

Formal Foundations of Linguistics (Linguistics 680)

Design Features of All Human Languages

- **Interchangeability:** all normal members of the community can both send and receive messages (bee dancing performed only by foragers; only male birds sing).
- **Cultural transmission:** Koreans learn Korean, etc. (There is not a proper subset of the cat communities whose members arch their backs to express fear/hostility.)
- **Arbitrariness:** there is usually no natural or inherent connection between the form of the signal and its meaning.
- **Discreteness:** complex signals can be broken down into distinct, repeatable, recombinable, meaningful units. (Some birdsong has repeatable, recombinable units, but don't express more complex messages.)
- **Displacement:** ability to communicate about things remote in time and/or space.
- **Productivity:** ability to express an infinity of messages (most of which have never been expressed before) about an unlimited variety of subject matters. (uniquely human)
- **Recursiveness:** whole complex signals can be incorporated as parts of more complex signals. (uniquely human)
- **Multi-level patterning:** meaningless units (phonemes) combine to form minimal meaningful units (morphemes), which in turn combine to form words, which in turn combine to form phrases (including sentences). (uniquely human)
- **Learnability:** organisms that know one variant of the system (L1) can learn another (L2). (uniquely human; mockingbirds are not a counterexample because they don't know the meanings of the songs)
- **Reflexiveness:** the messages can be about other messages, or even about the communicative system itself. (uniquely human)