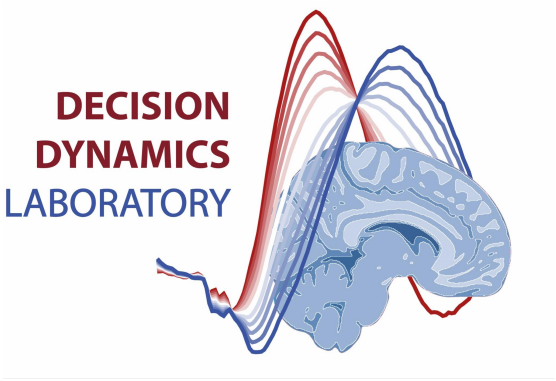

LaDeDA

Lab Handbook

Last updated: May 2023

Welcome to the LaDeDA lab!

You are likely reading this because you have recently joined the Laboratory of Decision Dynamics in Action (LaDeDA) in the Department of Experimental Psychology at the University of Oxford.

Welcome to the lab! We are really excited that you have decided to join us. We will aim to make the coming months and/or years in the lab as fulfilling as possible for you - in terms of intellectual stimulation, personal development, and generally having a great time in the lab.

We hope that you'll learn a lot about Cognitive Computational Neuroscience[1], have the chance to make new and exciting scientific discoveries, and develop new and useful skills (such as coding, data collection and analysis, writing papers and giving talks) that will serve you well for a future career in academia or outside it. But above all, science is a team sport, and we are all here to support each other and succeed together. So we hope that you feel as welcome as possible. Don't be afraid to ask questions or raise concerns when you're stuck, or when something isn't working for you.

How should new starters navigate this document?

New starters should be sent a link to the 'private-facing' version of this document (either immediately joining the lab, or ideally a few weeks beforehand). The private-faceing version is visible to current/former lab members, and is a google doc that can be updated at any time. It contains a few more logistical things at the end of the document. There will also be a 'public-facing' version that is freely accessible via our lab website, for anyone to read at any time.

It can be a good idea to look over the manual shortly *before* you join the group. When you arrive in Oxford and join a new lab/department, you can be inundated with lots and lots of new information/induction materials, meaning you may not have as much time to read this manual as you might like. But if you haven't had the chance to look over it beforehand, then aim to read the manual *within your first month* of joining the group.

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[1] Note: our lab has also previously been named the **Cognitive Computational Neuroscience lab**. But we also refer to ourselves as the Laboratory of Decision Dynamics lab, or, when we're feeling silly, the LaDeDA lab (pronounced *lah*-dee-*dah* lab). This is to avoid conflicts with the Computational Cognitive Neuroscience lab run by Jill O'Reilly, who are our close collaborators in Experimental Psychology. You can use any name you wish. 🙂

Contents

Section 1: Introduction

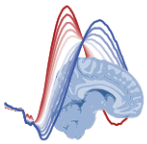
1.1. About this manual

This lab manual was partly based on a template developed by the Physics group at the Wellcome Centre for Integrative Neuroimaging, which LaDeDA is a part of. It was also inspired by lab manuals from other groups (in particular Mariam Aly, Eric Schulz and Samuel Mehr).

The handbook was first written in spring/summer 2022 collaboratively by all members of the group. This was when the lab was moving from OHBA (in the Department of Psychiatry) to the Department of Experimental Psychology.

The lab manual is a living document. You can suggest changes to the document at any time, just by using the comment function on the private-facing version. If there is something that you think needs more immediate or careful attention, feel free to raise it directly with Laurence or at a lab meeting.

Thank you for taking the time to read the handbook. We hope that it is helpful.



Section 2: Our scientific goals

2.1. What is the lab trying to achieve?

Our lab is still young. The overarching "mission statement" of LaDeDA will change as we develop. We are always open to new ideas from lab members.

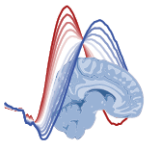
At the moment, however, our lab is concerned with studying ***decision making in dynamic situations*** - i.e. how decisions evolve across time. This is partly because decision making is inherently a *dynamical, time-varying process*. Even when the decision itself is static, the decisions we make unfold across time. But it is also because decisions that we make in the real-world themselves unfold in *dynamic, time-varying environments*. Such environments require change detection, information search, planning and attention.

