

# Honours Meeting

Tue, 11/30 10:07AM 29:39

## SUMMARY KEYWORDS

honours, people, biases, students, behaviour, processing, projects, attentional control, julie, interest, anxious, research, mechanisms, anxiety, individual differences, attention, studies, emotional, julian, future

## SPEAKERS

Lies Notebaert, Julian Basanovic, Colin MacLeod, Laura Dondzilo, Owen Myles, Ben Grafton

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Colin MacLeod 00:05

The purpose of getting together is to give you a general idea for what we do. Tell you something, what the honours experience tends to be like here in the centre. And then let you ask anything that you want to find out that might bare on your decisions for the ranking. I know there's no lock ins, but you want to make your rankings based on your judgement about what would be the most engaging and interesting for you. So my name is Colin MacLeod, I direct the centre together with Lies Notebaert, Ben Grafton. We have a number of postdocs, here we have Laura Dondzilo, Julian Basanovic, Owen Myles. Julie Ji is another postdoc that works with us, and who wasn't able to come. We'll say a little bit about Julie. And all of us will be involved in Honours supervision. So the, the way that we handle Honours supervision, if you like within the centre is as a team approach, all Honours students will have a primary supervisor, probably not all Honours students, but many will have more than one supervisor that might be an academic staff member and a postdoc. But there will also be engagement from everybody. So we have lab meetings, group meetings, and so there'll be points in the Honours experience, when Honours students might present what the proposals are. And we will all be giving feedback on what might make that better and there's points from Honours students will share the data or their talks they're going to be given the Honours conferences. So although you'll have a primary supervisor, possibly a secondary supervisor, you'll have the supervisory input of everybody that's here. And everybody that's here also includes - how many PhD students? ten or twelve? Something like that kind - twelve PhD students, most of whom will be working on topics related to the types of honours projects that that people will be conducting. And we typically taken double digit Honours students is that right? And sometimes, you know, two Honours students might work on two facets of something similar, but many will work on quite different things. So the work. The theme of the work that we do here is on emotion, emotion and cognition. The basis of, the information processing basis of individual differences in the disposition to experience particular type of emotions. A lot of focuses on negative emotions, a lot of what we do is anxiety and worry. We have done work on depression. And we've also done work in the past on positive emotional disposition. What makes people unusually cheery.



Lies Notebaert 03:02

And Julie's work is still a lot of depression.

C

Colin MacLeod 03:04

Julie's work is a lot on depression. And we're interested in what drives these differences in the emotional disposition. We're also interested in how emotional experience contributes to problematic patterns of behaviour, avoidance, for example, unhealthy consumption, which Laura does and also to adaptive behaviours, behaviours that can be driven sometimes by negative emotion like worry. But that serves to reduce the risk of some danger. So negative emotions isn't always negative in the sense of having negative consequences. Sometimes it can have positive consequences, and sometimes positive emotion can have negative consequences. So that's a very general sense of what we do. There's two complementary strands, the biggest strand of our research will be trying to illuminate the associations between hypothesised candidate patterns of bias in information processing and individual differences and with the emotional disposition or maladaptive behaviour and a lot that what tries to get more specific about the mechanism, you will be know that attentional biases and attention to negative information can be associated with disposition to readily become anxious, and then we ask what what what is it about attention? Is it the degree to which negative information captures attention? or is it the degree to which holds attention? and we'll try to disaggregate distinguish these two facets of attention. So we try to get more precise understanding of the specific information processing mechanisms that potentially contribute to different dimensions of individual difference in emotional behaviour. But any of these associations they wont tell us for sure that that information processing patterns causing that individual difference. So we have we have a complementary strand of research, which is, which involves trying to modify these biases, even if it's just transiently change the biases within the lab session, in order to see whether the manipulation of the bias of interest changes the pattern of emotional vulnerability, temporarily so that we call cognitiv bias modification research and it goes hand in hand with the main research that we do on identifying that the processing biases that predict the individual differences of interest, and then we've got these we say, and do the cause those individual differences through manipulation. Now, the the the actual studies that Honours students are almost certainly going to do if they work with us, I say, almost certainly because there are very few exceptions to this. And the exceptions are handled with great caution. They'll almost certainly be kept carried out on student cohorts. You have you been in this university this semester? So you've probably done studies in our laboratory? Yeah, probably right, because students can complete questionnaires early in the first year, that open opportunities to take part in research. And a lot of our research will be based on taking people that are high and low in particular, types of emotional disposition and/or particular types of behavioural issues. And then testing theories about what kinds of information processing devices will distinguish them. The work's very clinically relevant and work that has to do with conditions that manifests as clinical problems. And we do some collaborations work on clinical cohorts. And a lot of the work we do here is transported, what's the right word, translated into clinical studies and clinical interventions. But our advices, you need to be cautious about committing to such populations for an Honours project, because it makes you hostage to the availability of participants that you might not be able to get access to. And with honours you you want it to be the case that you're able to perform as well as you can perform. And if you fall a bit behind, you can speed up, and you're not waiting for somebody else to pick you out of a hole. So using students, often first year students means that if you get organised, there's a good number of them that you can get underway, right? The Yeah, so the honours studies typically don't do that. I remember when I said this before Lies you highlighted an exception to this, was that right?

