

~ The Manual ~

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Welcome!

Welcome to the Cognitive and Affective Neuroscience Lab manual. This manual was developed by me, Maital Neta. It is intended to represent my vision for how the lab should function and to complement existing San Diego State policies (which take precedence). **Upon joining the lab, all lab members are required to read the lab manual.**

The CAN Lab manual was inspired by several others, and borrows heavily from them (e.g., here and here). I expect that more information will be added and some sections will be revised as the lab grows and develops. If you have any comments or suggestions regarding the contents of this manual, please tell me.

This lab manual is licensed under a CC Attribution 4.0 license. If you're a PI or a trainee in a different lab and want to write your own lab manual, feel free to take inspiration from this one (and cite us!).

Expectations and responsibilities

Everyone

Big picture

- Do work that you are proud of. If you're really passionate about your research, and you work hard at it, that makes a huge difference.
- Double- (even triple! -) check your work. Being a little obsessive is essential to good science.
    - Everyone makes mistakes… the difference between a novice and an expert is that an expert acknowledges this and is meticulous.
    - If you do find a mistake, always tell your collaborators as soon as you can (and simultaneously work to fix the mistake). This is important at any stage of a project – even if the paper has already been written, and even if it has already been submitted!
    - We admit our mistakes, we correct them, and we learn from them. And then we move on.
- Be supportive of your labmates. We are a team.

    - Offer help even if you aren't on the project. Help others and you can expect others to help you when you need it.
- Work independently when you can, ask for help when you need it.
- Share your knowledge. Mentorship can take many forms.
- Respect each others' strengths, weaknesses, differences, and beliefs.
- Science is a marathon, not a sprint. Take personal time/ vacation when you need it and cultivate a life outside of the lab. Respect that other lab members also have a life outside of lab.
- Communicate openly and respectfully with other members of the lab.
- If you're struggling, tell someone (feel free to tell me!) Your health and happiness are important. It's OK to go through tough patches (we all do!), but don't feel shy about asking for help or needing to vent.
- If you have an issue with another lab member that cannot be solved by talking with them about it, please talk with me. Tension and hostility in the lab are toxic for the group dynamic. I am here to help with any and all of these issues, and the sooner, the better!
- If you have an issue with me and feel comfortable talking with me about it, please do! If you're not comfortable with that, please reach out to another member of the psychology department who can intervene (this can be the lab manager for smaller lab issues, or another faculty member for more serious issues).
- Stay up to date on the latest research, either by RSS feeds, getting journal table of contents, or following scientists on Twitter.
- Academia may feel different from other types of jobs, but it is still a job. You should treat coming into lab with the same respect that you would treat any other position. There are going to be aspects about the job you like more than others, but all are required.
- Conduct with the PI and other faculty:
    - You may notice that I am often quite casual in speech/behavior. That said, please remember that I am a tenured faculty member and head of the lab, have extensive academic experience, and a Ph.D. In that way, I am 'senior' (meaning in experience), and a good general rule is to behave formally with senior folks until you have a good handle on the appropriate level of casualness. I hope to be friendly with everyone, but my specific role is Lab PI (Principal Investigator) and this will ALWAYS take priority and precedence over any friend role. Please keep this in mind for your comportment, email, projects, and comments. Be polite and address all senior researchers, postdocs, and faculty by their title – "Professor" or "Dr." unless they tell you otherwise.

- Conduct with other trainees and students:
    - It is important to maintain a professional, friendly environment. You may not like someone else, but it should not be apparent in the lab! Whether you are more junior, more senior, someone's supervisor, someone's supervisee, etc., you should make a continued and conscious effort to work with others in a productive and collegial way. If you notice someone seems "left out" or uncomfortable, please make an effort to include them. Respect your supervisors, whether they are faculty or a student.
    - A lab can be competitive, where people strive to outdo each other, or collaborative, where people strive to help each other do their best. Labs can be competitive or collaborative with other labs as well. Our lab is intentionally collaborative. Each of us has a finite skill/knowledge set and working with others gives each of us access to more information and abilities. So, helping others is important in the lab, and I consider this as an important part of your performance. Other peoples' successes reflect upon you as yours will reflect upon them.

Small picture

- If you're sick, stay home and rest. Because you need it and because others don't need to get sick.
    - Notify the lab manager or me if you will be out, either due to illness or vacation. Make a note on the lab calendar. If you are sick and you had experiments or meetings scheduled that day, notify your participants or collaborators and reschedule.
- You are not expected to come into lab on staff holidays. If you are being paid, then you *are* expected to come into lab during university breaks (e.g., spring break) except for staff holidays or if you're taking your paid vacation time.
- Show up to all meetings, show up to run your participants, show up for any other commitments (classes, lab meetings).
- You are expected to meet any and all deadlines that I set (and/or those agreed upon among collaborators). If you are going to miss a deadline, you must give advance notice along with a reason and a proposed new deadline that must be agreed upon by all parties.
    - If you are hoping to submit an abstract to a conference, you must inform the members of the project team (including me) no less than 2 weeks prior to the abstract deadline, and you must complete a draft of the abstract no less than 1 week prior to the deadline.

    - For posters, a draft must be completed two weeks prior to the conference in order to facilitate feedback from the team (first) and then the wider group (lab and other colleagues in the department).
- Lock the doors to the lab if no one else is around, even if you're stepping out for a short break (e.g., to get coffee).
- Keep the lab tidy. Food messes should be cleaned up promptly, dirty dishes taken home with you, and common areas should be kept free of clutter. Items left unattended may be cleaned, reclaimed, or recycled. If you're using lab equipment, put it away when you're done.
- The dress code in academia is generally casual. My only request is that you look semi-professional when interacting with participants and when presenting your work. Jeans are fine, gym clothes and pajamas are not.
- Arrive to lab at least 45 minutes before you have any experiments scheduled, so that you will be there to greet the participants (see more information below).

PI

All of the above, plus you can expect me to:

- Maintain a vision of where the lab is going
- Provide the funding necessary to keep the lab going
- Meet with you regularly to discuss your research projects. The definition of "regularly" may change over time or over the course of a project, but for now, I mean once a week or more often as needed.
- Give you feedback on a timely basis, including feedback on project ideas, conference posters, talks, manuscripts, figures, grants
- Give you my perspective on academia and issues related to professional development, and generally help you prepare for the next step of your career, whether that's grad school, postdoc, faculty job, or job outside of academia
- Support your career development by introducing you to other researchers in the field, writing recommendation letters for you, providing you with opportunities to attend conferences when finances permit, and promoting your work in talks
- Care about you as a person and not just a scientist
- There are going to be aspects of your work that are fun, some that are challenging, and others that are downright painful (e.g., getting a manuscript rejected). I will always do my best to help you weather the ups and downs (and celebrate the ups!), but I will never let you shy away from the hard stuff… that is

where the most learning and growth happens. Expect that I will support you, but push you.

