

NYU Child Language Lab Manual

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Chapter 1

Welcome

Welcome to NYU's Child Language Lab Wiki! Click on tabs to the left to explore our site!

Mission Statement

We are interested in better understanding how young children work out the complex language learning problems they are faced with, specifically abstract words that cannot be taught or pointed to (e.g., how do you show a child the meaning of *must* or *think*?). To do so, we combine expertise in linguistics, cognitive science and developmental psychology to help us understand just how children accomplish this feat. Although neither you nor your child will personally receive any direct benefits from this research, by learning more about children's abstract language development, this research contributes directly to our knowledge about human linguistic and cognitive development, and indirectly to the improvement of early language assessment and intervention.

1.1 Current Projects ¹

PI-led Projects

1. **Fuzzy NomNoms**: Investigates the acquisition and comprehension of the modal adverb *maybe* in 2-3 year old children.
2. **AllAboutMe**: Investigates the evidential component of *must* and *might* in 5 - 9 year olds.

¹For more information, see this detailed list of experiments

3. **ModForceJunior**: Aims to understand how 3.5 - 4.5 year olds navigate modal force in acquisition.

Graduate Student-led Projects

1. **CountKiddo** (Maxime): Aims to understand the acquisition path of counterfactual assertions in 4-6 year olds.
2. **Exhaustives** (Alicia): Aims to pin down the source of number inferences in 4-6 year olds.
3. **KidBiComp** (Sarah): Aims to understand the nature and processing of code-switched utterances in 2-year-old English-Spanish bilinguals.

1.2 Lab Members

PI

Dr. Ailis Cournane

Lab manager

(past): Vishal Arvindam (current): TBD

Graduate Students

Maxime Tulling; Alicia Parrish; Sarah Phillips; Chiara Repetti-Ludlow; Anna Alsop; Paloma Jeretič; Naomi Lee; Mary Robinson

RAs

Jenna Pollan; Sasha Frangulov; Daniella Presti; Sam Mitchell; Rachel Arbacher

Interns

Stacy Gerchick; Max Manicone; Nicolette Cure; Michelle Golden

Alumni

Vishal Sunil Arvindam; Dunja Veselinovic; Hayden Kee; Yohei Oseki; Deborah Hapern; Kathryn Rafailov

Chapter 2

Lab Expectations and Behavior

The Child Language Lab @ NYU strives to make it a safe, enjoyable, and friendly experience for everyone who participates. We are committed to providing a welcoming and harassment-free experience for everyone, regardless of gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion. We do not tolerate harassment of members in any form.

2.1 General Expectations

1. Always follow instructions given to you by the Principal Investigator (PI), the Lab Manager, or the appointed project leader for sub-projects. If you are unsure of something, please ask for clarification. Our aim is to foster clear and open communication for CLL projects.
2. Clean-up after yourself. Always try to leave the lab more clean and more organized (or at least as clean and as organized) than when you arrived. Please remember that all spaces are shared, so don't leave things out – put personal items you would like to keep in the lab in the drawer spaces in Room 208. You are welcome to use the 2nd floor lounge kitchen to store food for the workday, make coffee, etc. If you do, label all food and be considerate of the shared nature of the kitchen space.
3. Be responsible & professional. For example, If you make a mistake on a task, don't hide it as that will make the situation worse. Let the PI (or project lead, or both) know as soon as possible.

4. The lab is a team, we work together to get research projects designed, piloted, executed, presented and published. A lab member may be asked to take on some duties that are good for the lab as a whole without direct advantage to themselves. Similarly, one may be asked to put off a task or switch task priorities for the good of the lab. Be a team player.
5. If you are having a problem with someone in the lab, please talk to them about it rather than talking to anyone else about it. Only if you are dissatisfied with the outcome, talk to the lab PI about it.
6. Treat all lab equipment with respect and care. Be courteous and ensure to charge the iPads, Apple Pencil, and Bluetooth keyboards and mice as needed.

