



The Status and Representation of Contact-Induced Semantic Shifts in Quebec English: From Twitter Users to Sociolinguistic Informants

Filip Miletic, Anne Przewozny-Desriaux, Ludovic Tanguy

► To cite this version:

Filip Miletic, Anne Przewozny-Desriaux, Ludovic Tanguy. The Status and Representation of Contact-Induced Semantic Shifts in Quebec English: From Twitter Users to Sociolinguistic Informants. *New Ways of Analyzing Variation (NWAV 49)*, Oct 2021, Austin, TX, United States. hal-03445857

HAL Id: hal-03445857

<https://hal.science/hal-03445857>

Submitted on 24 Nov 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

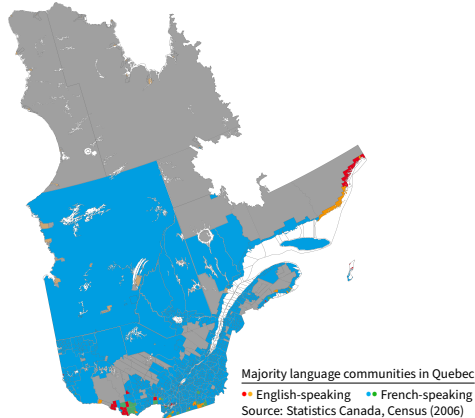
L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

The status and representation of contact-induced semantic shifts in Quebec English: from Twitter users to sociolinguistic informants

Filip Miletic, Anne Przewozny-Desriau, Ludovic Tanguy
CLLE, CNRS & University of Toulouse (France)
{filip.miletic, anne.przewozny, ludovic.tanguy}@univ-tlse2.fr

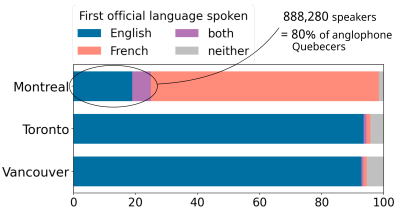
Object of study

- Contact-induced **semantic shifts in Quebec English**, e.g. *deception* 'disappointment' (cf. Fr. *déception*).
Big deception... you were not present in the Pride Parade in Montreal today. [...] I keep waiting for a breakthrough but Conservatives keep disappointing.
- There are **dozens of described examples** (Boberg, 2012; Fee, 1991, 2008; Rouaud, 2019), but most are anecdotal.
- How **widespread** is this phenomenon?
Which **factors** condition its use?
What **representations** are associated with it?



Method

- We operationalize contact-induced semantic shifts as **regional semasiological variation**, and study them comprehensively using an **interdisciplinary approach**.
- We use **computational semantic models** to systematically identify target linguistic patterns in a large Twitter corpus.
- We then implement a **variationist survey** to see how these patterns are reflected by real-life sociolinguistic behaviors.



Computational models of lexical semantic variation

DATA

- A custom-built corpus of **tweets** (Miletic et al., 2020) published **from 2016** onward.

Subcorpus	Users	Tweets	Tokens
Montreal	55 k	11 m	193 m
Toronto	51 k	13 m	223 m
Vancouver	48 k	11 m	213 m
Total	154 k	35 m	629 m

- Basic **sociolinguistic information**: stated location; degree of bilingualism based on languages in tweets.
- The data are used for analyses based on different **word embedding** models (Miletic et al., 2021).

TYPE-LEVEL ANALYSIS

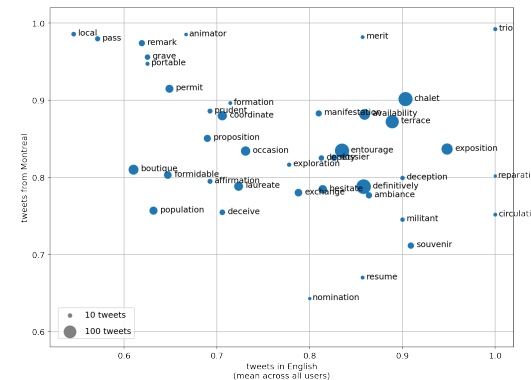
- Identifies the **words** within the whole vocabulary with the **most different meanings in Montreal**.
- Uses **word2vec** (Mikolov et al., 2013) to compare meanings across regions $\Rightarrow$ **≈ 20 new cases**.

TOKEN-LEVEL ANALYSIS

- Identifies the contact-induced **senses** of a word.
- Uses **BERT** (Devlin et al., 2019) to analyze 40 target items, producing **clusters** of semantically similar occurrences $\Rightarrow$ **annotation** for the presence of contact influence.

PATTERNS OF VARIATION

- For most lexical items, contact-related senses are used by speakers who **tweet in French more often** than those who use the same item with a conventional sense.
- Semantic shifts likely represent **variations in usage** associated with **bilingualism** rather than established regional variants.
- But both regional specificity and association with bilingualism vary across different items, suggesting **differences in diffusion**.