We believe that **understanding the behavioural and neural basis** of such time-varying decision making and its interaction with other cognitive processes is important for understanding human behaviour; **developing computational accounts** of such decisions is particularly important for formalising our understanding; and that this understanding may be important for characterising how decision making changes in **neurological and psychiatric disease**.

2.2. What is the lab currently working on?

If you join the lab, you're currently likely to work in one of the following three questions:

- **How do we make decisions in continuously evolving environments?** The basis of several projects is to get away from classic "trial-based" decision-making, and move towards studying information processing in more continuous settings. Beyond studying subjects' choice behaviour, you will use techniques with high temporal resolution (such as EEG/MEG, process tracing via eye-tracking) combined with analysis techniques that allow you to unmix responses to environments that unfold rapidly with lots of events that overlap closely with one another in time. You may wish to run experiments online, in virtual reality, and/or collaborate with researchers who can study similar questions in animal models; there are opportunities to do so within Oxford. To find out more about this line of research, a good place to start is this preprint. You can also watch this talk.

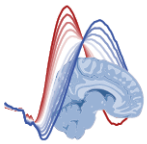


- **What are the interactions between information search, attention, planning, and choice?** Many naturalistic decisions involve a close interplay between decision making and other cognitive processes, such as planning (sampling from memory) and gathering information from the environment. We are interested in how information search processes unfold across time during choices in the lab (and in the real world). Currently we study this behaviourally, using in-person and online studies, and using cognitive neuroscience experiments in humans (fMRI and M/EEG). We also have the opportunity to collaborate with researchers studying these questions in non-human primates. To find out more about this line of research, a good place to start is this review article. You can also watch this talk.

- **How do we adapt paradigms from the cognitive neuroscience of decision making so that they can be used in experimental medicine (pharmacological) and clinical (patient) studies?** We are keen to adapt our paradigms so that they have real-world utility in translational settings. Often the pipeline goes like this: take an interesting cognitive (neuroscience) experiment that we have characterised well in healthy volunteers, that is relevant to psychiatry/neurology → optimise it to make reliable measurements in individual participants → understand the neuropharmacological underpinnings of these tasks/signals by performing drug studies in healthy volunteers → study the same task in patient populations. You can be involved in projects at any point along this pathway, and these may often involve collaboration with researchers in other departments (e.g. Psychiatry and NDCN). If you're interested in this line of research, ask Laurence to send you a couple of his recent grant applications on this topic.

The best way to find out more about individual projects is to talk to other lab members as soon as you arrive in Oxford. Don't be afraid to ask other people what they're up to! It can be a good idea to set up meetings with other lab members when you first arrive, so they can tell you about their work.

And remember: we're *always* open to new and exciting ideas. We welcome people with different scientific perspectives (and skill sets). We are keen for all lab members to play an active role in shaping the future direction of our research.



Section 3: Roles & Expectations in the lab

Our group consists of: *Students (Undergraduate, MSc, Visiting and DPhil students)*, *Early Career Researchers (ECRs), Research Assistants* and the *Principal Investigator (PI)*. We also interact with *Core Staff*, who include members of the administrative team at the Department of Experimental Psychology and WIN, and technical staff (such as radiographers and imaging support staff). In this section, we describe the responsibilities of each role, challenges they may face, what you can expect from them, and in return what they can expect from you.

Above all, we are a group of different people with different needs. We cannot always anticipate the needs of future lab members, or the future needs of current lab members. We are keen to accommodate those needs - so please feel free to approach Laurence (or make a comment in the google doc) if you think that something is not being addressed, or if anything listed below does not apply well to you.

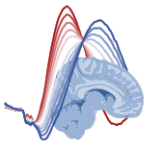
3.1 Overall expectations

3.1.1. Work-life balance, holidays

We want everyone to be able to find a healthy balance between their academic work and their other interests, hobbies and passions in life. Finding this balance will mean different things for different people. In general, though, (i) it is more important to work *effectively* rather than to work *long hours* (there may be times when you need to work hard (e.g. before a deadline), but in general it's not good practice to regularly extend beyond a normal 'working week'); (ii) it is important to prioritise being *well-rested* and taking holidays from work; for example, employees (RAs, postdocs, and the PI) are given 38 days' annual leave per year including bank holidays, and they are strongly encouraged to use this leave fully; DPhil students should take a similar amount of holiday to employees; (iii) find other things that sustain you in life beyond your work, and share these passions with others.

