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Contributor So, just a brief overview. I'll be talking a little bit about the University of Melbourne, and a brief introduction to the guidelines and regulations that cover responsible research and research integrity in Australia. Some examples of our approach to addressing the challenge of bringing these principles into practice, and then some of the challenges that we face locally, that I imagine are similar, regardless of the geographical location of the institution.

So, the University of Melbourne was established in 1853 which probably makes it about as old as some of the professors here at Oxford. It has 11 faculties or graduate schools, just over 45,000 students, in August of this year, with 40% of those being post- graduates. Just over a quarter being international students, which I think, for most institutions these days is an important component of income.

10% of those being research higher degree students, so that's PhDs and Masters by research. We have just under 7,500 staff. We are conveniently located next to the Melbourne CBD, which is sort of here. So it's about 10 minutes walk down from our office building to the Queen Victoria markets, which are just sort in here somewhere, which is nice and handy, if you're interested in switching institution.

The academic structure of the university. There are 11 faculties and graduate schools, covering the sorts of things that I imagine you'd expect to find in the broad research institutions, so I won't go through the list. Medicine, dentistry and health sciences is definitely the largest of those faculties at the University of Melbourne. It has a collective value of about half the University's research income, and it is big enough, these days, to be a smaller university in its own right.

If that was to be the case, it would also be a member of the Group of Eight universities in Australia, which is equivalent to the Russell Group. So that's clearly the biggest part of the University in terms of research activity. I just hope that no one from the other faculties listens to the recording of this!

The structure's undergone a bit of a change in recent years. The University's changed its curriculum from having something like 96 undergraduate degrees, with the aim of, in a couple of years, reducing that down to 6, really broad, new generation undergraduate degrees. And a shift of some of the faculties here to offering graduate only courses. So medicine and law, for example, would be offered only as a graduate qualification at the University.

That's been a little controversial and is having some interesting results on our application rates, both for school leavers and for university. Not as bad as I think we first thought that it might have been, which is encouraging.

So, research income in rankings. In 2008 the University brought in $382.5 million in research incomes, and had a total expenditure of just over $650 million. The total budget is approaching $1.5 billion when you include all of the other activities and staff costs that the University has.

This income and expenditure makes it the second largest research and development organisation in Australia, behind the Commonwealth Scientific and Industrial research organisation, a large collection of government funded laboratories.

The all important university rankings, which mean much more than they probably should- again we might have to edit the podcast after saying that, but we'll worry about that later! It's ranked number 73 in Shanghai's Jiao Tong index for 2008, and 36 in the Times Higher Ed supplement in 2009.

So, not surprisingly, this is the one we're talking about the most, even though we're concerned perhaps a little about the way those rankings are made. In most of these rankings, we end up being second in Australia, behind the Australian national universities, based in Canberra. That's largely a graduate university, if you like, and so that helps when it comes to the rankings.

Our ambition is to be in the top 50, so again, we've already met our ambitions, or still have a way to go, depending on what ranking you choose to look at. We are, as I said, a member of the Group of Eight universities, which is the oldest, most established universities in Australia.

In terms of research income, and publications and other fairly basic measures of research activity, the university is fairly usually ranked number one.

One of the things that has recently become clear to us is that we're quite broad. There is a lot of activity that goes on across the University, and that this is matched by some excellence. So we're not just doing lots of things, we're doing lots of things relatively well, which is even better I guess.

So we're one of the 16 universities to be ranked in the top 30 across all the disciplines in the Times Higher Ed supplement. One of only two in the Asia Pacific region, the other one being the University of Tokyo. So this has led to a new thinking about the way we promote what it is the University is good at doing. What research is the University doing that's good?

That's been a difficult question for us to answer, and, certainly, if we ask people walking down the street, they wouldn't be able to answer it really. We have a good reputation but there's nothing there really that's sort of flashing in neon lights.

So, we're developing or establishing some university research institutes around key problems of our time. So these will focus on things like energy, materials, brain research. Strangely, it might seem, we have an institute for a broadband enabled society.

There's a reason for that. The government's spending AU$43 billion on improving the broadband network in Australia, and one of our researchers decided that if someone was spending that much money, perhaps we should try and get involved to make sure that it's actually going to get used for a good purpose, and that there will be some benefits delivered. So that's interesting.