2.2 Lab Hierarchy

1. Principle Investigator (PI)
2. Lab Manager, PhD Student
3. Project Leader
4. Undergraduate RA, Intern

2.2.1 When and for how long people work

- RA (Paid): ~15 hrs/week
- RA (Research; unpaid): ~12 hrs/week
- Intern (Unpaid) ~8 hrs/week
- Lab Manager (Part-time): ~6 hrs/week
- Lab Manager (Full-time): 35 hrs/week

2.3 Research/Graduate Student Expectations ¹

1. It is important that Researchers stay up to date on the primary literature in their area of study. While the PI will point you to relevant readings, each researcher should make an effort to read articles in scientific journals that specifically apply to their interests and projects.
2. Researchers are expected to keep Project Managers and the PI updated on their progress, successes, and concerns. One-on-one meetings can be arranged with the PI for these discussions.

¹For a comprehensive list of Graduate Student Expectations, refer to the document entitled CLL_GraduateAdvisorExpectations in the lab Dropbox

3. Researchers are expected to contribute to the lab as a whole, both intellectually and occasionally with requested research from other projects in the lab (potentially outside of a Graduate Student's dissertation project).
4. Researchers are expected to follow all of the lab rules that will be given to you when you begin and potentially updated each semester. This includes completing all required ethics training.

2.4 PI Expectations ²

1. The PI has the responsibility of meeting regularly with the Graduate Students she advises to discuss their research and academic training. One should give the PI advance notice when scheduling a meeting to find a suitable time.
2. The PI has the responsibility of advising students on how to proceed according to their prospective career paths, and will offer continual assistance with research projects that is fully described in the Dropbox document.

2.5 Behavior

Refrain from demeaning, discriminatory, or harassing behaviour and speech. Harassment includes, but is not limited to:

- deliberate intimidation;
- inappropriate physical contact;
- use of sexual or discriminatory imagery, comments, or jokes
- unwelcome sexual attention.

If you feel that someone has harassed you or otherwise treated you inappropriately, please alert the PI or any other member on the team. If any member or project participant engages in harassing behaviour, the senior staff may take any action we deem appropriate.

²For a full enumeration of PI Advisor Expectations, refer to the document entitled CLL_GraduateAdvisorExpectations in the lab Dropbox

Chapter 3

Communication

3.1 Slack

Communication within the Child Language Lab should be conducted through Slack, a communication app that uses channels (`#nameofchannel`) to communicate to relevant sub-groups or to individuals. Lab members should be familiar with the Slack channels. Using Slack allows us to have work messaging that's separable from personal messaging, and faster and more chat-based than email. This is important for open communicating and the on-the-go aspects of the lab like testing.

3.2 Evernote

Log all work you do on lab projects in the Evernote notebook associated with that project. Make sure to include the date, your name, and a clear log of what tasks you have completed and notes for any issues that arise. We keep careful diaries of our projects for two main reasons: (a) our methods must be fully replicable down to the smallest decisions, and (b) we will have multiple people working on the same project, sometimes with significant time in between, so work must be able to be picked up both later and by someone else. Make sure Evernote syncs so all work is accessible to everyone in the CLL.

Chapter 4

Lab Resources

4.1 Passwords, Shared Credentials and Room Code

Long list of passwords and keycodes to all lab accounts are listed in the Evernote under the Lab General notebook. Please keep confidential!

If you get locked out:

- If locked out of 208, Slack someone in the lab for the keycode
- If locked of 209 (Testing room), request Teresa to open the door during work hours. If after work, request the security guard downstairs to open the lab
- PRO TIP: Always make sure the 209 key isn't in the room before locking the door

4.2 Evernote

Be familiar with what is in our Evernote and how the notes are organized. Consult Evernote notes when you have any questions about lab passwords, meeting schedules, project statuses, etc. Update Evernote notes when you make any changes or decisions related to the lab or lab projects.

