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An Interdisciplinary Dialogue

by
Hearing the Voice

'An Interdisciplinary Dialogue'
A Project Short by Sam Wilkinson
and David Smailes

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An Interdisciplinary Dialogue

in which Sam Wilkinson, Postdoctoral Fellow in Philosophy, and David Smailes, Postdoctoral Research Associate in Psychology, discuss interdisciplinary research.

Sam: As an analytic philosopher, I'm obviously going to want to get this discussion started on a point of terminological clarification. What do you think 'interdisciplinary work' actually is?

Dave: Before working on an interdisciplinary project, if you had asked me what 'interdisciplinary' work was, I would have described something more like what might be called 'multidisciplinary' work. In multidisciplinary approaches, while people from different disciplines work alongside each other and share knowledge, there's no attempt to change each other's methods or theories. In contrast, that's the goal of interdisciplinary approaches—that through working with Researcher A from another discipline, Researcher B will somehow change the theories or methods they typically use in their home discipline. This goal makes interdisciplinary work difficult. In science, the theories or methods researchers use are either good (i.e., they have strong explanatory power, or they are valid, reliable ways of measuring or manipulating variables), or are not very good, but are much-loved (i.e., they have little explanatory power, or they have weak validity/reliability, but for whatever reason, researchers seem to like that theory or method, and so continue to use it). Encouraging researchers from another discipline to adopt new theories or methods and to—at least partially—reject their good and/or much-loved theories or methods is bound to be a difficult process.

Sam: What you say about the not-so-good-but-much-loved methods or theories is very interesting. Do you think that there is something about excessively mono-disciplinary approaches that leads to certain methods and theories being somehow 'locked in' through institutional laziness (an 'if it ain't broke don't fix it' mentality) or mutual internal support (this data is firmly within the mainstream framework, so let's publish it)?

Dave: First, I should say that there are good reasons to stick with a method—in lots of cases researchers unnecessarily 'tweak' existing methods to add a novel aspect to their work, but that can make it difficult to compare findings across studies and to build a cumulative science. But working in a mono-disciplinary environment might make it less obvious to a researcher when a method is no longer useful, or how a method

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>
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could be improved upon, simply because you are exposed to fewer novel ideas, or because you're not exposed to the methods employed by other disciplines. And of course, what you say about the motivation, whether implicit or explicit, for mono-disciplinary research is there, and it's understandable, since you can get on with doing your research without too much interference. In contrast, because it aims to potentially change a discipline's theories or methods, interdisciplinary research takes longer than traditional, mono-disciplinary work. At a project level, my guess is that this isn't too problematic. This is, or certainly should be, factored in to give a fair appreciation/evaluation of the project. For example, a £2m, four-year interdisciplinary project on memory which produced 40 good outputs (i.e. publications) shouldn't be compared unfavourably with a £2m, four-year traditional (i.e. mono-disciplinary) psychology project on memory which produced 70 good outputs.

Sam: This is because funders and universities presumably accept that the projects are very different, and are aware that interdisciplinary work requires more 'proto-research'—or 'meta-research'?—and so the sheer volume of research outputs will be smaller, even though some of the research it produces might be ground-breaking, paradigm-shiftingwork.

Dave: That's right, in terms of evaluating things at a project level. On an individual level, I think this is a bit more problematic, especially for early career researchers, who may be applying for permanent positions when the project they are working on comes to an end.

Imagine Postdoc X who runs studies about mental illness for the interdisciplinary project on memory and Postdoc Y who runs studies about mental illness for the traditional psychology project on memory. Before Postdoc X can start running her studies, she should try to develop new methods of studying memory in people with mental health problems, by discussing memory with, e.g. a researcher from philosophy and a researcher from history. It will take Postdoc X a few months to have these discussions, to pilot a new task, and develop a new method that the humanities researchers are happy with. In contrast, Postdoc Y can take 'off the shelf' a pre-existing, peer-reviewed, published method for investigating memory in people with mental health problems, and can get her study up and running pretty much straight away. Data collection and data analysis for these two postdocs will take an equal amount of time, but publication may be a more laborious process for Postdoc X. For example, some journal editors and reviewers can be suspicious

> ❝ *An interdisciplinary postdoc is a high-risk, high-reward strategy.* ❞
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> **- Sam Wilkinson**

of new methods, especially ones that are rather different to the standard paradigms employed by a discipline (as methods that have been developed through interdisciplinary work are likely— and often hoped—to be). Thus, the peer-review process for interdisciplinary research, as compared to traditional (but equally well-funded) research, is likely to be a lengthier one, involving more rejections, and perhaps resulting in publications in lower impact journals. So, by the time the project is finished, Postdoc X may have conducted four studies resulting in eight publications, while Postdoc Y may have conducted six studies resulting in twelve publications. If we imagine that, towards the end of their respective projects, Postdoc X and Postdoc Y are applying for the same psychology lectureship, Postdoc Y's better publication record would make her the strong favourite to get the post. Although many job descriptions do include an ability to work interdisciplinarily as part of their 'desirable' criteria,

it seems unlikely to me, at least, that Postdoc X's ability to work interdisciplinarily would trump Postdoc Y's much better publication record.

Thus, for all of the benefits that doing interdisciplinary research provides for early career researchers, if my impressions are correct (I have no data here, these are all just impressions and anecdotes), one potential drawback is that doing interdisciplinary research can slow down your publication record.