Variationist sociolinguistic survey

PROTOCOL

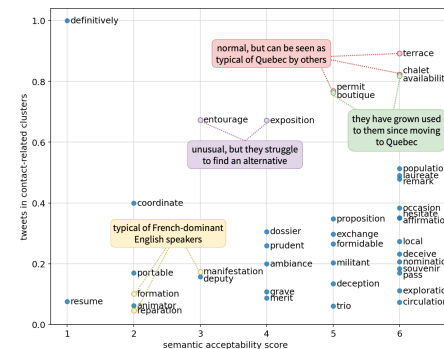
- PAC-LVTI** protocol (Przewozny et al., 2020): a standard variationist sociolinguistic **interview** and a detailed thematic **questionnaire**.
- A new **protocol extension** for semantic variation (Bailey & Durham, 2020; Dollinger, 2017; Robinson, 2010) using 40 **tweets**, each with an item in a contact sense:
 - Read the tweet out loud $\Rightarrow$ **phonological information**;
 - Rate **acceptability** from 1 to 6 $\Rightarrow$ **semantic information**;
 - Give a **synonym** in this context $\Rightarrow$ **interpretation check**;
 - Feel free to **comment** $\Rightarrow$ **representations**.

PARTICIPANTS

- 942 Montreal users from the corpus having used at least one target item with a contact-related sense $\Rightarrow$ **40 target users** chosen based on idiomaticity.
- Recruitment **through Twitter**, including an explanation of the participants' presence in the initial corpus.
- Data collection is **ongoing**.

A CASE STUDY

- 32 y. o. **monolingual English** speaker, ≈ 10 years in Montreal.
- All lexical items are **phonologically integrated** into English. Acceptability **ratings vary**, with rich qualitative comments.
- The ratings are **not correlated** with computational variation scores, but general patterns (bilingualism, interaction) **mirror Twitter**.



Conclusion

SUMMARY

- Our **computational method** for semantic shift analysis entailed the creation of a Twitter corpus and of multiple semantic models.
- This approach identified **previously undescribed** examples and provided insight into their **status and diffusion**.
- Our **sociolinguistic survey** uses a custom interview task building on the computational analyses to further investigate lexical semantic variation.
- Initial results show that this is crucial in establishing **sociolinguistic profiles** and eliciting **representations**.
- The link between Twitter and interview data is complex, which points to **different dimensions** of variation.

ONGOING WORK

- Further sociolinguistic interviews** will provide additional information, contributing to clearer conclusions.
- A **direct comparison of sociolinguistic and Twitter data** will provide descriptive insight as well as allow for systematic evaluation of computational methods.

References

- Bailey, L. R., & Durham, M. (2020). A cheeky investigation: Tracking the semantic change of *cheeky* from monkeys to wines: Can social media spread linguistic change? *English Today*, 1–10.
- Boberg, C. (2012). English as a minority language in Quebec. *World Englishes*, 31(4), 493–502.
- Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2019). BERT: Pre-training of deep bidirectional Transformers for language understanding. In *Proceedings of NAACL-HLT*, 4171–4186.
- Dollinger, S. (2017). TAKE UP #9 as a semantic isogloss on the Canada-US border. *World Englishes*, 36(1), 80–103.
- Fee, M. (2008). French borrowing in Quebec English. *Anglistik*, 19(2), 173–188.
- Fee, M. (1991). French in Quebec English newspapers. In *Papers of the Fifteenth Annual Meeting of the APLA*, 12–23.
- Mikolov, T., Chen, K., Corrado, G., & Dean, J. (2013). Efficient estimation of word representations in vector space. In *Proceedings of ICLR 2013*.
- Miletic, F., Przewozny-Desriau, A., & Tanguy, L. (2020). Collecting tweets to investigate regional variation in Canadian English. In *Proceedings of LREC*.
- Miletic, F., Przewozny-Desriau, A., & Tanguy, L. (2021). Detecting contact-induced semantic shifts: What can embedding-based methods do in practice? In *Proceedings of EMNLP*.
- Przewozny, A., Viollain, C., & Navarro, S. (2020). *The corpus phonology of English: Multifactorial analyses of variation*. Edinburgh University Press.
- Robinson, J. A. (2010). Awesome insights into semantic variation. In D. Geeraerts, G. Kristiansen, & Y. Peirsman (Eds.), *Advances in Cognitive Sociolinguistics* (pp. 85–110). De Gruyter Mouton.
- Rouaud, J. (2019). *Lexical and phonological integration of French loanwords into varieties of Canadian English since the seventeenth century*. Doctoral dissertation, Université Toulouse - Jean Jaurès.