Scientific profile:
"Constraints on Variation in Language and Communication"

1. Variation. Human language and communication exhibit a tremendous amount of variation. Every language community maintains its own inventory of sounds or signs, its own word and sentence structures, its own ways of conveying meaning, and its own system of appropriate interactions between people. Every genre of communication maintains its own types of text elements and language varieties, and its own contextual system of appropriate use.

2. Constraints. Notwithstanding this enormous variety, languages and communication systems also show remarkable degrees of similarity. There are many possible languages and communication systems, but some types are much more probable than others. Thus, the variation among languages and among genres of communication is heavily constrained. The causes of these restrictions will at least lie in human biology (possible articulations of the speech organs or arms and face, possible auditory and visual representations filtered by the human ear and eye, mammalian brain structures, language-faculty-specific cortical structures, human-communication-specific cortical structures), and, at a higher level, in human psychology (cognitive limits on processing capacity) or human social interaction (the need to classify important human relations). ACLC researchers work together to identify as many sources of constraints as possible.

3. Evidence. The ACLC finds evidence for the constraints with at least two equally valid methods: making generalizations about spontaneous data observed and elicited in the field, and behavioral experiments executed under controlled conditions. The observations in the wild involve the study of the acquisition of language and appropriate communication by children and adults, the study of diachronic changes in language and communication systems, the comparative study of language structure and communication systems across the world (typology), and the description of typologically "different" languages, which are often underdocumented and endangered. Behavioral experiments are performed in the lab, in schools and sometimes in the field. The ACLC emphasizes the fact that in the end, the evidence from all sources must be compatible.

4. Modeling. The long-term scientific goal of the ACLC is to discover systematicities behind human language and communication, and their causes. As in other sciences, it may be possible to find a set of theories each of which is correct in its sub-area, and ultimately those correct theories will have to account for all sources of evidence at the same time, and also be compatible with each other. Those theories will probably be quite different from, but probably also share some aspects with, all current theories. As long as the correct set of theories still has to be discovered, various theoretical approaches with partly overlapping empirical coverage will continue to coexist happily in the ACLC, such as generative grammar, functional discourse grammar, usage-based approaches, optimality theory, cognitive grammar, construction grammar, pragmadialectics... Meanwhile, the main measure of progress in our field is the success achieved by explicit models that account for as many sources of evidence as possible at the same time.

5. How this profile helps choosing research projects
The ACLC makes sure that the profile plays a role in guiding future research, by being a criterion in internal research applications or in hiring scientific staff. Thus, a research proposal has a greater chance to be supported if it looks at its subject matter from more of the aspects mentioned. For instance, a proposal that aims to study the "DP" (Determiner Phrase) has a better chance of being supported if it aims to find the tree structures to represent the DP, *and* investigates how children and second-language learners acquire the DP, *and* investigates how the DP changes over the generations, *and* investigates what kinds of DP are processed fast and which ones slowly, *and* compares the DP across a variety of languages, *and* compares the success of various possible models of the DP, *and* performs computer simulations with these models.

6. How this profile influences the typology of research groups
The multi-faceted approach leads to an organization of research groups by subject, rather than by method. Thus, there is no research group called "psycholinguistics", because the phonologists use psycholinguistic (as well as many other) methods to discover the processing of the English /æ/~/ɛ/ contrast, and the syntacticians use psycholinguistic (as well as many other) methods to discover the processing of the DP. And there is no research group called "historical linguistics", although many ACLC researchers investigate diachronic language change, usually with the goal of answering a typological question.

7. Learnability (part of the UvA Zwaartepunt of Brain and Cognition).
There is an explanatory relation between the observational sources of evidence mentioned above. If we want to know what possible and impossible languages are, we can notice that possible directions and sequences of diachronic change can help constrain this typological variation (if change has a bias against a certain feature, that feature will become rare or non-existent), and that possible acquisition paths and possible modes of interaction can help constrain both the possible changes (the order of features acquired may influence the end result of acquisition) and the typology directly (if a feature is representable in the brain but no acquisition path leads to it, the feature will never appear in adult language). These considerations are behind *Learnability*, which has been the ACLC's implementation of the UvA Zwaartepunt of *Brain and Cognition* since 2008. In this Zwaartepunt the linguists of the ACLC collaborate successfully with psychologists and child development researchers.