3.1.2. Teamwork, taking ownership, taking the initiative.

We strongly encourage working as a team, and supporting other members of the group wherever possible. You should proactively find out what other people in the lab (and department) are working on, where they may be facing challenges, scientific or otherwise, and consider what you can do to help them. You should have some areas of your work that you feel 'ownership' of - those on which you are taking the initiative, and leading the project. But you should also find areas of your work that can be 'shared



enterprises' with other members of the lab, and seek to build bridges between what you and other lab members are doing.

3.1.3. Giving feedback.

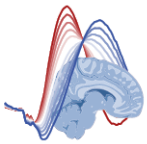
One of your biggest contributions to the lab can be to provide feedback to others. This can often come at lab meetings when people are giving presentations about their work. Make your feedback open, honest, and kind. You should also feel free to challenge the PI whenever you think he is wrong or your opinion is different. This may feel easier as you become more experienced, but you should never assume that the PI 'knows best', as he often doesn't. By having open debates (especially about science, but also about how the lab should be run) more progress is typically made than by simply agreeing with the *status quo*. You should never think that you are 'too junior' to ask a question or provide feedback on another person's project. If you are struggling to understand something, then it is likely that others are too.

3.1.4. In-person vs. remote working, 'core hours'.

We value in-person work. It leads to more spontaneous interactions, teamwork, creative thinking and generally better group meetings. On meeting and journal club days (Mondays and Tuesdays), most lab members should come into the lab in New Radcliffe House and attend meetings in-person. Use this as an opportunity to have lunch together, interact with other research groups, and catch up with one another. Unless there is a particularly good reason to join remotely, in-person attendance is strongly encouraged. However, we also appreciate that there can be value in working remotely. On other days, working patterns are more flexible. It is generally expected that during 'core hours' (10am-4pm, Monday-Friday), full-time members of the lab should be available to work on projects, collect and analyse data and/or have meetings when they are required by their projects. But beyond these commitments, your time is flexible; do whatever works best for you to get your work done. If you don't have fixed commitments or meetings on a given day, don't feel obliged to work fixed hours. Soon after joining the lab, have an open conversation with Laurence about your planned pattern of work, and stick to this.

3.1.5. Sickness

If you're sick, stay home and take care of yourself - both to keep yourself healthy, and potentially to keep others healthy too. Rearrange your meetings and research participants as needed. If you need to take an extended period (>1 week) off work because of health problems (either mental or physical), then let Laurence know.



Prioritise your own well being above all else: your work may feel important, but it can always wait.

3.1.6. Celebrating others.

If someone else in the lab achieves something, celebrate it. Make sure they notice that they've done something great… they may be too preoccupied (or relieved that it is over!) to notice. So, buy them a drink or a cake, send them a message on Slack, bring them a card, shout about it at a lab meeting or journal club, organise a celebration event. Do whatever you think will make them feel special.

3.1.7. Embracing "failure".

Science is hard, and often things don't work out as expected. Your experiments may not work out as planned; you may end up with a bunch of 'failed experiments'. Even the process of trying to get them to work may itself be wrapped up in things 'failing' - bugs sitting unspotted in code, data acquisition going wrong. All sorts of things can cause problems, as you just try your hardest to do research.

The most important thing to know is that this happens to *everyone*. It is completely normal for things not to work, and everyone - including, perhaps especially, the most 'successful' people you know - encounters multiple 'failures' during their day-to-day work. So, don't panic when things don't work out as planned. Instead, reassure yourself that this is an inevitable feature of doing science, try your best to learn from the experience, and move on. The same is true for all aspects of scientific life: publishing papers, writing grants, applying for jobs. All of these will inevitably be associated with lots of 'failures' before you reach your goals. So: don't give up, take feedback on board, and keep trying.

3.2 Expectations of specific group members

3.2.1 Students and postgraduate research assistants

Who do we mean? Undergraduate, masters, DPhil students and other research assistant who are post-graduate (but pre-doctoral).

