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Expanding the disciplines through SoTL

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The panel - pro and anti disciplinary SoTL - that this paper contributed to - sought to debate whether disciplines inhibit or build up SoTL. Torgny Roxa argued persuasively, as ever! that disciplines exert a structural and epistemological control such that SoTL cannot find a place to operate or be as effective as it should be.

This paper seeks to take an opposite position. This is not to deny several of the 'anti' points: including that disciplinary hierarchies and research agendas can act in the inhibiting way he described. Indeed, it is precisely because I agree with the potentially vitiating and stultifying nature of the discipline as a tightly bounded research community that I feel so strongly that disciplinary SoTL is vital and vitalising. For the essence of SoTL - the exploration by the teacher of some problem that has puzzled her and the ownership and publication of that exploration – I argue here can, rather, make disciplinary development swift and teachingcentred. It is precisely because of the separating off of research structures - research leave, research grants, research CVs all accounted for differently from teaching - that disciplinary SoTL has a space to develop and to affect and effect. And, whereas the disciplinary agenda has traditionally followed that of the research community, with at best 'research-informed teaching', SoTL gives teachers in their own right, as teacher-scholars, an arena and a base from which to transform their discipline.

Indeed, some of the roots of SoTL were, via what could be termed 'teaching-led scholarship', in challenge to the research discipline's epistemological agenda and presumptions and its way of disciplining its students. For instance, in David Perkins original conception of troublesome knowledge (Perkins 1999) the 'trouble' was to the discipline: in looking at the alternative explanations students come up with when lacking the discipline's 'correct' model, SoTL posited new potential paradigms for the discipline. It takes a SoTL approach to perceive the possibilities: a 'disciplined' teacher committed to research-informed teaching will simply run a red pen through the students' work as ignorant of the concept that would

have explained the phenomena or data 'correctly'. But Perkins pointed out that such 'undisciplined' explanations challenge the research discipline's presumptions and just might provide the next great paradigm shift in subjects such as physics or economics.

Salvatori's difficulty papers (seminally described in Hutchings, 2000), likewise, reveal difficulties in disciplinary methodology or epistemology that researchers have long accepted as the way the discipline works. Again, the research-informed teacher may tend to see the difficulty as that of the student's lack of disciplinary knowledge and understanding; at it is true that the difficulty would disappear given feedback that explained that knowledge and understanding. But that is to posit that difficulty as the student's deficit state rather than as a valid question.

I have taken this to heart and for ten years now have started my 3rd year Literature students, coming to the strange and challenging compulsory Greek tragedy texts they are set, by 114 asking for a pre-term 'difficulty paper'. I ask them to write about what they find alien and alienating before they come to the plethora of expert lectures and reading that will explain or at least fit that alienness into a 'domesticating' research agenda. Because I take it that these strange and estranging plays should disturb and that by fitting them into a research agenda it is possible to neutralise that disturbance that is the very reason for still studying them.

The argument has been made that disciplinary research academics tend to the conservative, preserving disciplinary and sub-disciplinary boundaries. I think that is often true: many an innovatory disciplinary thinker has had to advise their research students against moving too far away from the disciplinary agenda and its writing, argument and citation practices in their theses and in their submissions to the most prestigious and well established journals and conferences. For, for those bound within the research community, issues of power and control operate. Becher's seminal work on 'academic tribes and territories' (Becher, 1989) divided disciplines and their practitioners into epistemological tribes along two axes: hard/soft and pure/applied. Citation studies such as Hyland's (Hyland, 1999) felt able to divide disciplines along equally distinct lines by showing the inflexible rules of citation in

different disciplines; Tight (2008) traced Becher's tribes in practice by mapping distinct and seemingly exclusive co-citation groupings. Such studies emphasise research disciplines as rigidly bounded and hierarchical institutions, as Kuhnian 'paradigms' that set not only the questions to be addressed but the practices and forms by and in which they are to be answered. That is why the first major piece of writing doctoral students usually undertake is the literature review – an account of the state of the research discipline and where their research fits and serves a common aim.

My point here is to stress that beginning career academics must be conservative and 'disciplined' in their research; not so in their SoTL work, where they can address any issues, ask any questions about disciplinary epistemology, ontology, affect and effect that they can satisfactorily investigate and report.

