

Harry Collins

# Interdisciplinary Peer Review and Interactional Expertise

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# Interdisciplinary Peer Review and Interactional Expertise

by Harry Collins

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Judging excellence across disciplinary boundaries is an extraordinary ambition. Lamont offers us some of the discourse that panellists engage in to justify their engagement in this theoretically impossible activity. Sometimes they defer to others' special knowledge of a field that is not their own and sometimes they mention their admiration for those who appear to know many fields and seem to be able to make authentic judgements from, as it were, "within" fields that are not their own. The paradox is pointed up by the anthropologists who, she reports, are unwilling to support applications that involve comparative study of multiple field locations since they do not believe that it is possible to properly understand more than one field location in a single project – it just takes too long. Well, other disciplines are remote field locations so the argument ought to apply just as much to the case of judging other disciplines. In sum, interdisciplinary judging ought to be thought of as precipitating the same problems as interdisciplinarity of all kinds and this, in turn, has the same problems as anthropological fieldwork, cross-paradigm incommensurability, and so forth.

It is a lasting puzzle how any of this can be done. We have tried to argue that a semblance of cross-disciplinary collaboration can be managed in a variety of ways [Collins, Evans, and Gorman 2007] while interdisciplinarity proper can, perhaps, be managed through the medium of "interactional expertise."<sup>1</sup> Interactional expertise

<sup>1</sup> For lengthier discussion of the notion on interactional expertise see Collins and Evans [2007].

is fluency in the discourse of a technical area in the absence of competence to contribute to that area (which is called contributory expertise). It has been argued, and to some extent “shown” that an interactional expert can make technical judgments that are indistinguishable from those made by a contributory expert. More recently it has been argued that interactional expertise is not only necessary for genuine interdisciplinarity (short of the formation of new hybrid disciplines), but is what makes any complex division of labour possible [Collins 2010a]. The argument proceeds from the observation that even within a big science such as gravitational wave physics no practitioner has practiced more than a small fraction of the total practical activities that go to form the science as a whole. Therefore, when one speaks of someone being “an expert in gravitational wave physics,” that expertise has to be largely an interactional expertise. The language of gravitational wave physics is “laden” with the practices of all the many practical specialties that make up the field; gravitational wave physicists have “practical understanding” of the field of gravitational wave physics having practiced hardly any of the things to which the understanding refers.

One of the things we claim for interactional expertise is that it is what makes peer review possible. We claim that peer reviewers (of journal submissions and more obviously of grant proposals), cannot have practiced the exact kind of work they are judging so they the best kind of understanding they can have of it must come through interactional expertise. So what seems to be missing from Lamont’s description is any kind of analysis of the extent to which the reviewers had interactional expertise of projects they were reviewing, how they obtained it if such they had, and how they managed (other than by deferring to the more expert judgment of disciplinary specialists), if they did not.

Consider, first, those who might have interactional expertise in other disciplines. Interactional expertise is acquired by lots and lots of talk and then more talk and then more still. I spent thirty years of my life in an interdisciplinary School of Social Sciences and what I learned of psychology and economics as a result of endless committee meetings and lunchtime discussions was extraordinary. I also spent a period as the Head of School and recall with complete clarity the day that an economist explained to me, in my official capacity, that it would be impossible for him to work as hard in the future as he had in the past because he did not believe he could make it from his current rank to the rank of (full) professor and therefore no longer had the incentive structure that made hard work possible. This was a moment that gave rise to a step increase in my interactional expertise in respect of economics and economists; economists do not just profess their discipline, they live it and had I experienced the extent to which economics was, truly, a different “form of life.” On the other hand, it might be that economics was this way in my School but might be different elsewhere.

One sees that in so far as committee members base their judgments on interactional expertise, however, “objective” they try to be in a self-conscious way, they cannot escape their cross-disciplinary academic socialization. What they understand to be economics – or whatever – is going to be a function of who they have been talking to. We know there are schools of economics associated with particular universities. One might say to oneself “I must avoid the prejudices of the Chicago School of economics with its gate-keeping publication and hiring policies” but if all one knows of economics is what one has learned at Chicago or from Chicago-School economists it is hard to see how one can know how to think in any other way about what economics is.

