

## Opening Discussions

- Mike Gorman mentioning an exchange with Harry and Rob about 'contributory interactional expertise' where someone can be inside the expert community, but also changing the domain of expertise (changing the participant's understanding of what specialties need to be involved); needs to be more than just "we need Michael O'Rourke" but rather "we need philosophers involved."
- Michael: Is the IG a necessary or sufficient condition for interactional expertise? The real proof is being regarded as a member of the community in a full fledged way.
  - Mike: When I came into IE, it was before the imitation game – two quintessential examples with Harry and Katie
  - EBK: Papers in process on variation of motivations (Kennedy); evolution of the concept (Kennedy & Plaisance); and plurality and diversity of IEs (Plaisance & Kennedy)
  - Michael: Perhaps an 'interactional savant' rather than 'interactional expert' – lots of things that allowed me to understand and function effectively as a member of the research team was grounded in my ability to understand what the community and people were about.
  - Mike: Like your test better – if I landed in another group, and if people came up and talked to me, would they think I was a member of the community (up until you got into specific conversations about methodologies, formulas, etc)
  - Michael: It's not just being able to talk – being an interactional expert in a sense that's relevant to working with people and collaborating with people, you could have people who know all the facts in the world, but don't really get it
  - Mike: Also dynamics of trust, credibility, etc, things at the community and interpersonal level – but this isn't really considered in the SEE community
  - Rune: Can imagine various forms of interactional expertise imported into different situations
  - Michael: Related to EBK saying that the concept of IE has been hijacked; you can imagine a certain level of IE being required to be taken seriously by a CE community, but you can also imagine serious interdisciplinary environments where interactional expertise is beside the point – what matters is that you talk differently, that you aren't trying to blend in; different than trying to blend in, you're calling attention to differences and bringing in new language and perspectives
  - Stephen: There's a double whammy to the IG – any IE is typically instrumental, you're acquiring it for a purpose – you can change the expertise based on what the goal is. The imitation game has identified situations where the IG is its own end – why do I want interactional expertise in being Catholic? So that I'm not hassled. It's the end in and

of itself. What is the IE in aid of? There's a minimal thing it can be for – passing, but the contexts in which we're talking, passing is exactly not what you want – passing is instrumental, but not actually what you want

- Rune: It does the same work as my previous studies of physics before philosophy – they'll be paying more attention because I'm given some credibility
- EBK: Four motivation types that I'm suggesting: learner, challenger, mediator, and collaborator
- Michael: Comes back to Trading Zones. In the collaborator case, what you really want are “people who can ask questions and make claims that bring out the relevant best in other people”, who can bring their perspectives to bear in a way that draws out the relevant differences. You might have a certain talent for using what you know to highlight relevant differences. It's not important that you talk like the other people; it's critically important you don't talk like the other people to be able to draw out differences in other people. You need to get outside of yourself, but you could also fail by blending in so much with other people.
- Mike: It's the going native problem – if you become so immersed, you lose that difference
- Michael: You need a project creole, but that requires having differences to begin with.
- What's the problem with going native? When is it a problem?
  - All depends on what's motivating the work. It's not inherently problematic, it's situational.
  - Mike: Sometimes not looking for an outside perspective (e.g., working on a mathematical theory), unless you're wanting them to question fundamental paradigms. So, in case of STIR – you're wanting to stir things up, to change and challenge, can't go entirely native here and be totally wrapped up in the community
  - Stephen: Depends how the difference relates; in the systems biology case, there's a skill set that the biologists lack, and you wouldn't want to lose your skills and perspective
  - Rune: you need to remain strongly connected to your community to have value and expertise in the new community, but you also need to be able to communicate and exchange with the group as well
  - Rune: Puzzled with the SEE thing – had sympathy for the third wave paper, seeing the third wave as returning to the issues and being constructive rather than just destructive – confused now as SEE sees itself as a pure academic discipline; they have some knowledge about science, but how do you feed in to doing the science better?
  - Michael: The 'why' question is really interesting, and we each likely have our own answers to this. A higher level reason that may or may not be active in all of these cases would be a desire to solve problems, and the feeling that your perspective can help solve these. Why do

interdisciplinary work, so hard and not rewarded and associated with disciplinary disincentives? Because of this selfless response that the problems are important, the solutions will be more robust and have a greater chance at sustainable success if this perspective is integrated into the solution. There are also personal, selfish reasons – I'm addicted to learning new stuff, and with interdisciplinary work, you're always given the opportunity to learn new things. It's more selfish, but one could say that the.... I never go into these projects saying that I'm going to become an engineer, but... (Mike: "This is so cool!"). In a lot of cases, the real response is that you enjoyed hanging out with this person, you got lucky with a publication, they put your name on a grant, and you're two years down the road, and that's why you're doing it.