Postdocs

All of the above, plus you will be expected to:

- Develop your own independent line of research
- Help train and mentor others (lab managers, undergraduate and graduate students) on their research projects – either because they ask for help, or because I ask you to
- Present your work at departmental events, at other labs (if invited), and at conferences
- Apply for external funding (e.g., NRSA, K99). Ask others who have received funding for successful examples. I will hire postdocs only when there is funding available for at least a year; however, applying for external funding is a valuable experience and, if awarded, it will release those dedicated funds for other purposes.
- Apply for jobs (academic or industry) as soon as you are "ready" and/or by the beginning of your fourth year as a postdoc.
- If you are planning to pursue a non-academic career, treat your postdoctoral research as seriously as you might if you were pursuing an academic career. We can discuss ways of making sure that you are getting the training you need, while still doing excellent research.
- Remind me that different scientific opinions can co-exist in the same lab, and treat the rest of the lab to your unique expertise

Graduate students

All of the above, plus you will be expected to:

- Develop a line of dissertation research. Ideally, your dissertation research will consist of at least 3 related experiments that can be packaged into one thesis document.
- Help train and mentor others (lab managers, undergraduate and graduate students) on their research projects – either because they ask for help, or because I ask you to

    - Work with a team of undergraduate students. This will speed up data collection and give you some experience with managing and mentoring a team.
- Present your work at departmental events, at other labs (if invited), and at conferences
- Apply for external funding (e.g., NSF GRFP or NRSA). If nothing else, this is a valuable experience. Ask others who have received funding for successful examples.
- Do some soul-searching as to what type of career you want to pursue, e.g., academic jobs that are research-focused or teaching-focused, non-academic jobs like data science or science writing. Talk to me for help brainstorming ways of making sure you are getting the training that you need.
- Make sure you meet all departmental deadlines (e.g., for your exams and thesis) – even if your peers are missing these deadlines! And make sure I am aware of them!
- Prioritize time for research. Coursework or TA-ing are important, but ultimately your research is what earns you your PhD and prepares you for the next stage of your (even non-academic) career.
    - Talk to me about coursework you're considering (if not required).

Lab managers

All of the above, plus you will be expected to:

- Be in the lab on a regular basis – more than other lab members, your presence in lab when others are around is essential. You may need to work some irregular hours if scanning on evenings/weekends, so feel free to adjust accordingly, but one of the lab managers should be available during all normal working hours (9am-5pm).
- Oversee the hiring, scheduling, and training of undergraduate research assistants.
- Help new lab members adjust to the lab by answering whatever questions they have that you can answer. If you can't answer, direct their questions to me.
- Maintain the lab IRB protocols (writing them, renewing them), and paperwork (e.g., archiving consent forms, keeping any required paperwork up to date and organized).
- Maintain the lab website and social media, update the lab manual, add lab events to the lab calendars, manage the lab shared Google Drive folders and check the

lab email address (psych.canlab@sdsu.edu, take care of any emails that you can, inform me of any that you can't).

- Give new lab members access to the lab calendar, and add their experiments to the lab Google Drive folder.
- Coordinate polls for setting lab meeting times at the start of each semester and send emails about lab meetings day/time/topic.
- Assist with participant recruitment and scheduling.
- Assist other lab members with data collection or analysis (typically you will be assigned to particular projects).
- Help to maintain an atmosphere of professionalism within the lab.
- Tell me – as soon as it becomes even a minor issue – if there are any issues with undergraduates that are having trouble fulfilling their commitments to the lab.
- Assist me with the day-to-day running of lab operations, including responding to any requests that I send along (urgent requests – as indicated by me – should be responded to immediately).
- Work on your own research project (developed with my help).
- Upon arrival, familiarize yourself with the Lab Manager manual.

Note: You will often find yourself with several different tasks on your plate at once. If you are ever unsure about how to prioritize these tasks, don't hesitate to talk to me (even regularly) about it. But in general, any task that affects the quality and quantity of data collection is the highest priority (e.g., IRB approvals).

Undergraduate students

All of the above, plus you will be expected to:

- Assist other lab members with data collection or analysis (typically you will be assigned to particular projects), unless you are working on your own independent project under my mentorship or that of another lab member, in which case, you should work on that.
- Work with the lab manager and/or your research mentor to determine your weekly schedule. If you are not able to come in during your normal scheduled time, you must let the lab manager know with as much advance notice as possible.
- Provide extra support to the lab manager (this may include filing paperwork). If you are in lab and do not have a task to do, you should ask the lab manager or your supervisor whether there is anything you can help out with.

- Undergraduates who work in the lab for a full semester may have the option to assist with an EEG or MRI project during the following semesters in the lab.
- Attend and participate in all lab meetings. Exceptions are only possible if you have a class or job conflict. Actively contribute to these meetings, as you would any small class (e.g., participate in discussion, ask thoughtful questions, show your interest). We also expect that one of you may lead a lab meeting 1-2 times per year.
- Time commitment: Schedule a minimum of 5 hours each week to commit to the lab. It may not always be practical to set a weekly schedule for every undergraduate, but we still expect you to make lab time a priority and a firm commitment. Make it *your* responsibility to ensure that you meet this expectation each week. We may not always need you for all these hours, but you're expected to have this time if we do need you.
- Communication: Respond to e-mails from me or the other lab members within 24 hours, ideally sooner. We know you're busy, but we rely on communication with you if something urgent comes up.
- Work Ethic: Understand that lab work is not always glamorous. We expect a high level of commitment and performance whether you are doing data entry, running a participant, or looking at brains. We expect you to maintain a respectful and professional attitude when in lab, especially when running participants. We expect you to aim for a standard of excellence. Be precise (e.g., follow scripts, double-check your data entry, be on time, aka. early). Take exceptional care of the lab space and equipment. Complete tasks in a timely manner. Take careful notes during meetings and trainings, and when shadowing someone during data collection.
- For more information about undergraduate research positions, refer to the Undergraduate research section below.
- *If you are earning course credit for research, you must additionally:*
    - Write a short essay on your research topic or experiences due by the end of the week before final exams.
- *If you are earning participating in SURP, you must additionally:*
    - Submit a research proposal in collaboration with your faculty mentor and present at SCCUR, as well as meet other program requirements.

Code of conduct

Essential Policies

Many topics were covered already in the Expectations & responsibilities section above.

The lab, and the university, is an environment that must be free of harassment and discrimination. All lab members are expected to abide by the SDSU policies on discrimination and harassment, which you can (and must) read about here.

The lab is committed to ensuring a safe, friendly, and accepting environment for everybody. We will not tolerate any verbal or physical harassment or discrimination on the basis of gender, gender identity and expression, age, sexual orientation, political orientation, disability, physical appearance, body size, race, or religion (or lack thereof). We will not tolerate intimidation, stalking, following, unwanted photography or video recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention. Sexual language and imagery are generally not appropriate for any lab venue, including lab meetings, presentations, or discussions. Finally, it should go without saying that lewd language and behavior have no place in the lab, including any lab outings.

Harassment includes offensive verbal comments related to gender, gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, religion, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention.

