Linguistics Department Academic Plan
February 28, 2013

Background Description

Research and faculty

The UCSC Department of Linguistics is a relatively small and focused department, with an outstanding research profile and a commitment to excellent teaching and mentoring at the undergraduate and graduate levels. Linguists seek to understand and explain human language. What are its properties? Are they learned, innate, or do they emerge by other means? What principles of language, cognition, or usage explain them?

There are twelve ladder-rank faculty actively teaching in the department. Of our remaining two faculty members, Ladusaw has been in full-time administration for some years; Aissen, who in emerita status holds the title of Research Professor in Linguistics, remains active in research and graduate mentoring.

Our research centers on core areas of linguistics, in particular:

- Semantics and pragmatics, the study of meaning
- Syntax, the study of the formation of sentences
- Morphology, the study of the formation of words
- Psycholinguistics, the study of the relationships between linguistic behavior and psychological processes
- Phonetics, the study of speech sounds in their physical aspects
- Phonology, the study of speech sounds in their cognitive aspects

While some departments emphasize breadth within the discipline of linguistics, our strategy from the outset has been the opposite, to focus on a relatively small number of core areas. Six of our faculty work in the area of syntax and morphology (Aissen, Chung, Deal, Hankamer, McCloskey, Wagers); four in semantics and pragmatics (Anand, Brasoveanu, Farkas, Ladusaw); and four in phonetics and phonology (Ito, McGuire, Mester, Padgett). Since these core areas are also close enough to interact with each other (and all of them with Psycholinguistics, Wagers’ field), this disciplinary focus fosters a spirit of shared endeavor and encourages a great deal of collaboration. These are hallmarks of our department.

Our research is known for its empirical depth, theoretical rigor, and intellectual independence. Some of us gather data by fieldwork, sometimes involving understudied, minority languages; others by laboratory experimentation or computer-assisted work on language corpora. These methods are often combined, and we all share a commitment to precise modeling and explanation.
Theoretical linguistics has changed a good deal in recent years. While field work and written descriptions continue to provide crucial data, many researchers are supplementing these techniques with other means of gathering data. These include behavioral experiments in laboratories (for example, perceptual experiments and eye tracking during reading), or the use of large electronic corpora (databases of spoken or written language). Linguistics is also becoming increasingly interdisciplinary, forging stronger ties with computer science and psychology, for example.

Our department began a process of hiring some years ago, with the goal of remaining on the forefront of the field as it changes. Our current faculty combine formal theoretical methods with experimental and corpus-based methods, and reach out to neighboring fields more than in the past. We have positioned ourselves to continue doing high-level research in the core fields of linguistics.

There are three areas of laboratory space in the department: a perception and recording lab, an eye-tracking lab, and an analysis and meeting lab. All are located on the second floor of Stevenson College, where the department office and most faculty offices are located. This proximity of all labs to each other and to the faculty offices is very unusual in our field; we believe that it fosters a healthy integration of experimental and formal work. The department has also worked hard to establish a culture of shared laboratory space. Laboratory rooms are not formally tied to specific faculty or even subfields. This is in part due to space limitations, but we believe it has the positive advantage of promoting interaction and collaboration between researchers.

Six of the department’s faculty (about half of its members) have been elected Fellows of the Linguistic Society of America, an honor reserved for no more than 5% of the LSA membership. One was recently President of the Society and was just elected a Fellow of the American Association for the Advancement of Science. Linguistics faculty and graduate students have held a number of National Science Foundation grants in recent years.

Most of our research aims at discovery of patterns in language and the principles that explain them. In the larger picture, we see ourselves as contributing to the understanding of human cognition and behavior. Some of us are documenting facts about understudied minority languages like Chamorro (Mariana Islands), Irish (Ireland), Nez Perce (Idaho), and Tzotzil (Chiapas, Mexico). Most of our research is theoretical, but some of our faculty work in areas having applications, for example, automated discovery of an author’s stance on an issue, or automatic analysis of words into their parts.

*Graduate Program*

The department trains Master’s and Doctoral students. Though our Ph.D. program is small, it has an outstanding reputation. Our Ph.D. alumni hold permanent academic positions at Georgetown University, New York University, Stanford University, UC San Diego, UC Berkeley, the University of Chicago, USC, and Yale University, among many other institutions. Though we train Ph.D. students primarily for academic careers, alumni also hold linguistics-related positions at companies including Google, Microsoft, and Nuance.
The department recently adopted new requirements for the Ph.D. and Master's degrees. These were designed to preserve a strong foundational core while better positioning our graduates to contribute to the changing field described above. We may be the only program in the country that requires as core training courses in phonetics, phonology, psycholinguistics, semantics, and syntax, and trains all students to combine formal and experimental methods in search of theoretical explanation.