Other challenges to the research agenda from disciplinary SoTL comes from SoTL's investigations of new ways of exploring and reporting the discipline. Whereas the research article and dissertation must follow established argument and citation practices – thus circumscribing the epistemological claims that can be made – SoTL projects on digital narratives (e.g. Coventry et al, 2008), multimedia and 'alternative' dissertations,(e.g. Crème and McKenna, 2010); the virtual knowledge project (e.g. http://virtualknowledgestudio.nl/current-projects/knowledge-space-lab/ and the Visible Knowledge projects (18 case studies reported in Academic Commons Jan 2009 ed. Randy Bass and Bret Eynon) - have challenged both the possibilities and meaning-making processes of the discipline. Such SoTL projects have challenged the form of the research article, for disciplines are discourse communities as well as communities of practice and what is written shapes what can be written: e.g. the form of argument and induction/deduction from theoretical models. Such SoTL projects have, in short, challenged what it is to 'write the discipline'.

Of course there are many more enlightened disciplinary models than the hierarchical, prescriptive research model referred to above; none more so than Huber and Mills' (2005)

model of a disciplinary discourse and epistemology 'Trading Zone'. But there is no doubt that many new academics perceive their discipline as a power that must be obeyed and their role 115 as new teachers as mediating disciplinary skills and a knowledge base which is perceived as both accretive and prescriptive.

But, rather than this standing in the way of disciplinary SoTL, I see this as both enabling and rendering transformatory, disciplinary SoTL, which becomes a vitalising and autonomygranting approach. For SoTL originates in the exploration by the teacher of some problem that has puzzled her; s/he then owns and should present and publish that exploration.

Disciplinary SoTL forms an inclusive alternative community, drawing together scholars who may well also 'research'(e.g. the first ISSOTL Special Interest Group – that of History, formed at Washington ISSOTL in 2006 (Pace, 2007)), bringing together across the world scholarly investigation and, yes, curiosity and imagination. This paper argues that disciplinary SoTL can make disciplinary development swift and teaching-centred. This is because SoTL asks basic questions which may model the discipline differently: questions about what it is to study a discipline, what it is to be 'disciplined', what it is to write the discipline (Parker, 2007): essential epistemological and ontological questions which need to be asked afresh at the start of each new teaching session.

The richness of SoTL questions comes because they arise from our, as teachers, always having to think of the discipline as addressed to the needs and interests of three different cohorts: students who are temporary visitors to our disciplines – taking one semester or one module because they are curious or attracted to the subject matter, or because they want to balance their university education by taking a course that demands a different approach or skill set from those they are acquiring in their 'major'. At the same time, we need to look to attract, train and retain proto-researchers – those who are looking to follow us into our discipline and who need to compete and succeed in a very tough market.

Perhaps most challenging, we need to address the needs and wishes of those who are taking our discipline as their major university course but have no plans to become researchers. Most challenging, because we have to question the roots of our discipline and

its place and importance for society at large, right now. That importance may well not be immediate applicability, it may, more subtly, be the quality, nature and scope of the questioning, argumentation and meaning-making processes; the range of addressees and modes for the writing, argument and presentation of those questions; the nature, complexity and thoughtfulness of the critical practices; the 'humane' and 'liberal' outcomes of a liberal arts curriculum…

Our SoTL investigations therefore take place within a more multi-dimensional disciplinary landscape than that envisaged by research examination and funding communities, whose concern is in keeping the knowledge-gathering procedures rigorous and convergent. For course planning, assessment practices and outcomes must weave together and engage the interests (in the rich sense) and investment of all three groups – the temporary visitors, the proto-researchers and the single-discipline honours course members. The result is a continuous investigation and re-invention of the central concerns of the discipline by a mixed group of teachers and students engaged in the present. A new and very welcome stimulus to disciplinary SoTL work has been the inclusion of student researchers; an outstanding and stimulating account of student and teacher SoTL research has recently been published by Werder et al. (2009). 116

Any SoTL conference reports initiatives that change the discipline as taught: change the nature of the questions asked and the processes by which they are answered. Disciplinary knowledge and understanding are not created 'out there' in research centres and initiatives and transmitted to students via a research-informed curriculum; rather disciplinary future trajectories are re-engaged with the present concerns of these different cohorts. It might be thought that this is rather a 'luxury', for disciplines where the knowledge and understanding are liberal rather than professionally qualifying: after all a doctor or engineer needs a nonnegotiable, non-disputed body of professional knowledge with which to operate. But even, or

perhaps especially here, student-led curriculum developments have changed not the body of knowledge but the informing framework of understanding: risk, beauty, sustainability, health writing, medical humanities, nettlesome knowledge, health workers creating patchwork

texts…were all brought into innovative engineering and medical courses by the early 2000s. Investigated as they were by action research methodologies that have many similarities to those that underpin SoTL, they surely stimulated the founding of what are now recognised fields within engineering and medical studies.