If you notice someone being harassed, or are harassed yourself, please tell me immediately. If I am the cause of your concern, then reach out to the department chair or another trusted faculty member in the department.

Members asked to stop any harassing behavior are expected to comply immediately.

Scientific integrity

Research (Mis)conduct

The lab, and SDSU, is committed to ensuring research integrity, and we take a hard line on research misconduct. We will not tolerate fabrication, falsification, or plagiarism. Read SDSU's policies on research compliance here (more specifically here).

A big problem is why people feel the need to engage in misconduct in the first place, and that's a discussion that we can have. If you are feeling pressured to succeed (publish a lot, publish in high impact journals), you should reach out to me and we can talk about it – but this pressure is something we all face and is *never* an excuse to fabricate, falsify, or plagiarize. Also, think about the goal of science and why you are here: you're here to arrive at the truth, to get as close as we can to facts about the brain and behavior. Not only is research misconduct doing you a disservice, it's also a disservice to the field. And it risks your entire career. It is never right and never worth it. Don't do it.

Reproducible research

If you gave someone else your raw data, they should be able to reproduce your results *exactly*. This is critical because, if they can't reproduce your results, it suggests that one (or both) of you has made errors in the analysis, and the results cannot be trusted. Reproducible research is an *essential* part of science, and an expectation for all projects in the lab.

For results to be reproducible, the analysis pipeline must be organized and well-documented. To meet these goals, you should take extensive notes on *each step* of the way (and the *order* that you did things), from any preprocessing of the data, to running models and statistical testing. It's also worth mentioning that you should take detailed notes on your experimental design as well. Any code should be commented and done so clearly (don't use acronyms or variable labels that you are not likely to remember in 5 or 10 years from now). We all know what it's like to sit down, quickly write a bunch of code to run an analyses without spending the time writing comments, and then having no idea what you/we did a few months down the road. Comment your code so that every step is intelligible by an outsider. Finally, it is highly encouraged that you use some form of version control (e.g., Git in combination with GitHub) to keep track of what code changes you made and when you made them, as well as sharing code with others. The lab's GitHub is https://github.com/canlab-unl/.

As an added bonus, all of these steps will serve you greatly when writing your manuscript.

A related concept is replicability, which refers to whether or not your results can be obtained again with a *different* dataset. That is, if someone ran your study again on a different group of participants, would they get the same results? What about if they ran

a conceptually similar (but maybe not identical) study? Science grows and builds on replicable results – one-off findings don't carry much weight. Our goal is to produce research that is both reproducible and replicable.

Pre-registration and pre-prints

All studies must be pre-registered unless previously discussed and agreed upon with the PI. In order to pre-register, you should plan ahead and expect to complete this process before beginning data collection. Go here or here to complete a pre-registration.

Similarly, we will share our work with the world as soon as we are ready, which means pre-prints! Though not required, it is recommended to upload a pre-print of a manuscript simultaneously with initial submission to a journal. The preferred pre-print servers are bioRxiv and PsyArXiv. We will also put PDFs of all our papers on the lab website, and you should share PDFs of your paper with whoever asks.

If you are interested in either pre-registration and pre-prints, you should discuss this with me first, and make sure that all authors on the team have signed off before submission.

Authorship

Speaking of authors, we will follow APA guidelines with respect to authorship:

> *"Authorship credit should reflect the individual's contribution to the study. An author is considered anyone involved with initial research design, data collection and analysis, manuscript drafting, and final approval. However, the following do not necessarily qualify for authorship: providing funding or resources, mentorship, or contributing research but not helping with the publication itself. The primary author assumes responsibility for the publication, making sure that the data are accurate, that all deserving authors have been credited, that all authors have given their approval to the final draft; and handles responses to inquiries after the manuscript is published."*

Authorship will be discussed prior to the beginning of a new project, so that expectations are clearly defined. In general, I expect that graduate students and postdocs will be first authors on publications on which they are the primary lead, and I will be the last author. Talk to me right away if you aren't sure if you are first author. Students and postdocs who help over the course of the project may be added to the author list depending on their contribution, and their placement will be discussed with

all parties involved in the paper. These discussions and decisions will be spear-headed by the first author, in consultation with me. However, changes to authorship may occur over the course of a project if a new person becomes involved or if someone is not fulfilling their planned role. For example, if a student or postdoc takes on a project but subsequently hands it off to another student or postdoc, they will most likely lose first-authorship to the new project leader, unless co-first-authorship is appropriate (rare circumstances).

All of these issues will be discussed openly, and you should feel free to bring them up if you are not sure of your authorship status or want to challenge it. Again, these discussions should be addressed with the first author, but I am always happy to help with negotiations should the need arise.

Project expiration

If a student or postdoc collects a dataset but does not completely analyze it and write it up within 3 years after the end of data collection, I will re-assign the project (if appropriate) to another person (who will become first author) to expedite publication. If a student or postdoc voluntarily relinquishes their rights to the project prior to the 3-year window, I will re-assign the project at that time. This policy is intended to avoid situations in which a dataset (especially expensive data, e.g., fMRI) languishes for a long period of time, while still giving publication priority to the original primary lead.

Human subjects research

Because we are engaged in human subjects research, it is of the *utmost importance* that we adhere to our approved IRB protocols. Non-adherence to these protocols can lead to severe consequences for the entire lab (i.e., we may lose permission to run any research on human participants!). **All lab members must read and comply with the IRB consent form and research summary for any project that they are working on.** Lab members must also complete the CITI training and be added to the research personnel list before they can work with human subjects. If there are any questions about the protocols, or if you're not sure whether we have IRB approval to run your study, please ask the lab manager or me for clarification. If necessary, the lab manager can file an amendment to an existing protocol or create a new protocol. But you must not deviate from the protocol unless you have been specifically instructed to do so by me or your supervisor.

If you encounter any problems in the course of doing research that results in a negative outcome for the participant (e.g., if a participant becomes ill or upset, if there is an

accident with the equipment, if there is a breach of confidentiality, etc.), you should immediately seek assistance from me or the lab manager. If I am not around, you must notify me *within 24 hours*, preferably as soon as possible. In some cases, we may need to report this information to the IRB and/or our funding agencies.

Data Collection Required Policies

1. Respect: The entire floor where we do our studies is a research environment. With offices and labs all around us, please be considerate of those who need a quiet space.

2. Professionalism: Every subject is the most important subject. Lots of time and money goes into getting a study to the point where we can run participants, and it's crucial that we get usable data without confounds each and every time. Follow the script for the experiment to a tee. The scripts for each experiment are vital. You can't just go off script and do things in a different order. There are very specific reasons that we choose to run things in the order we do (e.g., first the task on the computer, THEN the questionnaires, etc.), and there are also very specific reasons that we choose the words we choose in the scripts. We want you to feel comfortable when you're running a subject, so that you don't feel like you have to actually read a script, but it's up to you to know the script and convey it exactly as it is written. If you don't understand the reasoning behind the script, the order of doing things, etc., talk to us and we'll be more than happy to explain it.