Day-to-day: Students are responsible for much of the research in our group. They contribute to the lab by acquiring data, writing code, and developing ideas. The vast

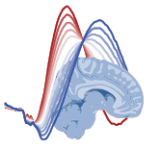
majority of their time is dedicated to their own research project, but they also do other “research adjacent” work. A week typically includes: supervisions, one-to-ones with other group members, general lab meetings, data collection, analysis, writing, and educational activities.

How can other lab members support students? Students are trained professionals and their ideas should be taken seriously by the entire group. Students can expect to meet with their supervisors regularly in a supportive environment. They should feel empowered to point out mistakes made by group members or admit when they do not understand something. Supervisors should provide regular feedback and encourage students to develop their own ideas to progress their project.

Expectations of students: Students are an integral part of the wider lab and frequently play a crucial role volunteering to help with tasks the group needs to function. Supervisors can expect students to provide regular updates on their progress, and participate actively in group activities. Students are expected to recognise that their research is a form of training and struggles are a part of the learning process. Students should also treat their research as they would treat a job; they should take a similar amount of leave to paid employees (see above), follow the same core working hours and

Challenges: Navigating a first major research project is a difficult task. To be successful, students must also develop “soft skills” including effective communication and time management. Unexpected difficulties are part of the research process - learning how to cope with setbacks takes experience, fortitude, and patience. These stressors can be exacerbated by additional factors throughout the degree, including the isolation of leading a research project, difficulty navigating work-life balance, and distance from long-standing support networks.

DPhil Students: You will develop your own dissertation research with support of your PIs. Your dissertation should contain at least three substantial projects that answer a big-picture question that you have. You should aim to become progressively more independent over the course of your DPhil, so that you will be able to decide on your own research direction towards the end of your DPhil. Apart from working on your own project, you will also be expected to help mentor master or undergraduate students in the lab. You will present your work at departmental events, at other labs, and at conferences. Think about what you want for your career (academia, industry, or something else), and talk to your PIs about it to make sure you are getting the training you need. Remember that you should start thinking about your next steps at



least one year before your PhD ends. Educate yourself both independently and by taking departmental courses or attending lectures at the University of Oxford. Make sure you meet all departmental deadlines (e.g., for your exams and thesis); make sure your PIs are aware of them, and don't assume that your PI will automatically be familiar with your deadlines and/or circumstances. Finally, develop your own expertise and treat the lab to your opinion - we will appreciate it.

MSc Students and Undergraduate Project Students: You may have your own project, or you may assist other lab members with data collection and analysis. You may be supervised by Laurence alone or in collaboration with a postdoc or DPhil student in the lab. Develop your weekly schedule by talking to your supervisor. You are encouraged to attend and actively participate in our lab meetings and journal clubs. Find out what kind of research you like, and share your ideas with us.

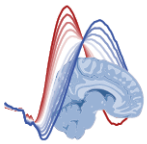
Postgraduate Research Assistants: You hold a paid position in the lab. You will assist other lab members with coding, data collection, and analysis. You may also run independent research projects of your own. You may also have administrative duties (e.g., scheduling lab meetings, managing the lab website, and keeping track of lab ethics). Depending upon your career plans, you may be preparing to apply for PhD/DPhil programmes; your

3.2.2. Early Career Researchers (ECRs)

Who do we mean? Postdoctoral researchers and junior fellows

Day-to-day: The ECR stage is marked by a transition to increasing independence. ECRs develop their own independent line of research. ECRs spend the majority of time on their own research, whilst also collaborating on a broader range of projects. ECRs often have several further responsibilities, including sitting on committees, student supervision, and teaching. ECRs may also be asked to stand in for PIs when required, and help with or lead grant applications.

How can other lab members support ECRs? ECRs can expect senior group members to dedicate time to their career development, alongside practical advice and feedback on their progress. Senior members should create opportunities for ECRs to take on increased responsibility, grow independence, and interact with the wider research community. Where ECRs are involved in supervision, students should take



ECR guidance seriously, respect other demands on their time, and ensure their contributions receive appropriate credit.