L

Lies Notebaert 07:52

Yeah. But that's not in our lab. So some labs have archival data, and large data sets with clinical data that honours students will work on. So that's, I think that's the exception for a non clinical data. And that data is already there

C Colin MacLeod 08:06

I think that's a really good thing to point out, because, you know, I think all students should be cautious. If they find that a normal study that you're thinking of doing, whether it's with us, or whether it's somebody else involves access to a specialist population, just be cautious and be absolutely sure that you're going to be able to get that access, you know, you want to talk to previous students, it is a gamble, you don't really want to take that gamble with your honours. But it's true, that if the, if the study involves clinical data, but the data has been collected, then you can confidently know that you're going to be able to do that often. What happens in these kinds of studies in other labs is the students will, will do testing to increase the pool of data that's available. But the viability of their honours project isn't dependent on them being able to get a certain number of participants to test because the data is already there.

L Lies Notebaert 09:01

But we don't do that.

C Colin MacLeod 09:02

We don't do that. No, we certainly haven't done that. It's not impossible, we might collaborate with somebody and doing it but I don't...

L Lies Notebaert 09:09

I actually suggested that Henry starts collecting data on the sleep & emotional data and build up the data set.

C Colin MacLeod 09:17

So we could, but it's probably not want to be honours projects next year. Okay, now, there's a lot of overlap. What I've tried to describe there is basically what's common to all of us, but haven't elaborated on which particular processing mechanisms of which particular aspects of emotion or whichever. There's a lot of overlap between our interest is a lot of synergy between the different types of projects that happen within the centre. But I think it's what we usually do here is go round everybody to get an individual perspective on that general theme and what they do. When it comes back to me I'll briefly be Julie to remind people of what Julie does, because she's not here, but shall we? Which order would you like to go in? You feel you? Yeah. Okay, so Lies, Ben, Owen Julian, Laura? Yes, that makes sense.

L Lies Notebaert 10:17

So a lot of my research is on understanding individual differences in emotional resilience, looking at what predicts people's heightened emotional functioning after having been exposed to adversity, and why some people seem to be better at that than other people. And a lot of the cognitive mechanisms that are the focus of the hypotheses that we test are to do with cognitive flexibility. As Colin mentioned, some of these cognitive biases, they're not always maladaptive. Sometimes it's really adaptive to be paying attention to threats. And when you're in a car, for example, you're in traffic, you need to be vigilant for potential

dangers. But then in other situations, it's not adaptive to be attending to set. For example, if you're sitting here, you don't want to be scanning for spiders constantly, because it's just going to distract you and take away from you know, what you could be picking up in the session. So often, we need to be tailoring our cognitive system to the situation that we're in, and kind of turning on biases or turning off biases as appropriate. So a lot of the hypotheses I test are to do with whether those differences in cognitive flexibility contribute to differences in resilience. And so in the lab, we do studies where we construct situations where a particular bias is more adaptive, or less adaptive and see if people can change those biases depending on these different kind of blocks in a cognitive task. That's how we test those.