Relatedly, be sure to close the door when running participants, and take note of anything unusual that happens during the study (lights go off, participant appears to be ill, part of the study happens out of order, the wrong version gets used, etc.) There shouldn't be any excess conversation between researchers during the study. If absolutely necessary, speak at a whisper. It should go without saying that you CANNOT have your phone on you or on during the session (not even on vibrate)! If your phone is on, the subject will think they can have their phone on as well, and this will obviously interfere with the experiment.

This is a professional research lab, and we need to appear as one. Have a positive attitude with participants and other members of the lab. Dress nicely. Jeans are OK, but think business casual. No basketball shorts or yoga pants. Also, do your best to limit offensive smells (e.g., proper hygiene, using deodorant, not using too much cologne, etc.); pungent odors in a small room can distract participants. Also, if you know the participant personally, you cannot run the study.

3. Communication: Please respond to lab e-mails within 24 hours. Check SONA for time slot updates, and assign credits after each session.

4. No food or drink at the MRI center. Treat the lab equipment with care, turn things off when you're done with them, don't eat or drink on or near the machines, etc. The psychophysiology equipment that we use in that room is very delicate (and expensive!), so keep the area as clean as possible.

5. If you are new to lab, the protocol is that you watch someone else run a couple subjects, then they watch you run a couple subjects and ONLY once you are ready and comfortable with the procedure, should you be setting up your own time slots. It is your responsibility to become familiar with the script for that experiment, and to understand what you need to do when you have a subject scheduled, so make sure you're paying attention to what others are doing.

6. You have to be organized, professional, and treat the subject with respect. Do not fight with or disagree with the subjects. ("The customer is always right.") If they say they already signed a consent form and don't have to do it again, don't insist that they haven't signed one; a better way of handling this would be to say "OK, maybe you have done that, but maybe you can just do it again for us, just in case." Remember, this is like customer service, we need to be polite and respectful and understand that these people are busy and they are helping us out by volunteering for research!

7. Understand that this is a privilege. We don't allow all students to collect data, this is something that is earned. You have all asked to be here, and asked to help with data collection. You're aware of the experience you are getting; you're choosing it. Please know that if this isn't taken seriously, or if there are deficits with your performance that are not improving, we will not hesitate to reassign you to another task. This is the bread and butter of the lab, and it's just too important. If this isn't what you expected, or it's too much to take on, we will happily find something else for you to do.

Documenting Consent

For most IRB protocols, participants sign a consent form indicating that they 1) understand what the study entails, 2) don't have any further questions, and 3) agree to participate in the study. This documentation is needed for our records. Make sure to provide the participant with an up-to-date consent form that has been stamped by the IRB, and check that they signed it at the start of the session. Give completed consent forms to the lab manager for secure storage.

Confidentiality

Any information that can be used to identify participants (names, contact information, etc.) should only be accessible to lab members who are listed on the relevant IRB protocol. Lab members must also be listed on relevant protocols before interacting with participants in any way (over the phone, email, or in person).

Consent forms and payment forms are typically the only physical documents we collect that could potentially contain identifying information. These forms are needed for our records, and are kept in LOCKED cabinets. All other physical and digital documentation should be labeled with a participants' ID (not a name or even initials). Any document that has identifying information on it should be redacted before being shared with non-lab members. Be especially careful not to share identifying information anywhere that could be accessed by non-lab members (e.g. calendars, email chains).

Reportable New Information Form (RNIF)

A reportable new information form can be submitted at any time regardless of the review level (e.g., Exempt, Expedited, or Full Board). The following Issues (A-N below) must be reported to the IRB *within 48 hours* of the event, or investigator notification of the event. The situation can be reported via telephone, email and submission of the Reportable New Information Form:

A. Any physical or psychological harm experienced by a participant which, in the opinion of the PI, is both unexpected and related to the research procedures.
    a. Harm is "unexpected" when its specificity and severity are not accurately reflected in the consent document.
    b. Harm is "related to the research procedures" if in the opinion of the PI, it is more likely than not to be cause by the research procedures or if it is more likely than not the event affects the rights and welfare of current participants.
B. Information that indicates a change to the risks or potential benefits of the research. For example:
    a. New information (an interim analysis or safety monitoring report, publication in the literature, sponsor report or investigator finding) which indicates that the frequency or magnitude of harms or benefits might be different from those initially presented to the IRB.
    b. A paper is published from another study that shows that the risks or potential benefits of the research might be different from those initially presented to the IRB.
C. Unanticipated problems involving risk to participants or others.

D. Internal Adverse Event.
    a. External adverse events must be promptly reported to the SDSU IRB, no later than five (5) business days following PI notification.
E. Serious Adverse Event (SAE).
F. Unexpected death of a research participant.
G. Noncompliance with federal regulations governing human research or with the requirements or determinations of the IRB, or allegation of noncompliance.
H. Audit, inspection, inquiry or enforcement action by a federal agency or sponsor.
I. A breach of confidentiality.
J. Change to the protocol taken without prior IRB review to eliminate an apparent immediate hazard to a research participant.
K. Incarceration of a participant in a protocol not approved to enroll prisoners.
L. Sponsor imposed suspension.
M. Complaint of a participant that cannot be resolved by the research team.
N. Failure to follow the protocol due to the action or inaction of the investigator or research staff (Protocol Deviation or Protocol Violation).
    a. Deviation that do not constitute a safety risk to the subject (e.g.; out-of-window visits) shall be reported on the next Continuing Review/Annual Check-in/Administrative Closure of the Project filed with the IRB.

If something happens and you are not sure if it needs to be reported (or even if you know that it does), your first step is to contact me immediately – you should send me an email with the subject line "Urgent: potential RNIF" and/or you can try calling my cell (full-time lab members should all have this phone number). Once I have been notified, the RNIF must be submitted within 48 hours:

1. Go to iRIS.
2. Select the appropriate project for which you would like to submit a reportable new information form
3. Press the '*Start a Submission Form'* button in the upper-left -hand area of the screen, and then '*Select a Protocol.*'
4. Select the Adverse Event Form
5. Respond to the questions under as applicable to the event in question.

Note: it is extremely important that these forms be as detailed and thorough in explanation as possible, especially in delineating how the event was unanticipated.

MRI Safety

Participants' safety should always be the *number one priority*. This is especially important when collecting MRI data, where a failure to follow safety guidelines can have fatal consequences. Training is required for anyone who works on any aspect of a project at the MRI center. All participants need to have filled out the MRI screening form. Never assume that a participant has already been screened, or that the responsibility for screening them falls on somebody else's shoulders.

MRI scans can sometimes uncover incidental findings about the participant's health (a sinus infection, an abnormal pituitary, etc.). Participants need to be notified about these findings within 48 hours of the time we were informed of it if they have acknowledged that they would like to be informed. It's important that participants understand that the type of scans that we do are not meant to be diagnostic. Inform participants that they should follow-up with their doctor if they have any concerns. In some cases, these incidental findings are particularly sensitive (e.g., when there is a brain abnormality in a child and you are informing the parent). You should make sure to talk to someone that has experience with these before you proceed. And if you are not sure how to explain the findings to the participant, you can discuss them with the Scan Operator. If you are uncomfortable with discussing the findings with the participant, don't hesitate to talk to me.