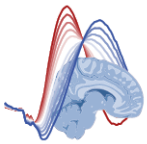
Expectations of ECRs: Having recently navigated a PhD/DPhil themselves, ECRs can provide valuable support to a student's career development. ECRs often have more time than senior group members to guide students in their research, can advocate on a students behalf, and often know who to approach when particular issues arise. PIs can expect ECRs to facilitate the dissemination of expertise in the group, and support students by providing crucial constructive feedback. ECRs will present their work at departmental events, at other labs, at conferences, and will ultimately disseminate their findings via publication. The ECR career stage is often when one has both the skills/experience and the time to make the most important scientific discoveries of your career, and publish your most significant papers. If you are an ECR, you will also be supported in applying for grants and independent fellowships. This will particularly be the case for ECRs who are keen to pursue a career in academia; experience writing and obtaining grants will make you more independent and attractive on the job market.

Challenges: Transitioning to increased independence places considerable responsibility on new ECRs. The role is often accompanied by changes in research group and/or topic, which requires adjustment. ECR positions are inherently transitional, and this stage in a researcher's career is often accompanied by growing personal commitments (e.g., starting a family). Managing a diversifying workload, the uncertainty associated with fixed-term contracts, and reduced supervisory support can be difficult.

3.2.3. Principal Investigator

Who do we mean? *Laurence.*

Day-to-day: Research is a core component of any PI's job. Laurence will engage in research projects via supervision and collaboration, typically directing multiple projects in parallel. In addition, a core component of Laurence's job is that he is a faculty member in Experimental Psychology. This means that he shoulders numerous responsibilities that are not directly research related, especially during Oxford full term time - this includes lecturing, tutorials for undergraduates, marking, examining, committees, group logistics (especially writing grants), and leadership in large-scale research projects. As a result, Laurence now has far fewer 'extended' periods to work on a single project than during earlier stages of his research career, and must often switch his work context from hour to hour. Outside Oxford full term, there is less demand on Laurence's time from his teaching responsibilities, and so he may have



more time to invest in research projects (and extended periods to do 'deep work' on a particular project or paper).

How can other lab members support the PI? Students and ECRs can help Laurence by reliably completing tasks they have agreed to handle. If they need feedback or input from Laurence before a specific deadline, it is helpful to give him advance warning so he can fit it in his schedule. It is also helpful to learn to distinguish which decisions need his input, and which can be acted on independently. Short emails which focus on a few central points are easier (and thus faster) to respond to. Laurence can receive many messages a day (50+ across email and Slack), and so if he has failed to respond, then it's fine to remind him. You can support Laurence in supporting you by being proactive about what you need from him. Lastly, lab members should be sensitive that at certain times during the academic year, there may be external demands on Laurence's time that means he is less available than at other times.

Expectations: Laurence will have an initial meeting with all new lab members where role- and project-specific expectations will be clearly formulated. Students and ECRs can expect Laurence to provide ongoing support and clear communication of expectations. Laurence will play an active role in the research being undertaken, whilst offering guidance and mentorship on a broad range of research and career topics. Students and ECRs can expect Laurence to make time for regular supervision meetings. He aims to give timely and useful feedback, including feedback on project ideas, conference posters, talks, manuscripts, figures, and grant proposals. He is often available in person (see section Working patterns), on slack and via email whenever possible, including regular meetings to discuss your research (and anything else you would like to discuss). He is happy to discuss questions on where the lab is going, and how to thrive in academia and will share his experience with you. He will also help you prepare for the next step of your career, whether it is a post-doc, a faculty job, or a job outside of academia.

Challenges: PIs find themselves managing conflicts at short notice, and handling delicate situations that may impact many people. Laurence is always open to discussions around improving group management.

3.2.4. Core Staff

Who do we mean? People who are not directly part of our research group, but are centrally employed by the department/WIN and bring their professional expertise to our research. For example: radiographers at WIN, administrative staff in Psychology, the EEG lab manager (Mark Roberts) in Psychology.

We expect group members to *always* treat core staff with respect, and to value their time and high degree of professional expertise. Core staff are highly trained individuals, often with unique expertise not held by members of our research group. When their contributions go beyond what would be considered conventional ‘support’, they should be recognised appropriately (for example, co-authorship on an upcoming publication).

Section 4: Research Group Culture

4.1. Work conduct

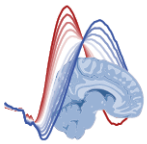
We aspire to an inclusive work environment, in which all members can thrive and achieve their goals.