There's about 10 of those that are developing slowly over time, as people realise there's some opportunities to be had by identifying these key themes that the University thinks it does good research in.

So, I'll talk a little bit now about the Melbourne research office, which will be familiar to at least one of you in the audience. The research office at Melbourne offers operational and strategic support to researchers and university management. So, in much the same way as I guess most research services offices are around the world.

We have very close working relationships with Melbourne Ventures, which is the commercialisation arm of the University, equivalent to ISIS here at Oxford. Our legal services unit, and the Melbourne school of Graduate Research.

The Melbourne school of Graduate Research is really important for us from a research ethics and integrity perspective and I'll go through why that is later on with you in the talk. There are four groups in the research office, Grants and Contracts. I don't think I need to explain what that group does.

Research Performance and Analysis group, which looks after ERA. ERA used to be called RQF, Research Quality Framework, and is our equivalent of the REF. ERA stands for Excellence for Research in Australia. But I think they worked out that's what it stood for after deciding that ERA would be the right thing to call it, mostly so that they could say 'A new ERA for research in Australia". So it's sort of backwards acronymism I think. Make up a word.

We have a research systems group, which looks after our in –house research management information system , if you like, THEMIS, they're quite busy. And finally, but of course, most importantly, we have a research ethics and integrity group.

So, this is the group that I look after in the research office, and we have responsibilities across the implementation of the Code of Conduct for research and research integrity. We also look after research disputes and research misconducts and relations. Another part of my team looks after human research ethics.

We have the animal ethics and welfare group and an animal welfare officer is part of the team, although the animal welfare officer reports outside of the group. Just in case he or she gets the feeling that we're not doing the right things by the animals, she can tell someone else.

And we also look after gene technology and bio-safety. Quite small numbers of staff, which means that we're pretty much busy all the time. We're directly involved in providing advice to applicants, departments and senior university officers, so we're right in there at the coal face of receiving calls and researchers asking questions about how to complete particular parts of a form.

We need to be, these days, strategic and operational. So, we spend a lot of time working out the best way to try and change the regulations that govern the way the systems we have to look after, work. And realising that that's quite an important job that needs to be done somewhere in the University, and it's one that we think we're charged with.

So, some of the sort of questions that I, or other people in the group might get asked in the course of any day might be, how do I dispose of an unidentified package.? I've found a tube in a minus 80 freezer and I'm not sure what's in it but this lab used to work on HIV. So that's interesting question.

How should the University's enterprise agreement- so the work policy deal, be changed to accommodate funding requirements, like allegations of research misconduct? And then, this is not actually made up, now that I think about it! Should the University still work with non-human primates?

So, the sorts of things that we're addressing are high-level, policy questions from the University, as well as dealing with specific day to day management of community.

In terms of the scale, we don't have any numbers about how many research disputes on misconduct allegations we might receive at the University in any one year, but that will change by the end of next year when we start monitoring these things more closely.

It would be probably fair to say that we had, say, one to three serious allegations that require formal investigation in a year.

Human research ethics. Our team manages 18,000 approved projects, so there's 3.8 of them looking after 18,000 approved projects. Our animal ethics team has 700 approved projects on their books and gene technology and bio-safety, which is half me and one other person, we have 350 approved projects for work with genetically modified organisms, and about 150 certified laboratories, containment laboratories, for work with these things.

So, we're kind of busy.

I thought I'd throw in a couple of cultural observations while I was here. The first one. I still haven't worked it out, so we can talk about this afterwards, but I still haven't worked out how to respond to '"Y'all right mate?". Because, in Australia we only ask that if someone's face is falling off, or if they're bawling tears, sort of rolling around on the floor.

"Are you all right?" is a serious question. So, when this was first asked of me in the first couple of days here, I thought I must look awful, I must be incredibly jetlagged! Or, like, is my ear bleeding? Is there something you're really trying to tell me? It ended up that I just responded by saying, "Yep". Which seems really brief and a little bit rude, but it's avoided any self-consciousness on my behalf.

So, if you have any advice on how to respond to that correctly, please send it on! I'm only here for another three or four days so I may have missed my opportunity to respond properly, but I'll try anyway.

So, the rules and regulations in Australia that govern research integrity. The main one, which was relatively new, it was released in 2007, is the Australian Code for the Responsible Conduct of Research. It was developed by the National Health and Medical Research Council, and the Australian Research Council, which are the two big funders in Australia, and Universities Australia, which is the representative and lobbying group of all the universities in the country.