Lab Resources

SDSU Wifi

Network: SDSU_Guest
Password: SDSU will send an SMS message to sign up for guest wifi

Or

Network: eduroam
Username: Your SDSU Login email
Password: Your SDSU Login Password

Google Chat

Google Chat will be used as the primary means of lab communication, such as general lab announcements, sharing links, discussing different projects, and basically any message that can be sent without email.

Try to keep each google space on topic, so that people can subscribe only to the space that concern them. For messages to one person or a small group of people, use the direct message channels.

Full-time lab members should install Google Chat to their computers and/or phones. Part-time lab members should check Google Chat regularly. I get Google Chat updates on my phone and have do-not-disturb mode enabled for evening hours (meaning I may not get your messages then); I encourage you to do the same.

Google Drive

The lab has a Google Drive that is used to store raw data and code, so that you can run your experiment on any computer that has access to the Google Drive. The lab drive (folder called CAN LAB DATA) is also used to store documents and files for general lab use (e.g., IRB documents, stimuli, demographics forms, etc.)

GitHub

All projects that involve programming of any kind must use some form of version control. We have a GitHub organization set up with unlimited private repositories, allowing you to sync your code to the cloud and share it easily with other lab members.

The lab's GitHub (https://github.com/canlab-sdsu) should also be used to share code, stimuli, and data with the world. Only share data after you've spoken with me (we don't want to share data too soon, before you've had a chance to look at it thoroughly yourself). When you share code, make sure it's *flawless*, because we don't want to distribute buggy code to the world! Have other lab members check it if possible.

Note that in some cases, data should be uploaded to the OSF repository instead of GitHub; all IRB protocols must serve as the guiding principle for data sharing, so be sure to check these protocols first.

Ask the lab manager to get access to the lab's GitHub.

Google Calendar

Google Calendar is used to host a general lab calendar. This is where undergraduate schedules are documented. This is where we schedule participants and testing room space. Be sure to book participants, as well as any prep time or clean up time that you need for your session (some studies require more prep and cleaning time than others, e.g., psychophysiology), onto the shared calendar, and update it *promptly* if there are any changes to that schedule (e.g., someone cancels or reschedules). List **participants IDs** (not names) on appointments, as well as the room number, and the name and phone number of the person conducting the session (so you can contact them if the participant cancels or reschedules). If you need to reschedule/cancel, try to find someone to cover the slot for you (first!) and as a last resort, cancel and update the calendar ASAP. But this is a last resort, only to be used in case of emergencies! When you schedule a subject, you are making a commitment to be there, and this should be a priority for you. Relying on someone else to cover for you is disrespecting that person's time and the time of the subject. Remember that other people are relying on that information to schedule participants!

When you are scheduling slots, make sure you are careful to check the CAN lab calendar so you don't double book the room. This is very important because if you accidentally schedule a subject when the room is in use, your subject may arrive and knock on the door, disrupting the current experiment that is taking place in there.

Ask the lab manager to get access to the lab's calendar.

MRI Calendar

The SDSU MRI calendar is a shared calendar hosted through the Calpendo booking system, and is used to keep track of the MRI sessions and availability. Ask the lab manager to put in a request for you to get access (if you are a full-time lab member only). You must check the MRI and the qualified Scanner Operator availability before booking any MRI sessions. Note that SDSU does not allow scanning without a qualified Scanner Operator present at all times. For participants who are 16 and under, patients, or other special populations, there must always be at least one additional Safety Trained helper present.

Normal operating hours are Monday to Friday, 9am to 6pm. We are allowed to schedule MRI sessions on weekends and after-hours. However, you should make sure a qualified

Scanner Operator will be available. Do NOT schedule a session with the participant until you get a confirmation that a Technologist will be available.

Appointments can be booked on the MRI calendar as early as needed, but "reserving" a time when you don't have a participant scheduled is not allowed. Cancelations within 48 hours of the scheduled sessions are subject to a full charge, so make sure to carefully screen your participants and remind them of their session times. If you do need to cancel a session, especially within 48 hours of the session time and especially if the session is after hours, you are responsible for getting a hold of the Scanner Operator to let them know they will no longer be needed.

All MRI users in Calpendo can view and edit events on the MRI calendar. As such, you must 1) be very vigilant not to put any identifying information in these events, and 2) follow Calpendo's guidelines which can be found here. Specifically, all appointments scheduled on the MRI Calendar should include the following information:

1. Resource: MRI, Testing Room / Mock Scanner, Parking
2. Project: Select a project from the available options
3. From/To: Date, time, and duration of reservation
4. Reminder: To whom reminders will be sent
5. Repeat: Do not adjust
6. Status: Do not adjust
7. Booker: User making the reservation
8. Operator: Select an operator from the list of users
9. Description: Space for anonymized subject ID's or short description, DO NOT include identifying or sensitive subject info here
10. Scan Type: Phantom, Pilot, Subject, Instruction

The reservation time should include the entirety of the time that the MRI will be occupied. The reservation should take into account time required from the Scanner Operator and the participant – this includes time spent screening the participant, but does not include time completing consent paperwork in the waiting area or changing clothes. Please leave a 30 -minute break between scheduled events.

See more information about preparing for an MRI session here.

Email

Email is one of our primary forms of communication as a lab: Please check your email (and Google Chat) at least once per day (Monday-Friday), and respond within 24 hours.

If you need some time to think about your response, please respond letting others know about the possible delay.

There is also a lab email account that only the lab managers and I can access (psych.canlab@sdsu.edu) – people often contact the lab (e.g., if interested in participating in studies) through that email address. Use this email address to contact participants; do not use your own email address. If you are sending an email to more than one participant at a time, **ALWAYS** address emails to participants in the :BCC field; **NEVER** address an email to more than one participant at a time (consider confidentiality!). Do NOT forward emails that include participant's name, contact information, or other identifying information; if you need to convey information about a specific participant to another lab member via email, compose a separate message using their participant ID (or generic descriptor, e.g., "a potential participant").

SONA

For many studies, we use SONA to recruit and credit participants through the SDSU Psychology Participant pool. If you have not used SONA before (or only used it as a participant, and not as a researcher), you may want to watch this tutorial. You will need to be set up with a SONA researcher account; this is different from your REDID. You can request a SONA researcher account by emailing the SONA subject pool coordinator at psfa.sona@sdsu.edu.

You will need the following materials to set up your SONA account and SONA study:

1. Completed SONA Request form (this can be obtained by emailing psfa.sona@sdsu.edu, the SONA subject pool coordinator).
2. The official IRB approval letter for which your study is approved under.
3. The IRB-approved SONA advertisement (if applicable).
4. Documentation that the IRB under which your study is housed is active (this can be something like the most recent continuing review form).
5. Documentation that recruiting participants via SONA has been approved by the IRB for your study (this can be which ever IRB form contains the approval to use SONA, whether that is a continuing review, change request, original project form, etc.).

