linguistic resources to employ modals correctly and need help to join the discourse communities of international research, which implies a need to teach discipline-specific research writing. Detailed implications for teaching, and a comprehensive teaching plan, will be presented.

References

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