It's in two parts. Part A educates and describes best practice for both institutions and researchers. Part B is the more controversial section that just describes the process which institutions must follow in assessing or handling an allegation of research misconduct. There are still some quite substantial problems with the way we're being expected to implement that part of the Code, and I'll talk about those later on.

So, I thought it might be worth having a look at what the definition of researchers conduct is in Australia. Fortunately it includes fabrication, falsification and plagiarism or deception in proposing, carrying out or reporting the results of research, and a failure to declare or manage a serious conflict of interest.

It includes avoidable failure to follow research proposals as approved by a research ethics committee, particularly where this failure may result in unreasonable risk or harm to humans, animals or the environment.

It also includes the wilful concealment or facilitation of research misconduct by others. So, that's very interesting. And as someone who started off looking after research ethics, I'm kind of pleased to see that failure to follow the conditions of approval could be considered research misconduct.

We have to be sensible about how we interpret that code. We've had some anthropologists who have had approval to go and interview the lost tribesman at Ayers Rock. And they get out there and realise that if they ask the questions that they have approval for, they'll be doing great damage to the community and offending everyone. Then I would consider it more unethical if they asked those questions rather than change and do something that wasn't approved in their ethics application.

The wilful concealment or facilitation of research misconduct by others is an interesting one as well. It's about how you define wilful concealment. So, if you know that someone else has done the wrong thing, are you being wilful in not telling anyone, or do you have to be asked if someone has done the wrong thing? Is that wilful?

Any comments? Any advice you can give me? Still working that one out.

So, it goes further to say that an act relates to misconduct if it involves all of the following. So, for the NHMIC, or for the Australian code, these three criteria have to be met. There needs to be an alleged breach of the code, so the things that are covered in Part A, I'll go through those shortly. There needs to be intent and deliberation, recklessness or gross and persistent negligence, and

there needs to be serious consequences, such as false information on the public record or adverse effects on a research participants animals or the environment.

We've spent probably two months time trying to come up with ways to break this definition, and it's relatively easy. You could say, as in an author of a paper, if I spelt your name incorrectly on the authorship line that I'd committed research misconduct.

Because it's a breach of the code, I've haven't attributed the author correctly. The name's spelt wrong. It was reckless, and probably negligent of me, to spell your name incorrectly. And there are serious consequences, because there's now false information on the public record.

That doesn't make sense to consider that that sort of accident should be research misconduct. But, where there's a definition that's probably as open as this, you'll always get some people who are trying to make a mountain out of a molehill, and turn something that really is an accident into something much more serious.

Having said that, I don't think there's much – it's fairly clear, I think, when something is research misconduct. I don't know that there's much worth spending much more time deciding how the definition could be better refined. That's just me though.

Research misconduct is also considered to have been committed if you repeat or continually breach the code, might also be considered to be research misconduct. Honest differences in judgement, or errors made unintentionally do not. So maybe that's the get out of that accidentally spelling someone's name wrong.

There are two really important parts of the code from my point of view. The first one of the requirements for authorship at the University of Melbourne. Authorship disputes make up- although we don't have the numbers, we know that the biggest chunk of the research disputes we deal with are related to authorship.

So, whether I should be on the paper or not, and whether I should be first, second or third author, for example. The Code says, that in order to get an authorship credit, you need to have made a significant contribution by, or be involved in the conception or design of the project, in the analysis and interpretation of the data and or in drafting substantial parts of the publication, or critically revising it, so as to change the interpretation.

So, it has to be a big contribution, a proper, academic contribution to the paper in order to be considered an author. You can't be given an authorship for providing materials, for collecting data, or by virtue of a relationship or position. So, ghost or honorary authorships are ruled out.

Our advice is, and it doesn't happen anywhere near often enough, is that people, researchers discuss authorship and acknowledgements before the research gets started. There needs to be a research agreement- an authorship agreement, at least drafted before the research gets underway, to avoid the sorts of disputes that happen when someone sees a draft paper for the first time, and decides that they really should be on it, but they're not.

The other thing that I think is really important, and being here for a month, spending the time thinking about research data and records, really has clarified this for me. That making sure that you're keeping track of the data that you are generating and the information around that data, so the research records, the medi-data, if you like, is critical. Really, really important. Otherwise you just don't know what you've got.

