We trained 30 speakers (monolingual English and French-English bilinguals) to produce different accents of English. A preliminary analysis addressed subjects’ ability to neutralize the tense-lax vowel contrast in reproducing a Russian English accent. Figure 1 displays F1/F2 vowel plots in three conditions: *pre*: prior to accent exposure, *training*: the subjects listened to and immediately repeated accented sentences, and *post*: the subjects tried to reproduce the accent spontaneously with sentences not previously heard. While both groups achieved nativelike production (pronouncing *heat* and *hit* as [hit]) when asked to repeat sentences, the bilinguals, as a group, were more successful when asked to spontaneously produce novel sentences in this accent. Bilinguals’ F2 values differed significantly between *heat* and *hit* prior to accent training, but not in the *post* condition. F1 values differed significantly for monolinguals and bilinguals in both *pre* and *post*.

Our findings support the phonological translation hypothesis (Flege 1981) which predicts L2 forms should be intermediate between L1 and L2, due to a restructuring of the phonetic space so that it encompasses two languages. An alternative account may be in terms of echoic memory (Calabrese 2011), a mechanism by which sensory representations of speech uttered by others are stored and checked against different mental representations, until the stored acoustic patterns are either ascribed to existing phonological representations or converted into new phonological representations. Bilinguals’ echoic memory strategies may differ from those of monolinguals due to simultaneous acquisition of two languages, such that novel intermediate phonological representations are arrived at more rapidly.