Table 5. *Results of the residual Reaction times mixed effects analysis for AA bilinguals (no Berber speakers)*

Effect	β	SE	T-value
Intercept (mean)	-0.005	0.006	-0.75
Constraint	0.066	0.011	5.767*
Switch	-0.021	0.018	-1.178
Cognate status	-0.012	0.013	-0.969
French proficiency	0.0001	0.0004	0.375
Codeswitching habits	-0.003	0.005	0.628
Sentence duration	0.0000	0.0000	0.888
Constraint*Switch	0.013	0.018	0.742
Constraint*Cognate status	0.026	0.019	1.310
Switch *Cognate status	-0.009	0.018	-0.510
Constraint*French proficiency	0.0002	0.001	0.258
Switch*French proficiency	-0.004	0.001	-2.568*
Cognate status*French proficiency	0.0003	0.0008	0.417
Constraint*Codeswitching habits	-0.003	0.013	-0.276
Switch*Codeswitching habits	0.020	0.023	0.872
Cognate status*Codeswitching habits	0.004	0.011	0.387
Constraint*Switch*Cognate status	-0.065	0.036	-1.811

SE: standard error, *: $p < .05$

Discussion

Were Cognates Processed as Codeswitches or Borrowings?

Stimuli in the switching conditions were instances of embedded French noun phrases. A recurrent question when studying codeswitching is whether the switched items represent actual codeswitching (i.e., a change of language) and not a case of borrowing. Borrowing and codeswitching are distinct processes in that in codeswitching there is alternation between two grammatical systems based on predictable syntactic constraints on switch points, whereas in borrowing, there is only use of one grammatical system (e.g., Poplack, Sankoff & Miller, 1988), This means that what assures a word is a loan and not a codeswitch is the fact that loanwords are almost always phonologically and morphologically integrated into the recipient language. Based on Boumans and Caubet's (2000) analysis to Algerian-French codeswitching data, embedded

French nouns are used with French markers and are not morphologically marked with Algerian Arabic suffixes.

Cognates in AA are established loans from French. When used as Algerian, they are fully integrated morphologically and phonologically into Algerian sentence structure and do not differ from any Algerian non-cognates (Table 9). The French cognates used in this study are integrated into AA structure when used as loans. However, when French cognate and non-cognate nouns are used as French switches, some bilinguals may partly integrate them phonologically but never morphologically. For instance, one may use the Arabic trill /r/ in /la rɛgl/ instead of the French /ʀ/ in /la ʀɛgl/ "the ruler" but never use Arabic suffixation / la ʀɛgla*/. In addition, as switches, the French nouns are not used with the Arabic article "əl" as in /əl ʀɛgl*/. Based on the above, the French targets which were embedded in AA sentence contexts and were presented in the French orthography in the current study represent a case of switching and not borrowing.

Table 9. *Phonological and morphological adaptation of French borrowings into AA*

	English	French	Algerian Arabic	Phonological Adaptation	Morphological Adaptation
Non-cognate	Neighbor -one neighbor	Voisine -une voisine /yn vwazin/	/ʤaara/ -/ʤaara weħda/	Not applicable	Not applicable
	-the neighbor	-la voisine /la vwazin /	-/əl ʤaara/		
	-the neighbors	-les voisines /le vwazin/	-/əl ʤaaraat/		
	-two neighbors	-deux voisines /dø vwazin/	-/zuʤ ʤaaraat/		
Cognate	Box -one box	Boite - une boite /yn bwat/	/bwatˤa/ -/bwatˤa weħda/	-use of emphatic Arabic /tˤ/ instead of /t/	-use of Arabic fem suffixes: /-a/ for singular and /-aat/ for plural
	-the box	- la boite /la bwat/	-/əl bwatˤa/		-use of Arabic article "əl" for both singular and plural.
	-the boxes	-les boites /le bwat/	-/əl bwatˤaat/		
	-two boxes	-deux boites /dø bwat/	-/zuʤ bwatˤaat/		-use of Arabic qualifiers "wahda", "zuʤ"

This is also confirmed by data from the bilingual interview. Instances of natural switches produced by the bilinguals show no integration of the French phrases into the AA structure as shown in Table 10. Furthermore, in the semantic fluency test mentioned in the Methods section, participants were asked to provide words in Arabic and French in different predetermined categories. Some participants produced Algerian cognates such as /roppa/, /kaskitˤa/, /triku/, /friʒidɛr/, /vista/ during the Arabic session, and others produced their French equivalents /ʀɔb/ "dress", /kaskɛt/ "cap", /tʀiko/ "sweater", /fʀiʒidɛʀ / "fridge", /vɛst/ "jacket" during the French session, suggesting that they distinguish borrowing from codeswitching.

Table 10. *Samples of natural AA-French codeswitching from the bilingual interview. AA is given in Bold and in IPA transcription*

Sentence	English Meaning
1. Vous nous donnez des informations **ʕla** les résultats?	1. Do you give us information on the results?
2. **jətsəmma** la chose **ɛli ʕlabali biha**	2. That is the thing of which I know
3. **roht waħdi ʕend** ma cousine	3. I went alone to my cousin
4. **sebʕa tnaħaw f**- la visite médicale	4. Seven were excluded during the medical visit"

Finally, errors in naming the French targets which were excluded from the analysis reveal that when the targets in the biased context were anticipated in AA, they were produced in AA then corrected to French. For instance, Algerian cognate /əl fərʃitˤa/ "the fork" and non-cognate /əl ħəl/ "the answer" were anticipated instead of the French /la fuʀʃɛt/ and /la ʀepɔ̃s/ respectively. This indicates that when otherwise the French targets were named in French, our participants processed them as French switches and not as borrowings.