The sort of data that people generate is very invaluable, even in terms of sort of person hours generating the data, or the equipment used. Not being able to know what it might be- a secondary use for the data also means that there's hidden value in that data. It's not ever clear what else the data might be used for, so it's important to know what you've got, and make it available to others.

For an institution, managing the types of things that constitute research data, so it might be outputs from a DNA sequence, or chunks of pottery collected from the Mediterranean sea, that could be considered to be research data as well.

How an institution handles that is an incredible challenge. I think making sure that there's clarity about the difference between research data, and research records is also important. I think, for a lot of the scientific and technical research, the idea of keeping a laboratory notebook is a familiar one, and that's really your research record.

It describes what you've done, and you'd be able to work out how much time you've spent on a particular project, hopefully, by going through a laboratory notebook. The idea that someone in archaeology, for example, should keep track of what they've done in a research journal, to the archaeologists that I've mentioned to, back in Melbourne, has been particularly offensive.

One of them suggested that, if we wanted to do that, we might as well just implant an electrode into her brain! We could give it a go, I could probably wangle the ethics approval for it, see how it happens! But, it's a challenge we still have. As it is more collaborative research happening in humanities and social sciences, there will be more authorship disputes.

There's not that sort of culture of keeping tracking of what it is, of the research that you've done. And so, some sort of research journal for everyone who's doing research, is a good idea. The Australian Code, and the University policy on the management of research data and records says, "All data needs to be kept at least five years from the date of last publication."

It makes it a responsibility of departments to keep a data registry, so that academics need to list the data they have generated, where it's stored, and when it should be disposed by, the schedule and authorisation for disposal. We're currently doing a lot of work on developing a central data registry for the university, so that we've got some institutional knowledge about the data sets that we have, who owns them and what they are.

This will help us as we start heading towards- the idea of data sharing and open access is a relatively new one in Australia, but if we don't have something like this set up then I think it's going to be very hard for us to meet any of those requirements, and get any of the benefit, the unexpected benefit, from being able to share the research data that we've generated.

So, other areas that are covered in the Code of Conduct involves supervision of research trainees. So, there are some responsibilities on the institution to have some programmes in place to induct research higher degree students, or research trainees into the University, and we should include telling them about the research ethics and integrity.

Conflicts of interest. Peer review, so you should be participating in peer review wherever you can, and doing a proper honest job of it. Some requirements from research collaborations, and this is a lot to do with making sure that there are agreements in place that cover other areas of the Code of Conduct. So, authorship, data sharing, who's responsible for the data when the project finishes.

There's also some relatively friendly statements about publication and dissemination of results that just ask you to publish things as soon as you can, and make the results available in as many different formats are as appropriate.

So, this one's for you, if you ever come to Australia. If someone says to you, "Give us a squiz.", there's no need to be offended or call the police, it's not in any way a threat, or suggestive. All you're really being asked is, "May I please have a look?". For some reason, that no one that I know can explain, squiz is Australian slang for look at something.

So, there's no need for concern. If you're asked, "Give us a squiz?", it's all right. It's similar to, "How you going?", which I have seen a similar look to that I must give, when someone asks me if I'm all right. Because "How you going?", "I'm walking, how else would I be going?". It's not an enquiry about a mode of transport, it's really the Australian equivalent of "Are you all right, mate?".

Okay. So, our approach to research ethics, and implementing the Code of Conduct for research at the University of Melbourne. This is one of the slides that's at the start of all my presentations to researchers at the University, and it's about where I think these requirements come from. I

think it's important that researchers understand that these are responsibilities that everyone in the institution has, when it comes to the conduct of research.

So, because a lot of the research that happens at the University is funded with public money, the general public, the taxpayers, have a right to expect that the money's being expended responsibly, that we're not doing unreasonable things to animals, humans or the environment in the conduct of our research.

The research community more broadly, so, not only within the University but also in an individual researcher's discipline, will have expectations on the way that research is conducted, so there will be some discipline specific practices or practices that you'll need to follow, in order to be accepted as part of that research community.

Out of the two of those, and from other places, come rules and regulations, the bits with teeth, if you like, that make you, or require you to do some particular things. The only spot where we think that we should have research conducted is that tiny little bit of overlap in the middle there, where all of those three sets of expectations and requirements are met.