The Ph.D. program requires a core of nine courses: two each in phonology, semantics, and syntax, and one each in phonetics, psycholinguistics, and either experimental methods or field methods. This strong core, all of which students generally take regardless of background, positions students for collaboration and success. Students must also take three advanced seminars in fields that form a coherent body of study relevant to their dissertation. The remaining course requirement is the Research Seminar, a professionalization course. The most tangible and beneficial outcome of this course is our annual Linguistics at Santa Cruz conference, during which the second- and third-year graduate students present their research to the department. This event coincides with visits by prospective Ph.D. students, and we believe that it plays a significant role in persuading students to enroll at UC Santa Cruz.

Ph.D. students must complete a language exam (testing reading competence in a foreign language), two qualifying papers in distinct fields, and then pass a qualifying exam, all by the end of the third year. The remaining requirements are a dissertation prospectus and the dissertation; these should be completed within the next two years.

The two-year Master’s program has as its primary purpose the training of students who are considering Ph.D. work in linguistics and wish to make themselves more competitive for such programs. Master’s students complete nine courses: two each in phonology, semantics, and syntax, and three electives. Before completing a Master’s Thesis students must also pass a language exam.

The department recently established a BA/MA program. With proper advising, this program makes it possible for a small number of undergraduate Linguistics majors to receive a Master's degree from the department given one further year of study after the B.A.

A great deal of graduate training and collaboration occurs in the context of the department’s various research groups. These include the Corpus Linguistics Group, the Morphology Reading Group, the Syntax and Semantics Circle, the Phonetics/Phonology Lunch, and two groups that have been research clusters supported by the Institute for Humanities Research: Cross-Linguistic Investigations in Syntax-Phonology, and the Santa Cruz Linguistics and Philosophy Group. The department also hosts colloquium speakers several times every quarter.
**Undergraduate Programs**

The Linguistics Department sponsors two undergraduate majors, Linguistics and Language Studies, and two related minors. There are currently about 140 students declared in each major. Since 2005 the number of Language Studies majors has remained roughly the same, while the number of Linguistics majors has grown by 58%. To some extent this growth can be attributed to the hires we have made in recent years; our departmental workload ratio has remained more or less the same over this period. The fact that only Linguistics has grown might be due to the prestige of the major, or to the research and teaching profiles of the more recently hired faculty (see below).

These undergraduate programs have been described by past external reviews as among the best in the country. Five of our faculty have won campuswide or divisional teaching awards. The Linguistics major, and the linguistics portion of the Language Studies major, reflect our faculty research profile in being focused on the core disciplines of linguistics. This focus allows students to achieve an impressive depth of understanding. For example, Linguistics majors must complete two quarters each of phonology, syntax, and semantics, and they often have the option of taking even more advanced classes in these areas.

Apart from an introductory linguistics course and the courses described above, Linguistics majors must complete five elective courses, fulfill a language or mathematics competency requirement, and fulfill the senior exit requirement. Most students fulfill the exit requirement by taking an upper-division or graduate class that requires a substantial original research project. A few write senior theses.

The Language Studies major combines the study of linguistics with a deeper training in a language and its cultural context. Students must complete an introductory linguistics course, a course in each of phonology, semantics, and syntax, and at least two further upper-division electives in linguistics. Language Studies majors must also achieve competency in a language beyond Level 6 at UC Santa Cruz. Finally, they take a range of additional courses either in linguistics or in the history, culture, politics, etc., of an area relevant to their language specialization.

Our programs impart important transferable skills too. Linguistics courses develop abilities especially in data analysis, analytic reasoning, and good and persuasive writing. Our courses also tend to encourage or require collaboration as well.

Undergraduate students are increasingly involved in departmental research. Many students participate in our laboratory research, at all levels of involvement, from assisting in experiments to becoming co-authors of published papers. The deep training provided by the department in specific subfields creates another avenue to advanced research. The best students participate in departmental research groups, attend colloquia, and take graduate classes. Every year, undergraduate students present their research at the Linguistics Undergraduate Research Conference. This year our students were awarded 5 of the 10 Undergraduate Research Awards in the Humanities Division.
**Impact, Vision, and Goals**

**Faculty**

When we wrote academic plans in 2005 and 2006, we envisioned a period of growth and renewal. We have largely achieved that vision. In 2005 most of us did research on theoretical phonology, semantics, or syntax using formal methods. Our faculty now include an experimental phonetician, a psycholinguist, a computational semanticist, and a semanticist with expertise in Bayesian reasoning and mathematics.