Sam: I see what you mean. However, don't you think that the interdisciplinary research environment is more likely to yield a truly ground-breaking publication? A publication that would really turn heads on a CV? In which case, we might say that doing an interdisciplinary postdoc is a high-risk, high-reward strategy (not to mention that it's usually more fun) whereas a mono-disciplinary postdoc is the safe option.

Coming from a non-empirical discipline, where experimental paradigms and methods are clearly never 'picked off the shelf', and hence cannot be an advantage, I see a trade-off of a different nature. A trade-off which may apply to psychology as well. It's that many departments will advertise lectureships with competencies and specialisations in 'core areas' of philosophy. It's easy to fall out of the core debates in your discipline, by getting purely engaged in interdisciplinary work. So the trick is to keep a foot in the discipline, by publishing in the core mono-disciplinary journals once in a while. Of course, that is easier said than done, but it is tactically wise to not lose sight of your discipline altogether. However, as a philosopher I still think that multidisciplinary work is more interesting and provides more fertile ground. Especially if, like me, your background is in philosophy of mind.

But anyway… perhaps we should talk a bit more about how it is that good interdisciplinary collaborations come about, on a day-to-day basis.

Dave: Sure. In my admittedly limited experience of building research collaborations, the best ones seem to come about organically. For example, while working at your desk you get a bit bored, ask your office-mate (who you thought did research that you weren't interested in) what they are reading at the moment, find that you're both interested in a topic area, and over the course of a few weeks and a series of informal chats, you realise that you have designed a study together. Research collaborations that are less organic (where you start off by agreeing that you should work together, and then try to find your common

ground) seem to be more a bit more difficult to get up and running.

Also, in my experience, science researchers and humanities researchers tend to have slightly different work patterns, and I think this can perhaps limit the opportunity to build organic research collaborations. For example, most, but not all, psychology PhD students get into the habit of coming into their office 9–5. Presumably, this is because their research demands that they do this: if you are screening for depression at a GP surgery, or looking at the prevalence of bullying in schools, you get accustomed to working 9–5 hours, and you will probably extend that habit into a postdoc position. In contrast, humanities PhD students are less constrained by 9–5 hours and so will be less likely to adopt those sort of regular office hours (if indeed they have offices). They're just as likely to work from 10–12 at home, from 1–3 in a coffee shop, and from 4–7 in the office.

One working pattern is not necessarily better than the other (in fact, despite being a 9–5er, I know that 6pm–8pm can be a really productive time for me to work). But these different patterns mean that researchers from different disciplines might not spend a large amount of time physically together in the same space. Thus, organic collaborations are less likely to develop and collaborations are more likely to occur 'by design'. This doesn't have to be a bad thing, but organic collaborations seem to me to be the ideal.

Sam: I completely agree that there are different working patterns. Working in philosophy, you aren't constrained by the need to collect data. Your only external constraints, usually, are meetings with others. However, because there is no data collection or analysis, it does mean that there aren't these somewhat mechanical things that you can just 'get done' even when you're feeling uninspired. You can't just run an experiment, or work out some stats. Time spent trying to work, at the office, when you're feeling unproductive, is time utterly wasted when you work in philosophy. A prescribed 9–5 simply makes no sense. I've learnt over the years that I have idiosyncratic patterns of productivity. I am at my most productive the second I wake up. I've often done my best work, quite literally, from my bed. I'll wake up, reach for my laptop and work for two hours (8:30–10:30), sat up in bed. Then I'll go into the office, get a coffee, and work fairly well until lunch. The two hours after lunch are a complete write-off. Then I hit productivity again from 3:30 until 8 or 9. Sometimes, if it's one of those days,

or I have a pressing deadline, I'll stay in the office until past midnight. That kind of flexibility is not only licensed by being a philosopher: it is often necessary.

However, I do really relish the meetings that I have with people, and I love coming into the office, precisely because they enable me to forge these 'organic' collaborations that you speak of. But I'm not so sure that gently engineered collaborations can't be fantastic. Reading groups are a really good way of establishing these. In responding from a different theoretical background, to the same piece of work, you often see places where there's some unexpected overlap. But perhaps these aren't engineered, but rather a way of setting up optimal conditions for an organic collaboration.

But in general, I agree that radically different working patterns can prevent this much-needed contact. Apart from the different working patterns, do you see any other challenges and obstacles to good interdisciplinary work?

Dave: Absolutely. For example, there is the obstacle that people coming from different disciplines often value different outcomes. In other words, there is not only the challenge of getting the research done, but the challenge of agreeing about the direction in which it is supposed to head, what it should be aiming for. For example, I have a psychology PhD and I think interdisciplinary research may be helpful in developing better theories of mental health problems and better methods for investigating the causes of mental health problems. In short, I think interdisciplinary research could be a means to an end (i.e., the development of better interventions for people who have mental health problems). In contrast, researchers from other backgrounds have a purer interest in how interdisciplinary research is done, in how it can be conceptualized, and in how it can be theorized. In short, for these researchers, interdisciplinary research is an end-in-itself.

Focusing on and valuing very different outcomes doesn't have to be a problem, and I don't think it has been for Hearing the Voice. But, I can easily imagine situations where it could be a key problem to overcome for an interdisciplinary research team.

Working Knowledge is a collection of accessible and user-friendly resources dedicated to the practical ins and outs of interdisciplinary research.

Covering everything from managing a research project's social media presence to conducting experimental design 'hackathons', the series is a must-read for anyone considering funding or embarking on interdiciplinary research.

Series editors: *Charles Fernyhough, Angela Woods and Victoria Patton.*