The argument here is that disciplinary SoTL can be transformatory and forward-looking. It can be transformatory and forward-looking not just for the discipline as taught but of disciplinary processes, period. There are two evaluated teaching and learning international discipline-challenging initiatives that predate a fully institutionalised SoTL but now feed into and feed off SoTL methodologies: Writing [in] the Disciplines (Monroe, 2002) and Threshold Concepts and Troublesome Knowledge (e.g. Meyer and Land, 2006; Land, 2008). Both 'initiatives' or, perhaps better 'interventions', are rooted in and challenge disciplinary meaning-making and identity; both do so from scrupulously thoughtful observation of students.

First, Writing in the Disciplines, which started with a prizewinning Cornell chemist's perception that he didn't 'do' and then 'write up' Chemistry; he wrote Chemistry (Monroe, 2002).The result was disciplinary writing-intensive courses through all 4 college years, i.e. into the Majors, studying a wide variety of those who had written the discipline but also contributing to that project: with student writing being published. As writing is disciplinary meaning-making rather than the mere reporting of research results, such student writing potentially contributes to the discipline as a discourse community; as writing - like teaching and assessment - is a disciplinary process, its evaluation contributes to the model of the discipline as a community of practice; both round out disciplinary models drawn from research writing and research processes.

The argument here is that SoTL and complementary teaching-based initiatives can and should be transformatory of the disciplinary epistemological frameworks. Writing in the Disciplines also affects students' disciplinary identity by engaging them also with the past – some WiD projects start locating students in the discipline by having them come into

dialogue with and write about some of its foundational thinkers and writers: those who 'wrote the discipline'. To write about such (cf Google Scholar's 'Stand on the Shoulders of Giants') puts the student – whether temporary visitor, delimited-stay or proto-researcher – into dialogue with those who shaped the discipline of which they are now coming to be a part. Into dialogue rather than into discipleship, as independent members of a community of discourse: for it follows from Writing [in] the Disciplines' founding vision that involving students in writing involves them also in writing the discipline. Seeing the discipline as an 117 inclusive community of discourse rather than a hierarchical institution brings students, even those 'short stayers'- for the outsider sometimes sees more of the game - into membership of that community.

Disciplinary SoTL comes into this because a Writing in the Disciplines approach changes the aims and nature of course assignments and assessment, hopefully as part of a structured and SoTL-evaluated and -disseminated programme (just one example is Maxwell, 2010). To change the assessment and assignment process is to change the nature of learning and potential meaning-making in the discipline as a whole; to go further and publish student writing can add new dimensions to the discipline as a whole.

The second teaching-led, discipline-challenging intervention is that of troublesome knowledge and its companion project that of threshold concepts. Ray Land and colleagues, through a series of conferences and books (Meyer and Land, 2006; Land, 2008), set disciplines a radical question: what are the threshold concepts in your discipline? Threshold concepts are discipline-shaping concepts which offer a gateway into a new way of visualising disciplinary data and content. They are essentially irreversible – once absorbed it is not possible to see the discipline in the 'old' way. But such concepts cannot just be 'taught'; the student has to get to a point where the 'old' paradigm is no longer enough: a point of 'stuckness', painful and disorientating, a necessary pre-requisite for trying to find a place in the 'new', equally disorientating, paradigm.