B

Ben Grafton 11:40

So all the stuff I'm probably doing a lot of students next year would be looking at the broad, broad question, and why are some people more anxious than others? We know one reason why it's because people pretend to think the future is going to be really crappy, tend to feel more anxious about the future. And the work we're doing is trying to unpick the mechanisms that drive the tendency to expect that the future is going to be really crappy. We've looked at three different types of mechanisms. The first was a memory bias for action names. And the other two have been attentional bias and choice bias. So with attention, the idea is that when we, when you have a future event coming up, you're likely to hear information about that. And if you're the kind of person who attends more to the information that has negative implications for that future event, then you're probably going to be more likely to formulate a more negative expectancy about that event, and consequently feel more anxious. The other related sort of mechanism is the choice bias. So that's the idea that we might intentionally seek out specific types of different types of information about an upcoming event. So if you had a, go an honours year coming up, you might want to know, why is honours what makes honours really terrible. Or you might want to know what makes a really good experience?

C

Colin MacLeod 13:10

It's actually a very good idea. Which students do you want to talk to? What did you want to hear about students that has a really hard time? And find out why? Or do you want to talk to great time and find out why?

B

Ben Grafton 13:21

In principle, I can actually see it's not necessary, but stuff like that, yeah, you could, if you're the kind of person who look for why is that a horrible experience, then you might end up feeling more anxious, more, you might have more negative expectancies about your Honours year, and constantly be feeling more anxious that. And the way we do those kinds of studies is to bring people into the lab, expose them to a possibility of actually going through an experience whether it's a quiz task, or actually got nasty videos or a job interview. And then prior to that, we give them information about those experiences. Some of the stuff we might do is just with giving them vignettes or statements but most of the stuff we do is to give them videos of people who've experienced that event before and telling them here's what's good about it or here's what's bad about it. We can assess the degree to which they attend more to the negative stuff and the degree to which they choose to expose themselves to or access and that's pretty much what I do

C

Colin MacLeod 14:20

it's a very cool framework because you've got in that little lab session quite a nice simulation of what feels like a natural thing for people coming up to an event they know what it could be bad but they don't know much about it, you've got opportunities for them to learn through selective processing or choice something about that event, you can measure how anxious the viewers that come up to it so within a little on hour block you've got a lot of action that says if some real world relevance is too nice studies in that space. Owen if you're happy it I thought might go to Julian because, possibly relates a bit more.

J

Julian Basanovic 14:55

Yeah. So my name is Julian. Nice to meet you. So I've basically got three things that I'm interested in or three different silos of research one builds upon three, three hubs of research that are interrelated. And one of them is building on related to what Ben was talking about, I'm interested in looking at the way in which information processing biases that we experienced in the lead up to a specific anxiety eliciting event so like an interview, for example, give rise to the emotional experience that we have during that event. But then also, the interaction between the process and that we had in the lead up to the event. And the experience with the event predict or give rise to our emotional and cognitive experiences following the event. So for example, say you go to a job interview or you give a presentation in class, you might have a number of things that you're doing before then you're attending to particular types of information, you're searching for particular types of information, you're interpreting things in particular ways, and in developing particular expectancies about how the event is going to happen, then the event happens and you get anxious or you don't get anxious, depending upon in large part that pre event processing that you were doing. But then, of course, after you finish that interview, you finish that presentation, you're probably going to think back about it for some time. And some people think back about it a lot. And for some people that can be quite damaging to their mental health naturally give rise to more anxiety in the future, we want to understand how these pre event processes give rise to the anxiety at the time and then impact the way in which you process that information after the event to. Related to, sorry, unrelated to that separately, I'm interested in phobia and fear. So what gives rise to people's aversion or avoidance or fear of particular stimuli. And typically, I've looked at spider fear and spider phobia, there are particular cognitive biases that have been shown to be characteristic of people who have elevated levels of fear. And what we've been able to show last year was that one of those particular types of biases, but as approach avoidance, action tendency, bias is able to be manipulated. So we were able to show that for the very first time, so we're hoping to do next year is to see whether the successful manipulation of that bias can actually result in change in people's level of fear when they're actually put into situations in which for example, they need to be exposed to a spider. So in these particular scenarios, we get people in the lab, given these training regimes make sure that that what kind of bias modification was successful, show them a spider and ask them how fearful they are and see how they interact with that spider.