4.3 Dropbox

All materials relevant to lab projects are stored on Dropbox (Usually under Experimental Studies). Each project folder might contain (but limited to) images,

audio files, participant tracking spreadsheets, R scripts, data files, and videos related to the project. This is done to ensure a central repository for each project, prevent data loss, allow for cross platform access and remote access. In the future, we plan to create an OSF page and make all our items, data and analysis available to the public to promote open science.

4.4 Software Packages

R, Matlab, Penn Controller, MTurk, Experiment Builder, Data Viewer

4.5 Inventory

- Lab room cabinet
 - 1st/bottom drawer: misc
 - 2nd drawer: misc
 - 3rd drawer: office supplies and toys/gifts
 - 4th/top drawer: Kids and adult t-shirts
 - 1st shelf/bottom shelf: experiment supplies
 - 2nd shelf: kids books
 - 3rd shelf: kids toys/gifts
 - 4th/top of cabinet: projector
- Cubbies
 - kids toys and snacks

Chapter 5

Onboarding

Basics

1. Fill out new hire paperwork (Consult PI about what documents specifically)
2. Create free Evernote account and get access to Child Language Lab @ NYU Evernote
3. Create free Slack account; download a copy onto your PC and your phone
4. Familiarize yourself with CLL Evernote, Slack, and Dropbox
5. Complete CITI training and save to DropBox
6. Sign up for Cayuse in order to be added to the IRB protocol. Ask PI or Lab manager to add you to IRB
7. Learn Door code (Rm 208) and location of key (Rm 209)
8. Schedule hours based on role
9. Read and sign Rules of the Lab (Dropbox contains General Lab Documents)
10. Learn lab passwords (Evernote contains Passwords)

Chapter 6

Experiments

6.1 How to Handle Routine Testing Session

1. Have consent form ready, explain studies and operation, and sign
2. Note on consent form what number participant they are for each study they do
3. Offer food/snack, be welcoming and accommodating etc
4. Run study(s)
5. If adults do ≥ 2 studies, reimburse afterwards with \$10 (found in top drawer in office room) and fill out receipt
6. If the participant is a child, offer a toy and CLL t-shirt
7. As soon as a study is done, add all demographic information to the tracking sheet for the respective study

6.2 Experiment Overviews

Exhaustivity (Alicia)

Children meet Og, the caveman. Og looks at pictures of animals and objects, and then he describes the pictures, but sometimes he says something that's wrong or a little silly. For example, if Og sees a picture of two blue ducks and one red one, he might say "There are two blue ducks" (a correct thing), or he might say "There are two red ducks" (a silly thing). The child's job is to reward Og with strawberries to help him learn what a good way to describe the picture versus what a silly way is. When Og does a good job describing the picture, he should get three strawberries. When Og says something silly, he should get one strawberry or maybe two.

- Time: 10-12 minutes
- Age: 4-6
- Materials: Answer sheet, laptop to play video, toy strawberries

Count Kiddo (Maxime)

Children are introduced to three ‘kippies’ (fun made-up characters) who want to buy some patterned hats from a wizard. The children are told what each hat costs (hats with stars cost a star, hats with hearts cost a heart and hats with circles cost a circle), and that the kippies will each choose a hat. The kippies then choose a hat and the wizard speaks to one of the kippies. The children are instructed to figure out who the wizard is talking to. They will be told that sometimes the wizard talks about the now, but sometimes he talks about how things could be different instead. The wizard could say something along the lines of “I wish that kippie’s hat had hearts, so he would give me a heart!” (corresponding image: three kippies, one with a hat with stars, one with a hat with hearts, and one who used to wear a starry hat but took it off for now). A narrator will repeat the utterance and then ask: “Who’s the king talking to?” After which the child is prompted to tap on the corresponding character displayed on an iPad. In between trials, children will collect stickers/stamps on a separate piece of paper.

- Time: 15-20 minutes
- Age: 3-5
- Materials: Hats and stickers, laptop/tablet to play video, recorder or qualitative answer key

KidBiComp (Sarah)

Children meet Sylvia, a young Spanish-English bilingual girl who lives next to a farm. Sylvia invites the child to play a game similar to ‘I Spy’, where she looks out her window and says phrases like, “the dog runs”, “el perro corre”, or even “el perro runs.” The child will see two different images and has to find the image that matches what Sylvia says. The animals and actions vary, but Sylvia describes them the same way.