Conduct in meetings: We expect all group members to attend whenever possible. We aim for an atmosphere where people feel comfortable asking questions regardless of seniority. Questions should be asked in a respectful and friendly tone, and criticism should always focus on the research rather than the individual.

Work interactions: Many of our desks are in “open plan” offices. Be considerate of people around you who may have different needs/preferences, and follow basic open plan etiquette (for example, avoid distracting noises or spilling out into adjacent spaces). Longer and louder discussions should take place in dedicated meeting rooms or a social area. Meetings via online video platforms can be draining, particularly for neurodiverse individuals. We encourage members to balance the benefits of these platforms against the downsides, and appreciate that the needs/preferences of others may differ.

Socialising: Building a cohesive group means getting to know each other. Group members often have lunch together at work or socialise outside of working hours. We often do something social on Friday afternoons, e.g., going for walks or to a pub. We want everyone to feel welcome at pub gatherings - alcohol consumption is always optional, and professional but friendly behaviour is expected at all times. None of these events are obligatory, and non-attendance will not impact our commitment to your professional development.

Inappropriate behaviour: We expect all group members to contribute to a positive atmosphere grounded in mutual respect. We do not tolerate bullying, harassment, victimisation, or discrimination. If you feel you have been subject to harassment, contact your PI or a harassment advisor. If you witness or suspect someone else is being subjected to inappropriate or unwanted behaviour, discuss it with them confidentially or raise it with a PI or harassment advisor. For relatively minor cases (e.g. inconsiderate interactions that stop short of bullying), you can speak to the person who is behaving inappropriately if you feel comfortable doing so. However, you should not feel you have to resolve any situation yourself; resources and mechanisms for this are listed below.



University bullying and harassment resources: Harassment policy, Harassment advice, Responsible bystander advice, NDCN harassment advisors, EP harassment advisors

Working hours and presence in the lab: Everyone has different working styles and different patterns will work for different people. However, to foster collaboration and communication within the lab, we all make an effort to work at NRH on Mondays and Tuesdays (where we run our weekly journal club). Most people are around between 10am and 2pm on these days. On Fridays, we often do something social together in the afternoon/early evening (starting around 5pm), but attendance at this is completely optional.

Apart from the suggestions above, you are expected to get your work done at whatever time of the day you like to do it, and you are not expected to put in long hours by working evenings, weekends etc. But we do expect you to show up to your meetings, to run your participants, and to lab meetings and journal clubs if possible. Please respect other lab members' work patterns.

During term time, Laurence's general working week looks like this: Monday and Tuesday will almost always be in NRH/working on lab things, Wednesday will normally be in NRH but he often is in college in the afternoon, and Thursday/Friday are often teaching days so you may see less of him then.

Work-Life Balance: A healthy work-life balance helps to manage the stresses of academic research. This means making time to do things you enjoy and for necessary personal activities. Beyond adopting daily working hours to sustainable levels, we strongly recommend taking several weeks holiday per year completely away from work, including work-related email. Timing for your holidays is generally up to you, but you may need to work around other constraints or deadlines.

Mental Wellbeing: Time to relax away from work is a critical contributor to mental wellbeing. If a colleague mentions that they aren't feeling okay, the most important thing is to simply listen to their concerns. If you are feeling mentally unwell, you can take sickness absence to rest and relieve stress (see the University's standard annual allowance of sick leave). You should not feel obliged to explain to your PI/line-manager why you are taking a sick day. If you are uncertain what mental health support provisions are available, , speak with your PI/line-manager, HR (Staff) or the departmental graduate team (Students).

Resources: University Work-Life balance Support, University Mental Wellbeing

4.2. Equality, Diversity & Inclusion (EDI)

We are firmly committed to creating an inclusive environment that celebrates the diversity of our group members and promotes equal opportunity. By cultivating a culture of inclusivity and respect, we strive to create a sense of belonging which supports the innovative work of our group.

The Personal & The Professional: Every group member represents a unique intersection of experiences and identity, and should feel comfortable bringing their whole selves to work. We aim to nurture this by understanding how our differences interact with both our professional and personal lives, and influence our individual aspirations and needs.