L

Lies Notebaert 17:22

Can I participate in that study?

J

Julian Basanovic 17:26

You can be the first participant. And then the third one, because that's something that Colin was mentioning in trying to understand what are the actual cognitive processes or mechanisms that underpin a lot of the biases that we're interested in. So for example, biases in attention, Colin was mentioning that we do research looking to see exactly what gives rise to those biases in the first place. One of the theories I'd like to investigate is the manner in which cognitive control or our ability to control our attention allocation

gives rise to or interacts with our levels of anxiety, any point in time, to cause us to have a preference for allocating attention to more negative information, which is then believed to result in more anxiety. So might be for example, that these attentional biases give rise to people's anxiety but to a greater extent, if those people also have in the basic mechanisms to a much larger degree. Yeah.

**C** Colin MacLeod 18:23  
Very Cool. Owen

**O** Owen Myles 18:26  
Cool. And what Julian just said, kind of leads nicely into one of my two kind of areas of interest. So the first one is attentional control, specifically I'm looking at it in terms of how it directly relates to anxiety. So whereas Julian's looking through sort of, through a bias or through tendency, and looking at the direct control of attention, and how that how that relates to different types of anxiety. So state anxiety, that feeling of anxiety in the moment, versus trait anxiety, just sort of an individual's propensity to get set anxious regularly. And also look at some of the components of that attentional control and see how they relate individually. That's sort of bucket one, bucket two, I have a strong interest in sort of measurement and how we measure these mechanisms that we're looking at. So right now I'm working on a project with Colin looking at trying to better measure attentional bias. And I also have a lot of interest in how we measured processes like attentional control, using questionnaires versus tasks and those sorts of things. And recently did a study with Julian where we looked at the best kinds of tasks measures of attentional control.

**C** Colin MacLeod 19:53  
Very interesting discussion, we've just recently had made world plan into something that's in the auto space, which is about logical reasoning, because there's a lot of experimental work done, and actually philosophical work done on the processes that underpin deductive reasoning. And we've been discussing how variants of standard deductive reasoning cash to be created, where people could make errors, basically logical errors. That would lead to negative or positive emotional compute conclusions. And that would open up the opportunity to be looking at individual differences, not just in what catches attention or what people remember, but but individual differences in the actual application of logic. And I think there's quite a few of the things that we talked about that probably would be nice honours students' projects.

**O** Owen Myles 20:45  
Yes, yeah, there's probably a few projects.

**L** Laura Dondzilo 20:49  
Yes, my name is Laura. And my research basically examines why, why some people are more likely to feel dissatisfied with their bodies, and engage in disordered eating behaviours. So majority of my research has been in the body image space, where I've investigated biases in attention and judgement, and their role in trait body dissatisfaction as well as state body dissatisfaction. However, recently, I've developed more of a

keen interest in disordered eating behaviours. So one potential, like honours project could explore the role of impairments and cognitive flexibility and disordered eating behaviour. And I'm quite interested in both extreme ends of this behaviour. So extreme dietary strain, as well as overconsumption. And this could lead to really interesting hypotheses. So it could be that people that engage in dietary restraint, show a deficit in recoding food on dimensions other than calorie content or healthiness, whereas overweight or obese people might show a deficit and recoding food and dimensions other than palatability or tastiness. That's an area I'm hoping to explore more next year, I think would be a good honours project