Note: You must have both IRB approval to conduct your study and IRB approval to use SONA *prior* to submitting any materials to the SONA subject pool coordinator.

Giving credit through SONA

1. Go to the SONA website, select your experiment.
2. Find the current date/time of your experiment under “view/administer time slots” and click on “Modify”.
3. Verify the participant’s user ID name and select “participated”. At the bottom of the page, click “update sign-ups”.
4. If you need to add someone to a study slot who did not sign up ahead of time through SONA, go to the bottom of the “administer time slots” page and use the “username manual signup”.
5. If the participant did not show up, follow above steps but assign “no show: unexcused.” We typically do not use the “excused” option unless the participant contacted you about their no-show (e.g., asked to reschedule after the cancellation window had closed).

Note: There is an auto-credit option for SONA studies that removes the need to manually give credit to students that complete online studies. This requires separate IRB approval.

Note: You may choose to inform your SONA participants that instructors are notified of the number of no-shows received, and may or may not choose to penalize this behavior.

Helpful Contacts (Psychology)

- Natalie Roper (nroper@sdsu.edu): Admin Support Coordinator for Dpt. Of Psychology
- Sean Molnar (smolnar@sdsu.edu): Instructional Support Technician and MRI Center Lab Manager, coordinates safety training
- College of Sciences IT support (stshelpdesk@sdsu.edu): For department specific issues, such as office computers, printers, lab spaces
- General IT support (https://it.sdsu.edu/get-help#faculty-staff): Offers support tickers, help phone line, as well as live support via Zoom
- SONA administrator (psfa.sona@sdsu.edu): SONA administrators, can provide help with SONA recruitment and project planning.

General policies

Hours

Being in the lab is a good way of learning from others, helping others, building camaraderie, having fast and easy access to resources (and people) you need, and being relatively free from distractions at home (e.g., Netflix). That said, one of the benefits of a career in academic research is that it is typically more flexible than other jobs. However, you should still treat it like a job (40 hours/week) and show up to the lab. This applies to lab staff members (the lab manager and other research assistants) and postdocs. You are not required to work over-time. For graduate students, I recognize that you have other demands on your time like classes and TA-ing but I still expect to see you in lab, doing research, often.

Lab staff members are expected to keep regular office hours (see above). Graduate students and postdocs have more flexibility. However, in order to encourage lab interaction, I expect that all lab members will be in lab, at minimum, most weekdays between 11am and 3pm or so. This is not a hard rule. I understand other obligations come up at times, but please keep this in mind and do your best to abide by this most of the time.

Sometimes I work in the evenings and on weekends. This means that I will sometimes send emails or Google Chat messages outside of normal working hours. I do not expect you to respond until working hours. In rare cases, I may suddenly and urgently need something from you over the weekend (e.g., for a grant deadline), but I will be sure to give you as much advance notice as possible. If my off-hours messages are unwelcome and cause distress, please talk to me, and we can work out some alternate strategies so I am not bothering you during your time off.

Although I sometimes work weekends, I try to only do that when absolutely necessary. Please respect that by making sure to give me enough heads-up about impending deadlines so that I can get things done for you (e.g., write letter of recommendation, give feedback on manuscripts, etc.). For more details, see Deadlines.

Keycard access

Your SDSU RED ID will be your keycard access to the building after hours and on weekends. You will also need a physical key to get into the lab space. Please be sure to have it with you at all times, as you don't want to get locked out! If you need access, consult with me to get your physical key and REDID validated in the system, and also reach out to the Psychology Department Coordinator Natalie Roper at nroper@sdsu.edu. Keep in mind that access to certain facilities is only granted upon

request. Make sure to request access to the facilities you need, and to indicate whether you need after-hours/weekend access.

Noise policies

I love that lab members get along and want to spend time together. This is a critical aspect of a productive, friendly, and positive lab environment. But I also realize that you are all very busy and want to have a place to focus and work quietly.

Motivated by the concerns of some lab members, and in conversation with them, we have devised a set of policies so that you can all work effectively. These policies do not preclude socializing at specific, agreed-upon time (e.g., lunch, happy hours); in fact, we encourage this! These policies also do not preclude meeting with one another to discuss research, classes, etc; again, we encourage this! But please keep these policies in mind:

11. General quiet time: Please respect other people's needs to work quietly in the lab (and bullpen) by lowering your voice and generally keeping noise to a minimum, particularly during the hours of 8am-12pm and 1-5pm. If you do need to talk, do it relatively quietly and/or set up a meeting in a small conference room in Atkinson with closed doors. A good rule of thumb on volume: Remember that there are other people around (including faculty in their offices) that should not be able to hear your conversations.
12. Headphones: If someone is wearing headphones, respect their need for quiet. Do not tap them on the shoulder to talk. Do not talk loudly in their vicinity. Exception: If there is a fire alarm or other emergency and they are not aware, do alert them for their own safety.
13. Flexible work locations: Feel free to work from an unused testing room or conference room in Atkinson, or somewhere else when Policies 1 & 2 are insufficient, or when you need more privacy. Please check the testing room calendar to be sure it will not be needed in the near future before setting up there. Try not to use alternate spaces often (especially working from home), but if it has to happen during certain periods (e.g., when writing and needing extra quiet), then please do so.

PI office hours

In addition to weekly 1:1 meetings and scrums (see below), and occasionally poking my head into the lab regularly, I will be in my office with the door open for at least an hour every day that I'm on campus. Feel free to interrupt me during that time. Because I am

sometimes on a call or up against a deadline, I ask that if my door is completely closed, send me a message or try me later rather than knock.

Meetings

Lab Meetings

Lab meetings will take place every week during the regular academic year, and are meant to be a forum for trainees to present project ideas and/or results to get feedback from the rest of the group. Projects at any level of completion (or even not yet started!) can benefit from discussion. These meetings can also be used to discuss methods, analyses, new papers in the field, and career development. For paper discussions, everyone must come to lab meeting having read the paper and prepared with comments and questions to contribute. Some weeks we may explore a particular issue and have people read different papers – in that case, come to lab meeting having read your paper and be prepared to summarize it for the group.

Each trainee (lab managers, grad students, postdocs) will be expected to present at least once every semester. These meetings are informal, but you should come prepared to contribute something substantive.

Lab meetings will last no longer than 1 hour. If at the end of that time, we need more time to discuss something, we will either take a break before continuing or schedule alternative follow-ups. Lab meeting agendas and notes will be maintained in the lab meeting folder in the Google Drive.

By the first week of the semester, the lab manager will initiate a poll to determine the time that works for the most people. All lab members (full-time and part-time, including undergraduates) are expected to attend the lab meetings. The only exception is if you have a class or job commitment during the same time as lab meeting and, in that case, you should come for any part of the meeting you can (e.g., if lab meeting is schedule 3-4pm, and you get out of class at 3:15, you should plan to join us for lab meeting right after class). If something comes up at the last minute and you are unable to make it to lab meeting, you must let me or the lab manager know.