Support: Personal background frequently intersects with mental wellbeing, and workplace exclusion and inequality can contribute to mental ill-health. PIs and line managers receive training on how to support group members and can talk through issues you face, whether or not they are your direct PI or line manager. They will treat these conversations as highly confidential, provided it doesn't ethically compromise them or pose a risk to your wellbeing.

Building communities: EDI spans a broad range of topics and issues. Many are unfamiliar when first encountered and can be uncomfortable to talk about. WIN holds regular educational events aiming to normalise respectful and thoughtful conversations related to EDI, particularly around how these issues manifest in academic workplaces. These sessions aim to help you understand the challenges your colleagues face and how you can act in solidarity. We encourage everyone to consider engaging with our Member Networks dedicated to different communities, which can also provide peer support.

Resources: WIN EDI Strategy, University EDI Unit, University Occupational Health, Student Specific Wellbeing, EDI Calendar, Annual Leave Policy

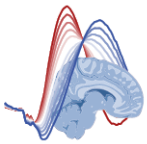
4.3. Good Citizenship

Our success is largely down to individual members pitching in to help each other.

Being a good citizen: As a member of the group, you are strongly encouraged to get involved with some form of lab service. This kind of "good citizenship" ensures the smooth day-to-day running of group activities and ensures that the burden does not fall unfairly on a few individuals.

What constitutes good citizenship? Anything that primarily benefits the lab rather than you personally. Examples include teaching, advising colleagues, group admin, and volunteering for studies. Note, there is no expectation that everyone does all of these activities, and no need to justify abstaining from some forms of good citizenship

Finding a balance: Good citizenship activities can be time consuming. It is important that they do not significantly impact your research progress. We also recognise that not everyone has the capacity to take on additional work - for example, due to disability or caring duties. We recommend discussing any potential activities that may take time away from your main research with your PI or line manager.



Section 5: **Communications and meetings**

5.1. Communication

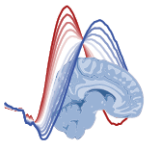
Email and Slack: Laurence prefers email for sending important documents such as manuscripts, as our Slack account is free and deletes messages >90 days old. Email communication is meant to be asynchronous and there is no need to respond immediately (on either side). However, lab members will strive to respond in a timely matter. As messages can sometimes get missed, followup emails are encouraged. Slack is preferred over email for quick messages related to ongoing projects, lab events, and anything that might be of interest to the group (and it will grab Laurence's attention more than email). Using a dedicated Slack channel is better than private messages - that way all project members are kept in the loop.

5.2. Meetings

Individual meetings: Every full-time member of the lab (postdocs and research students) will be offered a regular slot to meet with Laurence. These 'standing' meetings will normally be scheduled to be fairly short (15-30 minutes), and can be used to discuss ongoing projects or whatever you would like to discuss. However, whenever you need to have a longer meeting than this, just ask. (Laurence thinks that to get to the bottom of an issue, you'll often need at least 1.5 hours, if not an entire afternoon in front of MATLAB/Python. These are normally his favourite types of meeting).

If you are a new member joining the lab, then we will set a schedule for our weekly meetings during your first days at our lab. If scheduling conflicts arise (e.g., because of travel), we can try to reschedule for another day that week. If there is nothing to discuss, you can still drop by for a brief chat.

Periodically, a general feedback meeting between you and Laurence should be scheduled. In these meetings, you and Laurence both have the opportunity to talk about the progress of the last phase, provide feedback about your perceived strengths and weaknesses, and set goals for the next phase. You should also be able to have an extended discussion about your career goals, and what Laurence can be doing to support your career development.



In addition to regular meetings, you can normally spot Laurence in his natural habitat (his office) on the first floor in NRH. His door is almost always open (metaphorically if not literally), so feel free to stop by for a chat. He will almost always say yes, although sometimes he could only spare a few minutes. He is very generous about sharing his coffee and biscuits with you.

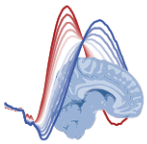
Weekly lab meetings: We have previously held lab meetings on a weekly basis on Monday mornings. However, at present, the lab is so small that we are instead replacing this with a Monday morning 'coffee break' at 11am, and not holding a weekly lab meeting in addition to the CompCogJC on Tuesdays. If you think that the lab should start having regular Monday meetings again, please say!

