Introducing SLA of phonology research: a historical perspective

SLA and contrastive linguistics
THE PAST: FOUNDATIONS

The 20th century contrastive studies, known under the name of Contrastive Analysis, originated out of the need to improve the methods of language teaching and learning.
Contrastive Analysis Hypothesis

**strong** version (Lado 1957): possibility to predict all errors as a result of transfer from L1(NL) to L2(TL):

- similar elements were assumed to be **easy**
- different elements - to be **difficult**

**weak** version (Wardhaugh 1970): comparison of L1 and L2 not enough to predict all errors; they can be explained after the fact
Gradually, more moderate views replaced the strong language acquisition hypothesis.

Transfer lost its all-solving status and came to coexist with the dominant notion interlanguage (Selinker 1969, 1972), independent of NL and TL.
Interlanguage Hypothesis

extreme
- Creative Construction Hypothesis (Dulay and Burt 1974)
- the monitor model by Krashen (e.g. 1981): a distinction between acquisition and learning

moderate
- Markedness Differential Hypothesis (Eckman 1977, 1981): difficult areas are those that are different from L1 and relatively more marked than L1
The notion of language transfer involves the use of native language (or other language) information in the acquisition of a second (or additional) language. A broader definition of this sort allows for observed phenomena such as:

1. delayed rule restructuring
2. transfer of typological organization
3. different paths of acquisition
4. avoidance
5. overproduction of certain elements
6. additional attention paid to the target language resulting in more rapid learning
7. differential effects of socially prestigious forms.
Weinreich (1953) *Languages in Contact*

- **interference**: “those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language”
- **bilingualism**: “the practice of alternately using two languages”
- **later**: only native-like use of both languages (e.g. Bloomfield) vs. any use of an L2 (e.g. Haugen)
Lado (1957) *Linguistics Across Cultures*

- **CA** - Contrastive Analysis
- **transfer**: “individuals tend to transfer the forms and the meanings, and the distribution of the forms and meanings of their native language and culture to the foreign language and culture”
- Differences between the two languages more important - they cause 'negative transfer'; similarities - 'positive transfer'
behaviourist view of language learning

- Bloomfield (1933), Skinner (1957)
- grammatical structure as ”system of habits” (Lado 1957)
- habits acquired through exposure and practice
- stimulus-response
mentalistic view of language learning (Chomsky et al.)

- Chomsky (1959) – review of Skinner’s (1957) *Verbal Behaviour*

- the independent grammars assumption - children have a system of their own, they are not defective speakers

- **LAD** Language Acquisition Device – children construct linguistic competence by ‘evaluation measure’ (‘hypothesis-testing’ in acquisition research)
independent grammars in L2

- **approximative system** (Nemser 1971)
- **interlanguage** (Selinker 1972)
- phonology of interlanguage (Tarone 1978)
- the methodology of **Error Analysis** (Corder 1971):
  - error (of competence) vs. mistake (of performance)
- paradox in Selinker & Corder: the object of description is learner’s knowledge of language (competence) whereas the research method is the analysis of his/her performance
important:

- multi-competence should be treated as a norm: it’s normal for the majority of people to use another language
SLA of speech

- Abramson & Lisker 1970: cross-lg differences in the discrimination ability of VOT (responsible for voicing & aspiration contrasts in initial stops), which agreed with Motor Theory (Liberman et al 1967): perception accomplished via production

- the **categorical perception (CP) paradigm** (tests of discrimination & identification of consonants to discover those lg-specific patterns)

- so, the opinion in the 1970s: discrimination of voicing & place contrasts in Cs in L2 determined by the phonemic significance of the stimuli in L1
SLA of speech cont.

- BUT 2 to 6-month-old infants COULD discriminate such contrasts independent of their exposure to the language in which they occurred.
- THUS loss in discrimination ability (age; progress in L1).
- adults Japanese learners of English could produce /r/ & /l/, but not perceive the contrast: production preceded & exceeded perception in L2 learning.
- training to improve perception was unsuccessful - support for the strong **Critical Period Hypothesis** (Lenneberg 1967): from 2 years to puberty.
- the above conclusions were premature → detailed studies demonstrated that…
perceptual difficulty in L2 is relative

as to voicing, place, context, experience with L2, but also different acoustic cues used by L2 learners than by natives for the same contrasts (e.g. for /r-l/ contrast native speakers use F3, while Japanese learners use temporal differences and F2)

native lg patterns of phonetic perception are formed in the first year of life (works by Werker et al., Polka)

no consistent answer as to children b-n 2 & 13: whether they have any advantage over adolescents & adults in the perception of non-native contrasts (Flege et al. vs. Werker & others)
perception vs. production

- perception causal for production: e.g. Portuguese speakers assimilated Fr. /y/ to their /i/ category while English speakers - to their /u/ category

- however, prod & perc may proceed independently (in Japanese learners of English perc lagged behind prod)

- "earlier is better" to learn production; no convincing evidence for perc (comment: adults have heard incomparably more signals than children)
perceptual training of L2 contrasts

- in the 1980-90s it was demonstrated that short-term intensive training improves perception of voicing easier than place; but longer training even more

- importance of context, e.g. vd/vless <th> contrast trained in CV context improved Fr. speakers' perception of natural CV stimuli, but there was NO TRANSFER to VCV or VC contexts: "subjects learn to differentiate position-specific allophones of phonetic categories, rather than context-free phoneme categories"
THE PRESENT

- both children & adults have some perceptual difficulties; they are not due to a loss of sensory capabilities, but reflect perceptual attunement

- sensitive period > critical period

- since non-native contrasts are not equally difficult, contrastive analysis of phoneme inventories cannot accurately predict perceptual problems of L2 learners
THE PRESENT cont.

- Selective perceptual patterns are modified in adults (& children) through immersion or conversational instruction; some perceptual difficulties may persist even after production mastered, so perc & prod may be uncorrelated in more experienced learners.

- Short-term training emphasizing equivalence classification transfers to novel talkers and stimuli, but whether it generalizes to all phonotactic contexts - has not been demonstrated.
Extended References

Extended References cont.

Extended References cont.