Individual meetings

At the beginning of each semester, I will set a schedule for weekly 1:1 meetings (30 minutes) with each full-time lab member. If conflicts arise (e.g., travel, illness), we can try to reschedule for another day that week. If we do not have anything to discuss in a given week, that's fine- we can just say hi or cancel it. If you need an additional meeting (or if you are an undergraduate and would like to have a meeting), just let me know.

"Scrums"

We will have 1 scrum each week (currently set for after lab meeting). All full-time lab members (lab managers, grad students, and postdocs), are expected to attend. These will last no longer than 15 minutes each and are meant as an opportunity for us to touch base as a team on our various projects and ask for help with troubleshooting any problems that arise. We will go around the table and each member of the team will have an opportunity to share an update and/or ask questions. Given that this is primarily meant to provide time to touch base as a team, you do not need to mention updates or questions that are specific for me (those can be covered in 1:1 meetings).

Professional Development Clubs

In progress

Deadlines

One way of maintaining sanity in academic work is to be as organized as possible. This is essential because disorganization doesn't just hurt you, it hurts your collaborators and people whose help you rely on. If you need something by a particular deadline, tell your collaborators (including me) as soon *as you know when a deadline is*, so we can allocate time as efficiently as possible. Don't be afraid to remind people as the deadline gets closer (yes, remind me as well).

For most hard deadlines that don't require a lot of time (e.g., reading/commenting on conference abstracts, filling out paperwork), I will expect at least **one week's** notice, but I *greatly prefer* two weeks' notice.

For deadlines that require a moderate amount of time (e.g., letters of recommendation), I will *require* **two weeks'** notice.

If you want feedback on work that requires multiple back-and-forth interactions between us – and potentially other mentors or collaborators – before a hard deadline

(e.g., poster presentation, research and teaching statements), give me as much time as you can; at the very least **three weeks**.

For manuscripts submissions and revisions (i.e., which either have no deadline at all or only a weak deadline), send drafts to me as soon as you have them, and bug me to give you feedback if I haven't responded in two weeks. But most of the time, I will endeavor to provide feedback on these as soon as possible and aim to do so within 48 hours – papers are important!

In general, you should keep in mind that my time is extremely limited. Please only send me drafts/documents when you feel good about what you have written and you are sure that you are ready to proceed (e.g., you should know that you want to submit to a conference before you send me an abstract to review).



If you do not adhere to these guidelines, I may not be able to meet your deadline. A good rule of thumb: As busy as you are, remember that others are at least that busy if not much more so. If it takes you two weeks to produce a document to get feedback, expect that others may need at least that long to turn it back around.

Presentations

Learning to present your research is vital. Very few people will read our papers carefully (sad, but true) but you can reach a lot of people at conference talks and posters. Also, if you plan on staying in academia, getting a postdoc and a faculty position both significantly depend on your ability to present your data. Even if you want to leave academia, presentations are likely to be an important part of your job. Additionally, every time you present your work, you are representing not just yourself but the entire lab.

It is therefore highly encouraged that you seek out opportunities to present your research, whether that is to the department (e.g., journal clubs), research community (e.g., other lab meetings within or outside of SDSU), or general public. If you are going to give a presentation (including posters and talks), be prepared to give at least one practice presentation to the lab at least one week ahead of time (two weeks or more are

advisable for conference presentations, and *many* weeks ahead of time are advisable for job talks, which require much refining). Not only will this help you feel comfortable with the presentation, it will give you time to implement any feedback. Remember that the more aversion you have to presenting (e.g., anxiety around public speaking), the more practice you need in order to get comfortable with it.

Template for posters will be available, and you can use those as much or as little as you'd like (but please do keep the SDSU and CAN Lab logos in the top corners). General rules for posters: minimize text as much as possible (if you wrote a paragraph, you're doing it wrong), make figures and text large and easy to see at a distance, label your axes, and make sure different colors are easily discriminable and consistent throughout (if angry is denoted by red on one graph, it should be red on all graphs).

There is no template for talks, and I encourage you to use your own style of presentation as long as it is polished and clear. I am happy to share slides from some of my talks if you would like to use a similar style. You'll get a lot of feedback on your talks in any case, but other people's slides might be helpful to you as you are setting up your talk.

Lab Travel

If I or the department are supporting your conference attendance, you are expected to attend at least the majority of the (ideally the entire) conference. There may be a session or two that are so unrelated/uninteresting/unintelligible that you needn't bother attending; if this describes many sessions, you should pick another conference. You will be expected to be able to report back to the lab on the conference content; jot down some thoughts during the sessions to share with us. In fact, upon returning from the conference, you will report in lab meeting at least one of your favorite scientific findings from the conference.

An academic conference is both a professional and a social event. There will be activities that are "purely social" (e.g., student socials, cultural site visits), those that are mixed (e.g., conference lunch events), and those that are "purely academic" (e.g., talks, posters). It is important to remember that even the "purely social" events are still professional, and even the "purely academic" are still social. A major goal of conferences is meeting others with similar interests; as a junior attendee, a major goal for you might be finding people to do graduate work or postdocs with. The connections and impressions you make last forever! And they can be transformative (I will happily provide many examples from my own career). Keep this in mind always. Being professional and friendly is of the utmost importance. Remember that you represent the entire lab while you're at a

conference, and your behavior will reflect on me/us. Also, a tip: Never assume that anyone you meet is a student, as they could be a young-looking faculty member!

Conference apparel varies by conference and attendee. The safest bet is business casual. And people often dress more formally for their presentations (poster or talk). This does not mean dress as if going to a club or a party – it means dress as if going to a job interview. Conferences often involve a lot of walking/standing, so consider comfortable shoes.

You are an adult, and I cannot be responsible for you. Be careful in new places, travel in groups, check the safety of your plans, let someone know where you are going, etc. If you are new to travel, read general travel tips and stick to more experienced travelers. Know how to access money, phones, cabs, etc. As far as drinking, just be safe and use your common sense. If someone invites you to a party or social gathering (even if this person is a senior researcher in the field), please know that you CAN SAY NO and it will not destroy your career. (But you are an adult and you can say yes if you want to – again, use your common sense if you do go.)

Finally, a comment on travel time. If lab managers are attending, it counts as work, as you are representing the lab (i.e., you do not need to take days off). But also, if you're traveling on a weekend or evening, this does not count as working overtime. And if you want to add personal travel days to your conference travel, you MUST clear this with me in advance.

Recommendation Letters

Letters of recommendation are extremely important for getting new positions and grants. I will write a letter for any student or lab member who has spent at least one year in the lab (it's hard to really know someone if they have only been around for a few months). Exceptions can be made if students or postdocs are applying for fellowships shortly after joining the lab.

To request a letter of recommendation, please adhere to the deadline requirements. Send me your current CV and any relevant instructions for the contents of the letter. If you are applying for a grant, send me your specific aims and/or a short summary of the grant. In some cases (e.g., I have limited time and/or short notice is given), I may ask you to draft a letter, which I will then revise to be consistent with my evaluation. This will ensure that I do not miss any details about your work that you think are relevant to the position you're applying for, and it will also help me complete the letter in a timely fashion. This may seem strange, but you'd be surprised how often this happens as you

move through the world (I write a first draft of all of my letters of recommendation at this point in my career).