- Time: 15 minutes
- Age: 2-3
- Materials: eye tracker, questionnaire
- Other: Children must be bilingual Spanish-English

ModForceJr

Children are introduced to Cat (a cartoon cat) and Logan (a puppet who watches the video with the child). Cat is planning a birthday party, and the kids are told that Logan will make statements about the images of Cat running errands, but that Logan doesn't always pay attention, so sometimes he says something silly. The narrator then says something along the lines of "Cat is going to the bakery to buy a birthday cake for the party! There are two ways to get to the bakery; the red road, and the green road. But uh oh! The green road is blocked" (corresponding image of a blocked green road and open red road). Then Logan will say "to get to the bakery, Cat can't go down the green road." The narrator asks whether the child thinks Logan is right. That model is repeated a few times, sometimes Logan is right and sometimes he is wrong, and then we see an image of the finished party with some fun music!

- Time: 10 minutes
- Age: 3 ½-4 ½
- Materials: Answer key, iPad

Fuzzy NomNoms

Children are shown two animals on the screen that look very similar (e.g., a sheep and a llama), and are then showed an animal in the middle of the screen that is hiding behind the curtain. It looks like it could be either animal and at this point, the child either hears sentences like "It's maybe a sheep", or "It's probably a sheep", while we track the child's eye-movements to see what they pay attention to on screen in response to such sentences. In this way, we infer the stages along the development path to learning abstract language.

- Time: 30 minutes
- Age: 2-3
- Materials: Eye tracker, headband/clips, cutouts of animals for familiarization

All About ME

Children are introduced to Pterry the Pterodactyl and Cera the Triceratops, who both comment on pictures using words like must, might and is. The child is then asked "who said it better," and the child comments on whether Pterry or Cera's comment was better.

- Time: 15 minutes
- Age: 5-9
- Materials: answer key, iPad, puppets

Chapter 7

Logistics

7.1 Lab Meetings ¹

We hold lab meetings once a week during the semester and at the discretion of the PI during the summer. Lab meetings usually involve data blitzes, presentations (lab internal and external) and feedback on projects.

7.2 Location

We use either the **Sociolinguistics Lab** (Floor 3) or **Phonetics and Experimental Phonology** (PEP; Floor 5).

7.3 Contacts

- Socio Lab Manager: Sarah Phillips (sarah.philips@nyu.edu)
- PEP Lab PI: Dr. Lisa Davison (lisa.davidson@nyu.edu)

7.4 Snacks

The lab manager is entrusted to get snacks for each lab meeting. The lab usually allots a budget of \$20/wk for bagels and coffee. After buying said snacks, the lab manager is reimbursed from the PI's research funds.

¹Before the semester begins, the lab manager will contact the lab managers/PI of either lab spaces to check availability and block of a time slot that works best for lab members.

7.5 Recurring Events

- At the end of each week, RAs and Interns must make sure consent forms are refilled, receipts are catalogued and data is digitized
- They must also print new flyers and put them up around NYU and the environs.

Chapter 8

Recruiting and Engagement

8.1 Recruiting

Recruiting involves a combination of calling daycares, parents, and scheduling participants that sign up through the lab's Google form.

Calling

Calls should be made from the phone in the lab (Phone # 212 998 7916). To call, dial 91 followed by the phone number. We primarily call daycares in the 5 boroughs as well as NJ, Long Island and Westchester County.