The challenge is, though, that these aren't the only things, obviously, that the researchers need to consider. Having some time to actually do research would be a benefit for them, no doubt. Having more time would be even better. There'll also be knowledge transfer, intellectual property and commercialisation requirements that researchers need to manage.

They've got to talk about their results, so that's time for preparing publications, posters, and attending conferences. They'll have some teaching and supervision responsibilities probably, that will need to be kept track of. They'll probably also have some departmental responsibilities, so they might be chair of the local safety committee, or the PhD coordinator in their department.

And, I guess, if there's any time left over, it might also be nice for them to have a life! No, not a realistic expectation?! It's a nice idea anyway.

So, and when we think about personal integrity, these are the four things that pop up. So, if you consider that someone has integrity, it's probably likely that you think that they're honest, that they're trustworthy. You expect them to do a good job of things.

That they're lawful, they pay attention to the rules and requirements, and that they show respect. These things really aren't all that different from the sorts of requirements that we see in research integrity.

So, research integrity, for me, really is just the generally accepted standards of practice for researchers, and the right way to do research, research integrity. It's easy to get a little religious and fanatical on this, the way to the bright light of research holiness.

Like any community, there are consequences though if these standards aren't met. So, if I drive through a red light, I have an expectation that I should get a ticket from a police officer for breaching the standards expected of me by my community. Similarly, if a researcher's not doing the right thing by the generally expected standards of practice, they should reasonably expect for there to be some consequences.

So, I think the other thing that I spent a bit of time trying to work out is whether we should be worried more about research compliance, as opposed to research ethics, and pointing out that there's a difference. Compliance is really the indicator that you intend to do things the right way. You're aware of the rules and regulations, and you'll pay attention to them while you're doing your research.

Research ethics, or research integrity is more, to me, about actually doing the right thing while you're doing your research. And that's why I think it's really important that there are clear statements about the expectations on researchers.

So, research integrity to me is not just about not doing the wrong thing, but actually about doing the right thing. And that makes it a harder job to sell, sometimes I think. All this together means

that I think compliance is the wrong model for promoting the research ethics and integrity in any institution.

It's not to say that compliance isn't important, but you have to show that you can- we meet the requirements of our funders and regulatory agencies. But I don't think it's the way that you should be, at the very least, selling it, or trying to promote the ideas of research integrity to our researchers.

So, I think the other thing that we spend quite a bit of time thinking and talking about is how to turn the principles that are included in the Code of Conduct for research into practice. Because they'll mean something different for every different researcher, at least for every different discipline, there'll be a different interpretation of what these high-level principles are.

Initially, some of the concepts seem abstract, and certainly, when you've first- if you went to a researcher and said, "Tell me about what you think about research data and records management", their eyes will either roll back into their heads or will glaze over, and you'll have to slap them in the face a bit to try and get them back into the room.

Once you start talking about it, though, they realise that it's a really important concept, and that they should be spending more time getting their data and records sorted out, and the potential benefits of having that right from the start are large.

So, the challenge is to make these principles real to researchers. And so, I think sometimes the way we describe things doesn't help that. Fabrication, falsification and plagiarism, somehow sound a little bit more noble than lying, cheating and stealing, which is really what they are. So that's how- yes, lying, cheating and stealing, really, to me, makes it much clearer that they're not the right things to be doing.

I think these sorts of- that turning principles into practices is best achieved through discussion and education rather than just ticking a box. So that's the ethics versus compliance model. Just ticking, I've read the Code of Conduct of research, doesn't really mean that they have any idea what the key messages of the Code of Conduct might be, or how they'll implement those in the course of their research.

So, the way we're approaching it in Melbourne is to try and lock some of these higher level principles away into policy. So, you know, all the researchers at the University will keep their research data for five years after the date of last publication.

We then expect, and are getting... heading towards requiring that our faculties elaborate on those policies, so they'd make more sense for their researchers, and then maybe also expect the departments will do the same thing. So that there'll be a local, discipline specific version of the policy that offers some practical, relevant, discipline specific advice.

I think that's a good way of getting the message down, but I also think it would be really difficult and unwise for someone in a central research office to try and write a policy that covers every sort of research. It's just not going to work that way.

I think this is one of the ways, and, to me, maybe one of the easiest, maybe not- ways of closing the gap between a principle and actually getting something working at the research level. It's important though that there's opportunities for people to develop things at the local level.