Apart from the new strengths and directions this gives to our research, this renewal has brought new opportunities for funding. With his strengths in computational linguistics, Anand has brought roughly $376,000 to the campus (IARPA). The department's most recent funding success, a $300,000 grant from the National Science Foundation, combines Wagers’ (PI) expertise in theoretical psycholinguistics and experimental methods with Chung’s (Co-PI) expertise in syntactic theory and fieldwork.

We had also hoped that our department’s new directions would lead to collaborations with other programs within and outside Humanities. Here we can point to Anand’s extensive collaborations with Walker (Computer Science) and (to a lesser extent) with Fox Tree (Psychology). There is more that we can do, particularly in connection to the evolving Language Program (see below).

After this period of hiring and renewal, the Linguistics Department expects to remain roughly at its current size of twelve ladder-rank faculty. However, faculty will naturally retire. It is time for the department to begin a serious conversation about the more gradual renewal that awaits us. Since three of our syntacticians are the most senior faculty, in the near term this conversation will likely be about the role of syntax in our department and in the field. We will have to proceed carefully, balancing two potentially competing desires: a desire to preserve our current strengths and a desire to move with, or even ahead of, a changing field.

Over the last 10 years or so we have had two concerns about faculty demographics. The first concerns gender. Of our 12 faculty (not counting the dean and retired faculty), eight are men. Of our five most junior faculty, four are men. Of the four candidates still under consideration for our current search, all are men. We have been sensitive to this issue for some time, but we believe we are dealing with a larger problem for the field, and not (or not merely) biases of our department. It may be that the only way to redress the imbalance in our department is to conduct more targeted searches in the future. However, this would help our department more than it helps the field.

The second concern has to do with the age distribution of our faculty, which is highly bimodal: four of 12 are Assistant, one is newly Associate, and the rest are Professor Step 4 or higher. The situation is much less grave than it was when we wrote the last academic plan, when there had been no new hires for about 14 years. We now have a young and vibrant cadre of ladder-rank faculty. However, the large gap in ranks creates a challenge for
departmental governance. In recent years many of the senior faculty have held administrative positions outside of the department, leaving few to govern within the department. Our challenge going forward will be to ensure a smooth succession of governance to the more junior faculty as the more senior retire.

As a mundane but meaningful issue, we note that two of our most senior faculty have offices in Cowell College, away from the rest of the department in Stevenson. When these faculty retire we will want to bring any new faculty members into Stevenson College.

**Graduate Program**

Linguistics currently has 20 Ph.D. students and 2 MA students. This is below a goal of 25 Ph.D. and 10 Master’s students that we had set for ourselves in an earlier academic plan. We have long felt that an incoming Ph.D. class (in a five-year program) should include at least five people in order to foster community and critical mass. (This works out to about a 2:1 Ph.D. student-faculty ratio.) Yet we have averaged closer to four per year. For this reason we welcome the recent campus initiative to increase the number of incoming Ph.D. students, which is in our interest as well as the campus’s. We are aiming to enroll 6 students this Fall.

However, the recent drive for more Ph.D. students also raises significant concerns. First, should our graduate student numbers increase dramatically – as they would if we were to meet a target of 10 Master’s students or a Ph.D. student-faculty ratio higher than 2:1 – we would surely have to augment department staff. Such a change by itself would likewise put an untenable burden on our already taxed faculty and staff. This would require a workload trade-off elsewhere in order to maintain academic quality. For example, we might wish to allow our undergraduate programs to contract. (This could happen naturally given new majors being proposed by the Language Program, see below.) The problem here is that TA-ships, which are needed to support the graduate students, are allocated based primarily on undergraduate enrollments.

Second, if we enroll more graduate students then we may need to position more of them for non-academic career paths, given the reality of jobs in academia. Those of our alumni who left academia have done well in finding jobs that make use of their linguistic expertise. Given our new faculty and research profile, graduate students will now have opportunities to acquire skills in statistics, experimental design, computational methods, Bayesians mathematics, etc. This may well increase opportunities for job placements outside of academia. However, given that our department’s orientation remains (and will remain) theoretical, not applied, it may not be realistic to imagine we can do a great deal to train students for other careers.

Third, though our program is considered one of the strongest in the country, the pool of excellent applicants is small, and we compete for them with the few other best programs, including MIT, the University of Massachusetts, Amherst, UCLA, and Stanford. Unfortunately, though the campus is finding ways to increase the number of offers we can make to prospective students, it will remain very difficult to attract more of the strongest
students – those who will not only matriculate but graduate and get jobs – without significantly better financial offers.