**C** Colin MacLeod 20:49  
Laura

**C** Colin MacLeod 22:17

it's really nice. This sounds like a different area. But a) it links because of course maladaptive patterns of consumption and often closely linked to emotions driven by a set of consequences. But they're also linked because these cool paradigms that are developed for selectivity. We haven't talk about this Ben, but switching tasks you know the flexibility task going from emotion to gender, emotion to gender, foods tasty to healthy taste to non-healthy, could it be the case that the actual ability to switch between both of these ways of coding is needed to have a balanced approach being stuck on one end? You could be stuck with the consequences. Okay, now Julie Ji's not here. Julie's now employed, well about to be employed on her own grant, she's finishing up a Forrest fellowship, which was after her PhD. The peak of the interest was in imagery, and the ways in which differences between life contributes to differences in emotional proceedings and behaviour. A core entry point to that which is still an interesting progression. She's interested in how depressing people anticipate the future and how that bares upon behaviour. Key behavioural hallmark of depression is a lack of behavioural restrictions. And the paradox is that depressed individuals tend not to engage in behaviours that can potentially provide rewarding experience, even though the problem is the lack of positive affect. So they need positive experience but are nevertheless reluctant to get? So Julie has been looking at how people represent their expectations for future mean that two ways? One is what do they represent the future? Any behaviour? Even a rewarding behaviour will typically have something a costs associated with it, you know, take some efforts to get the car out of the garage and go to the movies even if the movies are enjoyable when you get there. And so one of her interests is that the degree to which when you anticipate in the future, you're focusing on the costs rather than the benefits when you're judging is that behaviours worth it and depressed individuals may over represent the costs. The other thing that the things that introspecting imagery is the possibility that it might not be depressed people just represent more of the costs and benefits of the might represent costs to a higher imagery based form. They know that will be benefits but that knowledge more conceptually based, the know there will be costs, but they can imagine those costs, they can represent those costs in terms of just what it would feel like. And so the cost is over weighted in their behavioural decisions. As opposed to someone who might imagine how great the movie will be and they know there will be costs that are not imagining the costs of it. The broadening of that interest into how the behaviours are driven by these ways of thinking about the costs and benefits in the future, has lead Julie, into other domains, such as self harm, which a grant on self harm where she's looking at how people learn, to be engaged in self harm, think about what costs and the benefits of self harm in ways that ... most recently, vaccinations ways represent the risks and benefits feed into decisions mediated by emotional effects. So I think with Julie added that gives you hopefully an idea of how our kind of core interest in information processing and it bares upon individual behaviour that have emotional implications can manifest itself through a range of different programmes, and we haven't talked about all the programmes and stuff in alcohol consumption and alcohol. Hopefully gives you a flavour.

L

Lies Notebaert 26:51

One additional useful thing for the video to explain how we allocate projects

C

Colin MacLeod 26:56

I think it's true, I think what we should say is research in this team, Honours research, is real research. It's not a simulation of a research process. It's a vital part our research programme so honours projects are the things that we believe we need to conduct. And then a number of honours projects will be published, are designed to answer important questions. The the way in which we go about laying out candidate, honest projects, is we have a retreat before the semester starts that Lies has organised in recent years, except for last year, and one key part of that retreat, look at where all the PhD projects are up to, where the grant projects are up to, where our own interests are, and think what would be the right things to do things. And we come away from that often with, you know, 15 or so projects and that we're saying that could be an honours project. There will be way more honour projects that they will be honours students. But these projects sometimes kinda locked in, we know that it will be an extension of some paradigm or will be quite specific, sometimes questions and there are different paradigms people use. But what we do is students that are allocated to CARE, and this is important thing when you're ranking, I think it'll still be the case right, that the ranking option is the centre. It's not one of us, it's the centre. And then students are allocated the centre we'll come to a meeting just before second semester. on that wall, we'll put up a spreadsheet showing a whole bunch of from project areas, questions of ways that we could be addressed. That will probably say, who's likely to be a primary supervisor who might be a secondary supervisor, but that's not sure. Because what we'll then have is some discussion of these projects, we'll go through then students we're working with can ask any questions. And then once students rank order what they would want to work on, probably saying, I really don't want anything, here are three things I'd be quite happy to do. But none of the others appealed to me sort of, and then what we'll do is because we're going to so many supervisors were trying to maximise the satisfaction by putting students with projects