One of the things that the Australian Code of Conduct Responsible Research requires us to do is improve the culture of research ethics integrity at the University. I'm a non-practising micro-biologist, so the sorts of cultures that I'm used to thinking about are slightly different to those that I think the code was referring to!

But, it was kind of useful for me to think about it this way, at least for a moment. So, when you're growing a micro-biological culture, you add a small number of cells to some fresh growth medium. They'll go through what's called 'the lag phase', where they kind of adjust to the situation, and work out what sort of food supply they've got.

Then they'll go through an exponential growth phase, which is really good. They divide- every 20 minutes they'll divide into two new cells if the conditions are right. Eventually though, they sort of start fouling their own environment too much, and enter stationary phase, or run out of food. Stationary phase is sort of the diplomatic way of saying the bacteria dies, the death phase. It's a three step growth graph.

You can see some strange things when you look at growth lags. It's easy, much easier to measure the growth rate of the bacterial culture just by looking at how cloudy the broth is getting that you're growing it in. And so, sometimes you'll see a switch in the way the bacteria's growing, and it will use up one source of food and then find another one, and have a go at that.

If you get even fancier, you can start doing continuous culture, where you're constantly supplying the right amounts of food and you're removing the waste products that the bacteria are producing, so that things only grow and we don't enter the stationary, or death phase.

This is how the sorts of micro-organisms that produce industrial chemicals grow. So, the big thing that keeps these cultures growing is making sure that anything that's troubling them is removed from their environment. And maybe that's equivalent to allegations of research misconduct. But keeping the food supply right, and keeping them growing, is the key thing.

I'm not sure this will actually translate into the real world of researchers who are people, rather than who are bacteria, but I'm going to give you an example of some of the things that we've been doing to try and stimulate the growth of our culture of research ethics integrity at the University.

We have a lot of acronyms in these next slides, so I'll take it slowly. For me! Future Research Leaders programme was an initiative of the Group of Eight universities and got some Commonwealth money to develop it. It's aimed at people who are considered to be potential heads of departments really, and introduces them to lots of the key concepts in the research life cycle.

There are eight modules, and the people who prepared it have developed a case study that covers all eight of those modules so that participants can get really involved in it, and familiar with the case study, and get quite engaged in the conversation. Sorry, I just heard my own vowels then, "Quite get engaged in the conversation", that's another 'Home and Away' moment!

Module three is called governance in compliance. Surprisingly, even with that title we do get people attending that session. It doesn't scare them off! The case study for module three covers things like data security and confidentiality, authorship, ethics and then, at the very end, biological safety.

We have them locked in a room for four hours, but we give them lunch, so that automatically means that we get higher scores on the feedback forms. Once they've got over the shock of thinking they're going to be talking about rules and regulations and forms, they engage remarkably well with the subject material, and really enjoy having four hours out of their busy weeks and months where they actually get to think about the professional aspects of being a researcher, talking about how the principles that are in the codes and apply to ethics or authorship actually translate into their research practice.

Having the case study there is incredible useful because it frees up discussion. It means that you can ask questions about the people in the case study, rather than having to say, "The deputy head of my department has done something dodgy, what does the rest of the group think about this?".

It doesn't stop that from happening, there's still a lot of personal reflection that comes out from these workshops, which I think is really useful.

ECR workshops, Early Career Researchers. This year we've called them 'Laying the Foundations' to try and make them sound inspiring. Not that they're not inspiring. Research ethics and integrity was included for the first time this year. We had an hour and a half. We decided what we'd do, we'd ask the group to build their own Code of Conduct for research.

So, we divided the group up into about five or six different small groups and gave them a topic to work on each, so they had 20 minutes and then reported back. This was really interesting. The group that decided that they wanted to come up with the requirements for authorship essentially listed everyone that could be involved in the project.

So, there were technicians, there were people in the storeroom in their department, because they ordered things for them. Some of the cleaners made it in. I suggested that perhaps I should be in there as an author, because it was likely that some of my team had been involved in approving the ethics application for these projects. But apparently that was a step too far, so I was quite insulted by that. But I'll deal with that myself!

So that was really interesting, that they thought it should be everyone who's been involved deserves to be an author, we're all a friendly and happy nice research group. I think, by the end of it, though, when we'd read through the Code, and we talked about how the Code requirements actually might make a bit more sense, because it's about people who actually make a significant academic contribution to their authorship, I think they were happy with that.