Finally and most obviously, a larger graduate body requires more funding just to increase numbers. The campus has contributed significantly to this initiative particularly in areas like first- and fourth-year fellowships and a better over-offer ratio. At the same time, Linguistics was allocated three fewer TAships this year than in previous years. We have taken considerable steps in recent years to meet the campus’s (and our) objective of Ph.D. growth:

i. More faculty are applying for external funding. As noted above, two of our faculty were just awarded an NSF grant at roughly $300K, and another has brought in roughly $376K from IARPA.

ii. In the last two years Anand (Associate Graduate Director) and Padgett (Chair) have run workshops in the Fall to help first- and second-year Ph.D. students apply for NSF graduate fellowships. These workshops have been successful: in 2011-12, one first-year student was awarded an NSF fellowship and another received honorable mention. (The total number of NSF fellowships awarded in linguistics in 2011-12 was approximately 6.) We intend to continue these workshops in the future.

iii. Beginning this Fall, we no longer intend to fund Master’s students, though this will make it even harder than it has been to attract people into this program.

In other words, we are doing our part. We are concerned, though, about whether the campus really has the resources itself to help us follow through on this growth initiative.

On a different note, we have been concerned for some time about the gender balance of the graduate student body, a reflection of the same problem for the field discussed above. Only nine of our current 22 students are women. We pay close attention to this issue during screening and recruitment, but with limited success. In recent years women have dropped out of the Ph.D. program more often than men have. The department should continue to explore ways of improving this balance.

Undergraduate programs

At the undergraduate level, we will continue to offer degrees in both Linguistics and Language Studies. However, the size of these majors may be affected by the creation of majors like Spanish Studies and Applied Linguistics and Multilingualism, offered by the Language Program. We view this prospect as one offering a positive challenge to renew and grow in other ways, perhaps in collaboration with programs outside our department. Some opportunities have arisen only recently.

The renewal of our undergraduate programs is already underway in some respects. Within the department, the changes in our research profile are increasingly reflected in our undergraduate course offerings – recent additions include courses in computational methods, quantitative methods, psycholinguistics, and language and social identity. This
changing curriculum may help explain why the Linguistics major has grown much faster than the Language Studies major in recent years, as discussed above.

Changes outside the department suggest other opportunities for undergraduate growth and change. As the Language Program achieves its status as a department, with a critical mass of faculty who work in Applied Linguistics and related areas, it should be a goal of our department to forge connections. This has begun in a modest way; for example, the Spanish Studies and Applied Linguistics majors will require Introduction to Linguistics and allow Linguistics courses to meet elective requirements. But there are obvious more interesting and deeper connections we should explore, both at the undergraduate and graduate levels. The department should also explore new connections with Psychology and Computer Science, prospects that may be more promising now than in past years given our new faculty profile and changes in those departments.

**Broader impacts**

The impact of our department’s research is mainly in the form of knowledge created, that is, contributions to our understanding of human language, cognition, and behavior. However, the broader impact of our work goes beyond knowledge creation in several respects.

First, some of us combine theoretical work with documentation of understudied and/or endangered languages. We live in an era of unprecedented language attrition due to modern economic and social forces. Linguists estimate that half of the world’s languages will be extinct within a hundred years. In this context, documentation of the syntax, morphology, and phonetic structures of understudied languages is a contribution both to the field and to the world at large. This tradition of our department is likely to carry forward. For example, our most recent hire, Deal, builds some of her research on her own documentation of the syntax, morphology, and semantics of Nez Perce, a Native American language. Another recent hire, McGuire, is collaborating with Padgett on a project using ultrasound to address questions of phonetic theory while documenting the production of sounds in Irish Gaelic. A third junior faculty member, Wagers, is the PI of an NSF-funded project with Chung to bring modern behavioral experimental methods into the field, documenting the online processing of structures in Chamorro.

Our department’s newer directions create other opportunities for broader impact in the future. For example, Anand (in collaboration with Lyn Walker of Computer Science) studies the computational modeling of multi-party conversations.

It is worth mentioning that all of these broader impacts coming out of linguistic research require a very modest cost for the knowledge and impact they produce.

Though most of our Ph.D. graduates take academic jobs, many have joined industry and are making contributions in areas like speech recognition and synthesis, computational linguistics, technology-assisted literature review, and software development. Our Master’s and Bachelor’s graduates make even more diverse contributions to society, in areas such as language instruction, editing, speech pathology, and computer technology.