Tuesday CompCogJC: Every Tuesday from 2:15 to 3:15pm, we have our computational cognitive neuroscience journal club (CompCogJC), which currently takes place at the Milner Room on the first floor in NRH. This is a joint journal club together with members from Jill O'Reilly's and Matthew Rushworth's lab as well as the wider EP and Psychiatry community. Everyone is encouraged to present; you can either talk about a recently published paper (journal club) or present your data (data club). We also welcome presentations from outside visitors.

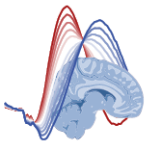
We strongly encourage presenters not to use any slides when presenting papers, with the exception of showing the figures. The purpose of this policy is to focus more on the discussion itself rather than collectively looking at the projector screen. Before the journal club, we usually go grab lunch together somewhere in Jericho, and watch the BEACON (behavioural and cognitive neuroscience) seminar together afterwards which take place in-person in the Seminar Room. (To join the mailing list of BEACON seminars: please go to https://web.maillist.ox.ac.uk/ox and login, then search for *epseminars* in the search tab and you should be able to click subscribe.)

Other meetings

DEAR day: We held our inaugural Drop Everything And Read (DEAR) day in Hilary Term 2022, and it has become a termly event ever since. The basic idea is to have a room where we sit together and read whatever papers we've been procrastinating to read. After that, we will go for a lab walk, and probably (most typically) end up in a pub.



You are strongly encouraged to print out copies of the papers they are reading, so as not to be distracted by emails, Twitter etc, and it also means you don’t have to carry a heavy laptop on your walk!



Section 6: Developing as Researchers

How the group supports your development as a researcher, and your expectations surrounding best research practice

6.1. Expectations for best research practices

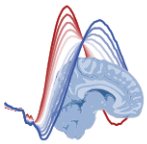
Open Science

We're all for open science, so lab members are encouraged (well, required) to share their code and data with others, whether they are in the lab or outside of it. Within the lab, you can share your code and data whenever you like. But do not share your code or data with the outside world until you think (and Laurence agrees) that the lab has finished working with it. This gives us an opportunity to work with the data to meet our needs (including grant needs!) before releasing it for other people to use. Generally, we will make our data and code publicly available simultaneously with the submission of the paper to a peer-reviewed journal (exceptions might be made if work on the dataset is ongoing for a different paper). Currently, the best option for sharing smaller datasets might be the Open Science Framework, and the best option for sharing MRI datasets is OpenNeuro (let the lab know if you find others).

We will also share our work with the world as soon as we are ready, which means preprints! The lab policy is to upload a preprint of a manuscript simultaneously with initial submission to a journal. The preferred preprint servers are bioRxiv and PsyArXiv.

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 cannot reproduce your results, it suggests that one (or both) of you has made errors in their 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 your analysis pipeline. This means writing down how you did things every step of the way (and the order that you did things), from any pre-processing of the data, to running models, to statistical tests. It is also worth mentioning that you should take detailed notes on your experimental design as well. Additionally, your code should also be commented, and commented clearly. We all know what it is like to sit down, quickly write a bunch of code to run an analysis without taking time to comment it, and then having no idea what we did a few months down the road. Comment your code so that every



step is understandable 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.

Data File Naming conventions

We are now moving in line with a subject-based data sharing format called BIDS (Brain Imaging Data Structure) for both neuroimaging and behavioural data. A detailed introduction to BIDS can be found here.

Ethics

Adherence to approved ethics protocols is essential, and non-adherence 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 ethics consent form and research summary for any project that they are working on. If there is no ethics approval, we cannot run participants, look at the data, analyse the data, or be in any way involved in a project. Make sure to think early enough about applying for an ethics protocol if you want to run a study with human subjects.

To start a new ethics application, you should apply to the Medical Sciences Interdivisional Research Ethics Committee (MS IDREC) for ethical review. You have to fill out a CUREC form (make sure to download the latest version from here) If you are not sure whether to apply for CUREC 1, 2 or 3, make sure to ask other lab members. Your full application (including all supporting documents) should be sent by email to the MS IDREC Secretariat (ethics@medsci.ox.ac.uk). The approval of an ethics application can take up to several months, so make sure to start as early as possible to avoid any delay to your research progress.

On the other hand, we have a number of active ethics for EEG and online behavioural studies that you can use if your project fits the description.