It is intrinsic to threshold concepts that, like riding a bicycle! once absorbed and internalised

it is difficult to imagine thinking without them. Again, a SoTL approach can investigate the processes and turn back to the discipline the nature, implications and perhaps limitations of these central concepts. For threshold concepts potentially offer two challenges to the established paradigm that informs disciplinary researchers. Firstly, the epistemological challenge is the need to see and map the discipline as a sequence of essential conceptual framings (as they are irreversible, the 'disciplined' academic has long absorbed the final concept and finds it difficult to 'unpick' the previous layers of disciplinary understanding).The need to investigate student 'stuckness' and the difficulty and deep reluctance inherent in crossing the threshold may be illuminating: what do they have to relinquish in order to move on? A lesser understanding, surely, but also perhaps confidence in the way the field and data work? Maybe a richer or more 'real world' or 'natural' or 'grounded' understanding of the work they are engaged with? As always, SoTL investigations bring out both epistemological and ontological aspects of the discipline: what it is to understand, to make independent meanings of disciplinary material; but also what it is to see oneself as an 'x' – a mathematician, economist, doctor, literary critic…

The second challenge to the 'disciplined' academic through SoTL investigation of threshold concepts is how to deal with troublesome knowledge, made in the absence of the next concept. Of course the easy thing is for the teacher to dismiss the assignment, explaining that an essential concept is needed. But David Perkins' (1999) original conception was that in the absence of the recognised disciplinary paradigm, students make their own sense of disciplinary data and agendas. And from that uncertain sense-making may come challenges to the disciplinary paradigm. Kuhn's concept of the paradigm came from physics, where a radical challenge may break the paradigm, as the Einsteinian broke the Newtonian, and Perkins talked of troublesome knowledge as potentially stimulating the next breakthrough. 118 Paradigms in accumulative disciplines like Chemistry and in essentially dialogic and disputed disciplines like Literary Studies may operate differently – perhaps SoTL studies of students and troublesome knowledge may result in a visualisation of troublesome knowledge not as

breaking the paradigm but as turning the kaleidoscope by which multi-approach disciplines'
multivariate data are seen.

Whether that is true of narratives around and before the acquisition of the next threshold
concept, I would like to put the whole issue into a SoTL framework. Because much SoTL
work seems to me to have potential to produce troublesome knowledge: really taking
account of students 'difficulty' papers, treating the difficulty as not necessarily specific to the
student but one which may be asking a question of the discipline. Likewise, a digital
narrative or multimodal assignment raises issues about what it is to 'write the discipline'.

In any case, I see SoTL's disciplinary contribution as being to ask troublesome questions
and to bring into disciplinary conversations the troublesome knowledge generated in the
teaching and student experience. A vital and vitalising mission.

The argument here is that SoTL investigations and innovations can have a transformative
effect on the discipline. Of course there are generic SoTL projects which inform all teachers
but the arguments here are based on evaluations of teaching initiatives by which SoTL, in
effect, investigates and changes the epistemological structure of the discipline – which is
particular to that specific discipline - and the ontological status and development of those in
the wider disciplinary community. SoTL at its best forms additional communities of practice
within the disciplines – communities of practice which are essentially inclusive, with agendas
coming from SoTL workers but also drawing in all kinds of co-workers into an open
conversation, one which suggests further SoTL investigations.

Whoever leads the research – which of course must be evaluated and published like any
other kind of research – SoTL's rootedness in the teaching and student experience of
teaching reorients the discipline's questions. And, most importantly, it moves teaching away
from a transmission or knowledge transfer model: i.e. away from the teacher delivering
disciplinary content created elsewhere in the discipline. SoTL's transformative investigations
of new ways of exploring and reporting the discipline - digital narratives, multimedia
dissertations, the visible knowledge project and so much more - have challenged both the

possibilities and meaning-making processes of the discipline. SoTL disciplinary knowledge is just that: mobile, transformative, disciplinary knowledge about meaning-making and agendasetting for the discipline's future.

This is admittedly a hard argument to win. Research stars, research writing, research universities are all accorded automatic primacy over their teaching equivalents. The original SoTL claims in the US aimed to accord equivalent status and T and P regard for SoTL and 'Research' aka Scholarship of Discovery. The danger in well-developed generic SoTL, with its own stars, is that it continues a pernicious siloing of teaching and research. The argument here is that disciplinary SoTL allows teaching and research to be mutually informing, mutually developing of the discipline. And as Michael Bérubé, in introducing a day panel at MLA 2011 on 'The Academy in Hard Times', said, various disciplines are facing very hard times indeed. We can't afford siloes, we can't afford disengaged researchers, we can't afford 119 not to enable students to invest, and carry on investing in their chosen disciplines. I see transformatory, engaging, disciplinary SoTL as the main hope for such disciplines survival.

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