

The transmission of linguistic change within a speech community is characterized by incrementation of a faithfully reproduced pattern characteristic of the family tree model, while diffusion across communities in the wave model shows weakening of the original pattern and a loss of structural features. It is proposed that these two models are in complementary distribution, reflecting the difference between the learning abilities of children and adults. Within the speech community, children faithfully transmit the structural pattern acquired from their caregivers. Sound change in progress reflects the regular incrementation of this pattern among pre-adolescent and adolescent children, the primary process leading to separation of the branches of the family tree. Contact across branches depends upon the language acquisition of adults, which produces a less faithful replication of structural patterns.

Evidence for this proposal is drawn from three studies of diffusion. (1) Structural constraints are lost in the diffusion of the New York city pattern for tensing short-*a* to four other communities: northern New Jersey, Albany, Cincinnati and New Orleans. While the New York City tensing is inhibited in function words and limited to closed syllables, both of these constraints are lost as the pattern diffuses to the communities. (2) While the Northern Cities Shift develops regularly and consistently within the settlement pattern of the Inland North, its diffusion to St. Louis along Route I-55 shows a much less regular character. This diffusion of the Northern Cities Shift appears to represent the borrowing of individual sound changes, rather than the diffusion of the structural pattern as a whole. (3) Diffusion of the Philadelphia short-*a* tensing pattern to the African-American community in Philadelphia shows an approximation to the original system, with much less consistent rules for the distribution of tense and lax forms.