I think it would be fair to say- this was a group of about 35 post-docs, mostly. So they really were early career researchers. Not surprisingly there was some initial hesitation about doing a research ethics and integrity session, how boring is that?

The discussion went into overtime. So we didn't have afternoon tea that day, because they were so engaged with the topics that we were discussing. The feedback suggested that a lot of them found it really valuable to be thinking about these high-level principles of research, and, for some of them, it was the first time some of these issues had been raised. Which is slightly concerning that it was the first time that they'd thought about some of the issues.

It was really useful to be able to get a group of 35 post-docs and explain to them how these principles do actually impact on the way that their research is conducted day to day It's making that connection again. I think getting in early is one of the things that we're really focussing on at the University of Melbourne as well. We've future research leaders, early career researchers and research higher degree students.

So, this is GRIME, as I call it when I'm feeling indisposed towards it, or GREEN, as its most preferably referred to. It's the Global Research Ethics and Integrity Module. It's run by the school of Graduate Research, which looks after all of our PhD and research masters students.

It was a Universitas 21 initiative, so U21 is a group of 21 universities that collaborate together on particular projects. The idea, initially was, I think to try and encourage exchange between this group of universities. And, in some respects, it's similar to FRLP, that all of GREEN happens online.

So, there are eight chapters that cover basic principles of research integrity like research conduct, and authorship and peer review, human ethics, animal ethics and some of the research frontiers questions. So, to get them thinking about the ethics of things like stem-cell research.

So, the students will log on, there'll be a briefcase study. There'll be an opportunity for them to write some comments about their initial thoughts or a bit of reflection. We have some face to face workshops with the students, which they all really enjoy. Well, all is probably going a bit too far. Which most of them really enjoy. And online discussions, where they open half way through a week, where they can ask each other questions, and debate the topic that the case study covers.

Every now and then there'll be some expert moderator opinion to either fire up the discussion, or realign it if it's headed off on the wrong path. We've found this to be a really useful tool for getting- well, for two things. For getting the concepts, research ethics and integrity, raised in the mind of people who are just starting out their research careers.

Also for getting them to think about things that they may not have to. So, we have PhD's in philosophy talking about stem-cell research. It's a good mind broadening experience for them, I think.

One of the things they are doing that relates specifically to human research ethics is some training in the management of ethical research. So, this is based on the findings of an ARC funded project, called 'Investigating Human Research Ethics in Practice', that was conducted by some researchers in our school of population health, Marilys Guillemin and Lynn Gillam.

They undertook a survey of 38 human research ethics committees, and met with lots of researchers to get their opinions of how the human research ethics process worked, both from a committee viewpoint and from a researcher viewpoint. It was some excellent research that we're in the process of implementing the recommendations from their report.

The key one was some better training to improve the understanding of the basis of human research ethics, so, why are people being asked the questions that they are on application forms? And, to consider ethical risk.

So, it's what happens if you are dealing with a group of people who are attending a mental health clinic and someone declares that they've had enough, and they can't take it anymore. How do you respond to that? If you're in there as a University of Melbourne researcher, what are your responsibilities, and how should you best respond to that situation to make sure that both you and the participant are safe?

Participants observed a real committee meeting, and held a mood meeting, where they had a couple of- one good and one really dodgy application to review and decide whether it should be approved or not.

All of the participants, and I can say that with confidence, it really was all of them, reported that they had a much better understanding of the process around human research ethics and why they were asked particular questions in the application form.

The bumper sticker from this session was one of the researchers realising that for her a grant proposal is conceptual, this is what I'll do if you give me some money. But, it's not until you're forced to actually write down what you're doing in an ethics application that it makes the research real.

This is where you're really saying that I'll interview 150 people using this survey, here are the questions. And so the benefits of that process were, for her, particularly keen.

Very briefly, one of the things that I want to get started on for next year is a research integrity toolkit. There are about eight or nine topics in most Codes of Conduct for research. There's probably around eight or nine months when most researchers are in the department doing things, being active researchers, so, why not have a discussion, a group meeting once a month and discuss one of the topics that's covered in the Code of Conduct for research?

So this is the discussion group, this is about actually producing the principles into practice, if you like, at the research coalface. Can I throw any more clichés in there? Grass roots, all that sort of stuff.

So, this research integrity toolkit will have some sort of guided discussion notes and hopefully copies of the local policies that have been developed.