- Prior to making a phone call, study the calling script (Can be found on the Dropbox under Ethics Documents > Sept2018 CLL_SchedulingScript_DaycarePreschool) and get a feel for the kind of responses we give.
- Don't memorize the script verbatim at the risk of sounding too robotic. You want to sound friendly and stress that the responsibilities of the day care will be minimal.
- Try not to use the word "experiment", as this can sound invasive and can turn people off. Use phrases like "we are running a study" or "we play fun games with kids, and their answers provide us with important information about how they process language"
- It is helpful to shadow a current RA to get a sense of the mechanics of the phone call.
- Once you feel comfortable making a call, you can find a non-exhaustive list of daycares in Google Sheets.
- As you work your way through a list, update contact information if needed and make comments on responses from the contact at the daycare. Comments include:

- If interested, send an email with the required attachments (Institutional Consent, Letter of Cooperation and Consent Forms) which can be found as a template in the lab email. Once you send an email, flag that you have emailed them and make a note to follow up in a week
- If completely uninterested and do not wish to be called back, flag the day care and make sure not to call again.
- If a daycare responds with the required documents filled out, send the Letter Cooperation to the PI for approval from the IRB.
- Once approved, give a week or two to have the daycare get parents to sign consent forms and then schedule a day to go in.

Facebook Outreach

We should be posting on Facebook regularly (somewhere between 1 and 3 times a week). Try not to post multiple times a day, but rather, spread it out over the week. You can do this by scheduling posts.

Content generally consists of cool/informative videos about kids and language learning, RA spotlights, and announcements about new studies and activities. Look at our previous posts for inspiration, or feel free to start a new series/trend. In general, don't make it too wordy and include visuals if possible! If we have something especially important to post (e.g. our lab video when it is complete), you can talk to Ailis about paying to "boost" the post, so it reaches more users.

Aside from posting on our own page, posting in existing groups makes a BIG difference. Local neighborhood groups, NY parent groups, kids activities groups, and groups for local institutions (local parks, childrens' museums, etc.) are all good places to post. Sometimes this involves applying to the group or contacting the admins of the group directly, which can all be done using the lab facebook page.

Scheduling

- At the beginning of each semester, RAs should pick out times they can be in the lab and block out those times on the google calendar.
- Once we have the times filled out, the lab manager can fill up those times in the Calendly, the lab's scheduling system.
- When adults or parents of sign up through the google form through the website, they receive an automated email for the lab.
- An RA then follows up with the calendly link to schedule a time to come in.
- Once they sign up, both parties will receive a notification and the time slot will be automatically added to the lab calendar.
- A day before testing, the participant will receive a reminder.

- The RA scheduled to work that time slot will be responsible for running the experiment.

Chapter 9

Offboarding

Give up ID and offload all information linked to your NYU ID to the lab.

Chapter 10

Publications¹

- Authorship on scientific publications is based on significant contributions to the intellectual input, execution of studies, and writing of papers. Here is the statement on authorship from the journal *Evolution*: “Authorship of a paper carries with it responsibility as well as credit. All those whose names appear as authors should have played a significant role in designing or carrying out the research, writing the manuscript, or providing extensive guidance to the execution of the project. They should be able to present and defend the work in a public forum.”
- Within the CLL, the PI (Ailís Cournane) has final say on all authorship issues for work conducted by lab members in whole or in part during one’s tenure in the lab. However, as a general guideline, the “default” policies are stated below. These are subject to change without notice and to modification for specific circumstances, including but not limited to exceptionally high or minimal contribution in one or more areas.
- For all authorship issues, provisional authorship may be indicated prior to submission, but authorship and author order will not be finalized until the time of manuscript submission, and that decision falls upon the laboratory PI. **Provisional authorship or author position is no guarantee of authorship or author position on the final submission.**
- Regarding standard research publications, the criterion for co-authorship is contribution of $(100/X)\%$ in any one or combination of the following three areas: intellectual input (including initial design and subsequent modification and development of the project); execution (including data analysis); and writing of the paper (including figure and table preparation) for submission. X denotes the number of potential authors contributing to the study. For example, if one of three potential authors contributes 15%

¹Adapted from Noor Lab (Noor, 2012)

to all three areas, they may appear as an author of the paper, since their total contribution is 45% ($15\% \times 3$), which is greater than the 33% ($100/3$) minimum. We also abide by the Evolution criterion that all authors should be able to present and defend all the work, not just their piece of the work, in a public forum. Such a presentation should include accurate and thorough discussion of the relation of the work to other published studies on the topic. There must have been at least some detectable intellectual input and engagement; **one cannot have been merely a “lab-hand.”**

