Information about Final Projects for
Linguistic Approaches to Animal Communication
2017

Instructions

Participants are required to write a *short* paper on a topic related to the themes discussed in class; it will be prepared by a squib (mini-analysis, *maximum* 2 pages) due on Tuesday, April 4th by 1pm by email.

–The final paper should be no longer than 5 pages.

–Content: It could take the form of a survey of a well-identified area (e.g., the alarm repertoire of a particular species), a critical look at a particular study (e.g., are the conclusions of Dupont & Dupond (2015) warranted by their data? What experiment can you imagine that would be more informative?). A more concrete list of possible projects can be found below, but participants are encouraged to propose their own topics.

–Note that some of the projects below call on different skills and tastes, some come with data to be analyzed, some amount to literature search, etc. If you are unsure about whether they would be a good fit for you, please discuss it with us.

–The preparatory squib should describe your topic and preparatory work you have done towards the final paper.

Squib and final paper format

Under construction

Depending on your general topic, your squib and final paper should have one of the following forms. We specify below which parts should already be present in the squib (but not necessarily in the same form as in the term paper!).

• If your paper is a **literature review paper [squib: include at least 1. and a part of 2.]**

The paper should have the following structure:

1. Definition of the species + reviewed articles
   –Make sure you briefly provide the **most relevant** non-linguistic facts about the

species.
–Say in a few words why this is an interesting/challenging topic.

2. State the main generalizations that are found in the literature.
   If the literature provides precise data about linguistic behavior, summarize them as **synthetically and precisely** as possible (e.g. you may use the + notation to summarize different sequences that have the same general form).

3. State some initial theories one could entertain, and how the data bear on them.
   => your discussion should at least include statements of the form:

Theory I = …
Theory II = …
Theory I can account for data x, y, z by …
Theory II can account for data x, y, z by …
And possibly
Theory I cannot account for data a, b, c because …
Theory II cannot account for data a, b, c because …

(This may be more or less easy/appropriate depending on your topic. If you have difficulties with this, contact us.)

4. Extract crucial predictions that distinguish the theories you have discussed, and if possible sketch some field experiments that could help decide among them.

• If your paper is a theoretical paper [squib: include at least 1. and a large part of 2.]

1. Definition of the species + data that you are re-analyzing.
   Remind the reader of the main generalizations (data) to be accounted for.

2. Summary of earlier theories
   –State these theories briefly but precisely, and explain how they account for the data.
   –Explain what the main advantages and drawbacks of these earlier theories are.

3. Statement of your alternative theory
   –Explain what motivates your alternative theory.
   –State it precisely.
   –Explain how it accounts for the data.

4. Compare your theory to the earlier theories: what are the data that they all explain? What are the data that are explained by some theories but not others?

5. Extract crucial predictions that distinguish among the theories you have discussed, and if possible sketch some field experiments that could help decide among them.

Note: the goal is not necessarily to have the best theory, but to be clear on which theories could be entertained and how one could decide among them.

• If you are analyzing or reanalyzing a database, or performing an experiment: contact the instructors.

Timeline

–Send an email to both instructors by March 28th to manifest your interest for a particular topic.

–**Friday, April 6, 13h**: preparatory squib due, by email to:
<philippe.schlenker@gmail.com>
<em.chemla@gmail.com>

–Final paper due: 2 weeks after the final class

Possible topics

Critical surveys and case studies

– Bird survey and properties of bird semantics
Is there evidence for a non-trivial compositional semantics in birds?
Literature: Engesser's and Suzuki's papers discussed on March 15th.
Possible interlocutor: Sabrina Engesser

– Chickadees calls: constancy of the number of calls?
There seem to be more regularities in the chickadee calls discussed in Templeton, Greene & Davis (2005) than the regularities discussed by the authors. They discuss a negative correlation between the number of D notes and predator size, but the number of D and A notes together is more or less constant, so that one could just as well talk

about a positive correlation between number of A calls and predator sizes. This opens the way for other kind of interpretation of the correlation (in particular if one of the notes is more detectable than the other by the predators themselves).
Data are available.

– krak vs. krak-oo: Campbell monkeys use Krak and Krak-oo calls on Tiwai island where there is no Leopard. A first look at the data suggests that the two types of calls are interchangeable, but one could look at the question in more detail and ask, for instance, if the calls are found in different positions within their sequences.
Data are available.

– What do Diana monkeys understand of Campbell's calls? krak, boom, -oo, hok
There is a growing literature on inter-species comprehension. Diana's understanding of Campbell calls in particular has been well documented. One may review the current evidence to assess what part of the Campbell repertoire the Diana monkeys understand, and what not. For instance, one may ask whether they understand the role of the -oo suffix.

– The syntax and semantics of boom across monkeys (and beyond?)
Literature: discuss this with us
Possible contact point: Jean-Pierre Gautier

– Diana and Campbell's female calls: what do we know?
Literature: a good starting point is Dunja Veselinovic's recent work on the topic
Possible (email) interlocutor: Dunja Veselinovic

– Hornbills' production and understanding of calls.
Literature: e.g., Rainey, Zuberbuhler, & Slater. (2004). The responses of black-casqued hornbills to predator vocalizations and primate alarm calls. *Behaviour*, 141, 1263-1277.

Theoretical questions

– Why is -oo not repeated, i.e. what is the reason why we do not find Krak-oo-oo calls? Several possible explanations could be evaluated: this is not found because (i) it would not make sense given the semantics that we postulate for it, (ii) it would not be possible to articulate two -oos in a row, (iii) Campbell monkeys do not repeat calls, ...
Possible interlocutor: Jeremy Kuhn (cf. his work on the topic)

– Can there be a conjunctive analysis of the suffix -oo of Campbell monkeys?

A conjunctive analysis for the suffix -oo would make it so that

[[R-oo]] = [[R]] and [[-oo]].

This is standard when two sentences are concatenated:

[[John is happy. Bill is happy.]] = [[John is happy.]] and [[Bill is happy.]]

It is also standard for some combinations of adjectives and nouns:

[[This is a red circle.]] = [[This is red.]] and [[This is a circle.]]

Some adjectives do not lend themselves to a conjunctive analysis:

[[This is a small elephant.]] =/= [[This is small.]] and [[This is an elephant.]]

At this point, the proposed analysis is also not conjunctive: roughly because "non-serious" is like "small" (what counts as a serious aerial alert may be different from what counts as a serious alert tout court). Can you spell out the reason why the analysis is not conjunctive more precisely? Can it explain why Krakoo is not strengthened with "not-Hokoo" (entirely optional)? More interestingly, can one find a conjunctive analysis for the suffix -oo that would account just as well for the data?

Literature: Sauerland (2016)

– Dynamic analysis pyow-hack of putty-nosed monkeys

One could try to formalize an analysis of *hack* whereby its meaning makes different contributions depending on whether the hearer pays attention to the speaker. If *pyow* is an attention getter, this could explain why *pyow-hack* sequences are so peculiar: the contribution of hack is altered by the preceding *pyow*, which supposedly captures attention. Such an analysis was sketched here, but not quite formalized and assessed in detail. You could do so.

Tools: This may require some familiarity with semantic methods, possibly "dynamic semantics". Contact us if you're unsure.

–Campbell's: the pragmatic theory states that, on Tiwai island, strengthening does not take place because it would create a contextual contradiction. But one may wonder whether the solution is to not strengthen the call at all, or maybe to simply consider that some alternatives are not relevant. One may thus ask what would be the predictions of an analysis allowing for pruning alternatives?

Open-ended questions

–Survey of ape gestures

–Survey of ape calls