Now consider those who have no interactional expertise. Without the idea of interactional expertise in their intellectual knapsacks they may not know what they are missing. They will almost certainly believe that what can be learned about another subject or another point of view can be learned from reading – though if they ever said this out loud they would realise they were talking themselves out of a university job since everything they know could be put on the web. I am continually astonished at the extent to which academics act as though they inhabit a purely textual culture in spite of the fact that they resist the replacement of universities by distance learning systems and the like. Thus, people write book reviews without it occurring to them that they should send the review to the author before publication so as to check for major errors. The review is written, it is published a year or so later, then the author discovers that when the reviewer says “he/she misses this or that point,” the point is made quite explicitly on page X. People write articles critical of others work in the same way. The time taken for a “conversational turn” when the conversation is conducted through the medium of print is two to three years. Do we just not think our subjects are valuable enough to deserve a speedier turnaround for argument; do we not think the outcome matters so long as the argument is going on?

Compare the social sciences and humanities with the physical and biological sciences where argument, even when it is textual, is conducted at the speed of an electronic preprint exchange. We really do not deserve to be treated as important if snail-pace print exchange is good enough for us. Finally, and I know the logistics would become a bit awkward if everyone did this, in my graduate seminars when we reach a difficult point concerning the interpretation of someone’s work or we seem to find a contradiction within someone’s oeuvre, I often pick up the phone and ask the author there and then what they mean (first getting permission to put the conversation on speakerphone so the whole seminar group can hear). People are astonished when they first see this happening or when they hear about it. But why are they astonished? I want to know what that person meant when they said “such

and such” – I ask them – what could be more natural? What could fit better with our deep understanding that academic life is an oral culture – a matter of socialisation into the “collective tacit knowledge” [Collins 2010b] of the discipline or this or that particular local area of the discipline?

Thus, I am still puzzled about how cross-disciplinary peer review can work. I think we could get a better handle on its possibilities and problems if we thought in terms of how people learn expertises of various kinds and, as a sub-species of that problem, how they learn about other disciplines in their day-to-day life as academics.

Quite apart from how peer-review works, in the basket of disciplines chosen by Lamont for her study there remain a number of intriguing unresolved puzzles for the theory of interactional expertise. We do not understand how historians make good sense of the past since they have only a written archive and no immersion in spoken discourse. Maybe history just *is* the study of the archive – some historians think so. We do not know if literary criticism is anything other than interactional expertise – what is it to perform the analysis of a text other than to make good judgments about it in discursive settings which is how we test for interactional expertise. We do not know what philosophy is though I would suspect it is at least two things: one is the study of philosophical texts; the other involves thinking about how the world works. These two are very different. I am pretty sure that Science Studies has the potential to be two very different things, one an “artsy” discipline which is all about interpretation and one a “sciency” discipline which is about how the world of science works when it is trying to discover new knowledge. Again, these things seem very different and ought to be judged by entirely different standards and probably practised in different institutions. These are some of the directions in which the intriguing question set by Lamont’s study invite us to travel.

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Abstract: Judging excellence across disciplinary boundaries seems impossible. How can one think in a way that enables one to judge another persons work. Lamont gives us some clues and opens some intriguing avenues for research but does not get into the conceptual heart of the matter. I argue that the only way to make any sense of how the feat of cross-disciplinary judging can be done is to think in terms of “interactional expertise.” Though this concept shows how it is possible it still does not resolve the problem of judgement when the interactional expertise has been acquired in an academic environment which differs from that of the person being judged.

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**Harry Collins** is Distinguished Research Professor of Sociology and Director of the Centre for the Study of Knowledge, Expertise and Science (KES) at Cardiff University. His sixteen books cover the social analysis of science, artificial intelligence, tacit knowledge and expertise. His 150 published papers cover similar themes. In 1997 he was awarded the Bernal Prize for lifetime contributions to social studies of science.