- To be considered for “first author”, the researcher must have contributed >50% of the writing of the final draft as well as $(100/X)\%$ to either the intellectual input or execution of the project. If the paper drafts given to the PI are so poorly prepared (as determined by the PI) that rewriting from scratch is easier than editing, first authorship by the writer is forfeited. The first author has **no more than 4 months** from the end of data collection for a particular publication, as determined by the lab PI, to prepare the paper draft. Failure to produce a well-prepared draft in this timeframe may forfeit the right to first-authorship.
- For review papers, authorship requires the incorporation of a significant amount of writing, amounting to greater than two paragraphs of text. As above, if a potential author submits text that is either rewritten or otherwise omitted from the final version, authorship may be nullified.

Chapter 11

Reading List ¹

Essential reading list to get up to speed with the general flavor of our research questions.

11.1 Modals

- Hacquard, Valentine (2011) ‘Modality’. In C. Maienborn, K. von Stechow, and P. Portner (eds.) *Semantics: An International Handbook of Natural Language Meaning*. HSK 33.2 Berlin: Mouton de Gruyter. 1484-1515.
- Hacquard, V. and Ailís Cournane. 2016. Themes and variations in the expression of modality. *Proceedings of the 46th Annual Meeting of the Northeastern Linguistics Society (NELS 46)*.
- Barbiers L.C.J. & Dooren A. van (2017), *Modal Auxiliaries*. In: Barbiers L.C.J., Dooren A. van (Eds.) *The Companion to Syntax*.: John Wiley.

11.2 Acquisition

- Lidz, Jeff & L. Perkins (2017) *Language Acquisition*. in J. Wixted (ed) *Stevens Handbook of Experimental Psychology and Cognitive Neuroscience*. Wiley.
- Gleitman, L.R., Cassidy, K., Papafragou, A., Nappa, R., & Trueswell, J.T. (2005) Hard words. *Journal of Language Learning and Development*, 1:1., 23-64

¹Papers without links are in this dropbox folder

- Cournane, Ailís. (under revision). Learning Modals: on how children acquire the language of possibility. *Language & Linguistics Compass*.

11.3 Experimental Methods

Corpus

- Cournane, Ailís. 2015. Revisiting the Epistemic Gap: evidence for a grammatical source. *Proceedings of the 39th annual to the Boston University Conference on Language Development (BUCLD39)*. Somerville, MA: Cascadilla Press.
- van Dooren, A., Anouk Dieuleveut, Ailís Cournane and Valentine Hacquard. 2017. Learning what must and can must and can mean. *Proceedings of the 2017 Amsterdam Colloquium*.

Sentence Repair Task

- Cournane, Ailís. 2014. In search of L1 evidence for diachronic reanalysis: mapping modals. *Language Acquisition* 21 (1): 103-117.

Truth-Value Judgment Task

- Gordon, Peter. The Truth-Value Judgment Task. Chapter 10, In D. McDaniel, C. McKee, H. Cairns (Eds.) *Methods for assessing children's syntax*. Cambridge, Mass: MIT Press.

Picture-Choice Task

- Gerken, LouAnn & Michele E. Shady. The Picture Selection Task. Chapter 6, In D. McDaniel, C. McKee, H. Cairns (Eds.) *Methods for assessing children's syntax*. Cambridge, Mass: MIT Press.

Eye-Tracking

- Trueswell, J. C., Sekerina, I., Hill, N. M., & Logrip, M. L. (1999). The kindergartenpath effect: studying on-line sentence processing in young children. *Cognition*, 73, 89-134.

11.4 Language Change and the Role of the Children

- Cournane, Ailís. 2017. In defense of the child innovator. In Mathieu, Éric and Robert Truswell (eds), *Micro Change and Macro Change in Diachronic Syntax*. Oxford: Oxford University Press. Pp. 10-24.