Thinking back to the culture of research ethics integrity idea, and I mentioned that it was relatively easy to determine the health of a bacterial culture. It's much harder to assess the health of a culture of people. But I think we have to start thinking about how to do that. Maybe a research integrity climate survey, so where you ask...make some five questions, say, available on the website for anyone who's interested in answering them to have a go at. Might ask, how comfortable do you feel, would you feel, discussing a potential research conduct manager with your supervisor? That matter with your supervisor.

Maybe do it every three or five years, just to get an idea of whether any of this sort of training and education and discussion that we're promoting is having any impact on the way things are actually happening in the department of research.

I'm running overtime, so I'll go through this quickly. Some of the problems that we have. The Australian Code of the Responsible Conduct of Research is a guideline document only. It's not a legislative or a regulatory document, except for NHMRC funded research, where compliance with it is part of the funding agreement.

So this means that we have- its status is not clear. So we'll have a group of researchers that are funded by the NHMRC, who are required, by contract to comply with it. Everyone else doesn't have to, it's just there for guidance, that doesn't' really make much sense.

There are some clashes, particularly with Part B, for handling allegations of research misconduct with the internal University policies, and with the enterprise agreement that means that we can't actually implement some of those requirements in Part B at the moment or we'll get into bigger trouble with more serious consequences.

These will be resolved over time, but it might be four or five years before we get everything aligned properly.

Male Can I just ask, has the University of Melbourne adopted the Code or does it make any statements requiring its own staff to comply with the Code beyond the NHMRC funded research?

Contributor Not at the moment. So we still have the University's own Code of Conduct for research, and there are a couple of clashes with that and the Australian Code that we need to get sorted out too. There are still some problems with the process for handling allegations of research misconduct. As an example, it requires that the full legislative protection offered to whistle blowers must be extended to potential claimants.

But this means, then, that because of our local state legislation for whistle blower protection, that we can't tell anyone about the allegations. So we can't let the respondent know that someone has made an allegation. So, how can we conduct a fair investigation when we're not able to get a response from the person that the claim is being made against? Doesn't really work.

Because of the University Code and the Australian Code, we're currently operating under two different definitions of research misconduct, which is, 'less than ideal', is probably the Group of Eight way of putting it. At the moment, the University of Melbourne Code of Conduct for Research says that if there is a deviation from accepted practice, or a breach of the Code that is intentional, deliberate, reckless or negligent then that can be research misconduct.

The Australian Code has that serious consequence requirement. So, our first decision, when we get an allegation of research misconduct, has to be which definition is the right one for us to use, and, like I said, that's not really helpful. Not terrible helpful.

I mentioned before that the definition is also possibly problematic, but I don't think that it's as important as some of the people we're dealing with make it out to be. We've had a similar clash with the authorship requirements in that the University of Melbourne policy and code, the International Council of Medical Journal editors, with their Vancouver protocol, is different from the requirements of the Australian code.

So, both the University and the Vancouver protocol you are able to be awarded an authorship credit if you give final approval for the publication to be published. I'm not sure whether that really is enough to earn an authorship credit, but that's also not something I'm looking forward to discussing with the directors of some of our medical research institutes who sign off on all the publications, and magically get their name on the end of all of them.

So, if you don't hear from me in 2010 that's why! Next year we're planning to review the University of Melbourne code, and we'll address some of these bits where there's conflict. Finally,

I think it's fairly clear to me, and I think fairly clear to everyone else that there are institutional responsibilities in ensuring that research is conducted responsibly. They are unavoidable.

It can't, or shouldn't, be devolved to faculties, departments, or divisions. I think the training and education, the discussion part of this process, in the principles of responsible research, research ethics, and research integrity, is important and critical, and probably the only real way of getting anything to change in the culture in terms of the culture of research ethics and integrity.

I think that part of that is responsibility on the institution to make really clear statements about the way the research that is carried out in its name is to be conducted. I think that's something that we need to work on in Melbourne.

I think part of the problem is that this is - promoting research ethics and integrity is a long-term project with sometimes intangible or at least really difficult to measure benefits. It's not like you can say, if we spend another 100 grand on two new research integrity offices that next year we'll have $200 million more research income. Can't say that. And so, I think in some ways that means that the area doesn't get enough attention, that it isn't taken as importantly as it needs to be.

That's all. Thank you very much for your time.