Data management

Storing active datasets

In general, data will be stored in one of three places:

- **Google Drive folder for storing:**
    - Behavioral data (no identifiable data!!!)
    - Unlimited storage available here so a good backup for everything
    - Restricted Drive Folders
- **IRODS for storing:**
    - MRI data (raw and analyzed forms)
- **HCC (Anvil) for storing:**
    - MRI data (analyzed forms)

IRODS and Google Drive are triple redundant – meaning that they are backed up three different times. In general, you should not store data locally on your computer unless it is being synced with Google Drive (de-identified data only).

Data Organization

It is crucial that we have the same format for storing files across the different experiments in the lab, so that, in years from now, we can easily find any files we might need. Although I recognize that your files feel like your property (and are certainly the result of all your hard work), the university actually owns these files, as does the funding agency (e.g., NIH) – even I don't own them! So this is something you *must* do. If you don't, your analysis pipeline and data structure will be uninterpretable to others once you leave (sometimes even when you have the best intentions and have created README files to explain your structure). Please make sure that you are using this data structure for all your experiments in the lab:

- Surveys (Parent folder)
- Stim (Parent Folder)
- Project Name
    - Data
        - Scripts (examples below)

        - Age Group/Version of Experiment
            - Scoring/cleaning Scripts
            - Stats Scripts
    - Data type_1 (e.g., Survey data/Qualtrics data)
        - Age Group/Version of Experiment
            - Raw Data
            - Scored/Processed Data
    - Data type_2 (e.g., Valence Bias/MT data)
        - Age Group/Version of Experiment
            - Raw Data
            - Scored/Processed Data
    - Data type_3 (e.g., e-prime data)
        - Age Group/Version of Experiment
            - Raw Data
            - Scored/Processed Data
    - Data type_4 (e.g., MRI data)
        - Age Group/Version of Experiment
            - Include link to IRODs or other MRI data-hosting platform
- Project/Session/Experiment Materials (example materials below)
    - Participant Log (this may need to be hosted somewhere else if it contains identifying information)
    - Task instructions/descriptions
    - Session Guides
    - SONA materials
    - Survey Materials (text file, list of surveys, include path to parent folder)
    - IRB documents (e.g., consent forms)
- Stim/Tasks (examples below)
    - Original (text file, list of stim names, include a path to parent folder)
    - Stim Order (text file, list of stim names, include a path to parent folder)
    - Project task/task scripts (to run a task)
    - Exported Qualtrics Survey
- Conferences
    - Society name (e.g., SAS)
- Manuscript
    - Literature Review
    - Paper Drafts
    - Final Data & Figures
    - Journal Submissions
        - Journal 1
            - Reviews Round 1
            - Reviews Round 2
        - Journal 2
        - Journal 3
- Metadata (examples below)

    - Version control document
    - Analyses run

While we're at it, when working on drafts of a document (e.g., a manuscript or conference abstract), the first author that creates the draft should name the file using this format: "projectName_[Society name_]mm.dd.yy" (adding Society name in the case of conference abstracts) and if/when returning feedback, I (and other co-authors) will add the suffix "_FML" (first, middle, last initial; e.g., my suffix will appear as "_MN").

Archiving inactive datasets

Before you leave the lab, or upon completion of a project (post-publication), you must archive old datasets (on the NAS and on Google Drive) and back them up. I will review the dataset with you before you leave.

Data Sharing

Not only is data-sharing the right thing to do, we are actually required to do so for any dataset that was funded by the NIH. Within the lab, you can share your code and data whenever you like. Outside of the lab, we will try to make these datasets publicly available within a year of publishing the first paper from the dataset. You should also be prepared to share any scripts that you used in your published processing & analysis pipeline, but talk with me before sharing anything. Currently, the best option for sharing smaller datasets seems to be the Open Science Framework, the best option for sharing MRI datasets is OpenNeuro (let the lab know if you find others).

Funding

Funding for the lab currently comes from:

- my retention package from SDSU
- NSF CAREER award
- a number of other smaller grants

If you need to buy something, or have to charge a grant for something, let me know and I will oversee the process.

At some point, you will likely be asked to provide a figure or two for a grant I am writing, and/or provide feedback on the grant. Relatedly, you are entitled to read any

grant I have submitted (just ask!), whether it is ultimately funded or not. My only request is that you not share these documents with others (they should ask me directly). Aside from being a good opportunity to learn how grants are written, this will also allow you to see my vision for the lab in the years ahead.

If you are being paid from a grant, you must make progress on grant-related projects and are expected to help with data sharing, and requests for figures or other information in a timely manner (as indicated by me). If you are a grad student and would like to be paid from a grant (rather than a TAship), you must similarly expect to adhere to these guidelines, even in the planning and submission process for the grant.

Allocation of expenses

I will oversee all aspects of the financial management of our funding sources. However, it is important to me to be transparent about where research money comes from and how it's spent. I have included some notes below but please do not hesitate to ask if you want to know more details.

- **Internal funds:** I do not think I'm technically allowed to disclose the terms of my contract(s) with SDSU. However, we have money and it's enough to keep us going, and fill in any holes (smaller expenses) for a while. The perk here is that these funds are flexible in that they can be used for any justifiable purpose.
- **External funds:** Because external funds are more restricted than internal funds and because they expire more quickly, we should use them whenever allowable and save internal funds for other purposes. All research funded by the government (NIH, NSF) *must* acknowledge the grant number upon publication (and ideally also in poster presentations and talks). This is essential for documenting that we are turning their money into research findings. We must also submit a yearly progress report describing what we have accomplished. Lab members involved in the research will be asked to contribute to the progress report.

Undergraduate Research

Undergraduate research assistants play an important role in our lab, and we have a few opportunities for them to earn money or credit for their contributions. Because these opportunities require a certain degree of commitment from both the student and the lab, we generally reserve them for students who have already spent at least one

semester volunteering in lab. If this policy would prevent you from being able to work in lab, please talk to me or the lab manager because we want all students to be able to pursue their research interests.

In addition to volunteering in lab, other research opportunities include:

1. If you want to work in lab and earn course credit, you can sign up for special study, Psy 499 (link to info). Typically, you would be in lab for at least 10 hours a week. In addition, you will be required to attend lab meetings and write a short statement about your experiences at the end of the semester. Note that you can enroll in Psyc 499 multiple times.
2. If you want to work in lab and earn money, you can apply for SURP (SDSU Undergraduate Research Scholarship and Creative Activities Program). SURP requires faculty to act as a mentor and submit a research proposal for an undergraduate student at SDSU. Students will work on either a fall or summer project, and will be paid hourly for their time, cumulating in a Symposium presentation at SCCUR. Please see this page for more information.

If you're an undergraduate student and you want to pursue any of these options, talk to me or a lab manager.