- Mike: need this in the report too – areas of future conversations, questioning, research
  - EBK: The reflection we can create and foster within this field, using this IE conversation as a case study, we're generating questions and critiques that aren't being done from within the community, but are substantially more relevant and targeted and drilling down more deeply than is possible from a wide angle of outside the community
- Mike: Want to be careful about not taking this too far – not necessarily a discipline, more of a community and conversation

### **Brainstorming on Themes, Questions, Goals, Structure, and Audience**

- Key themes and questions
  - Difference between contrib and interactional expertise
  - What is engagement
  - For all of these – why do they matter?
  - Usefulness of conation is in working out the styles of individuals and how to create groups
- How much do we bring in affective/conative aspects ...
  - Brit – depends on audience
    - For scits conation is relevant as goal is to make teams work
    - Not usually part of STI but keep for certain purposes
- Brit – key theme – boundary work
  - Field building
  - Capacity building
  - Example – Jasanoff (Harvard STS) have a website that describes socio-technical imaginaries – good example of how to feel one's way to creating something
    - Think of sti as a concept like this .
  - Integration – what is it?
  - Connecting knowledge production and users to ensure desirable outcomes

- 2 capacities
  - our capacity to work as a field
    - make ourselves know
    - get funded
    - have a coherent message
  - 2<sup>nd</sup> capacity
    - help STEM to connect their work to societal outcomes
- Rune – bringing work of humanists and scientists into greater harmony
  - Q: Why do we need to do this?
- What level of granularity is relevant to this report (EK)?
  - Want to be provocative without getting into the weeds
  - Brit – website structure is good – it has overview and links out to details of various communities
- MOR – themes
  - What do the communities have in common and what are their differences
  - Why this group and not some others – what it was that made this group the right group
  - How does integration turn up in the various groups
    - Britt – use Tom’s question – what are we integrating?
      - For conation – team members
  - Modes of integration
    - Critical mode – theoretical account of what integration is – describe it when it turns up
    - Facilitative mode – make integration happen
  - There is a facilitative dimension to all the communities of integration
    - Other ways of making the point
      - Therapeutic vs diagnostic
      - Evaluation
        - Our groups are evaluators (formative vs summative)
        - mid-stream modulation as evaluation
  - MOR – groups get connected via a mode of integration
  - EK – role of integration – when is it good?
  - EK – plurality of approaches – ‘toolkit’ of ways to integrate in different situation – not just laundry list but no single theory either
  - SJC – case studies
    - Could be vignettes to illustrate larger themes
    - Britt – when field building want theoretical harmony – case studies push toward family resemblance rather than consistent theory.
- Need report to have value for others outside the group
- Britt – we need to ‘map’ other groups we are connected to
  - MOR – I2S – and Bammer’s recent book
    - Has status as integrator of integrators ....

- I2S subsumes STI?
  - Britt – STI is diff from I2S because more STS in STI – BUT STI isn't STS – minimally we are doing something specific (a subfield?)
  - Britt – I2S wants a discipline and STI wants a field
  - Overlap with Philosophy of/as Interdisciplinarity (PIN)
    - Connect STI to PIN to distinguish STI from STS
    - MOR – key feature is INTEGRATION
      - An important process that we are trying to get a handle on – hence we are not PIN
- Report needs to locate STI with regard to other efforts!!!!!!!
- AUDIENCE
  - Each of the communities here
  - Policy makers
  - Scientists and engineers considering engagement
  - STEM audiences ???
  - PIN
  - Granting bodies/funding agencies
    - Sci of science information and policy
    - Connections to entrepreneurship
    - NIH –
      - National cancer institute – Kara Hall
      - Leverage broader impacts criterion – this group helps with broader impacts
      - Leverage translation within NIH
    - Rene von Schomberg – European Commission - ???
    - Norwegian research council
    - Shirk – knowledge mobilization
    - EK – list too quick for SJC
  - Professional Societies
  - SSSS
  - APA
  - I2S
  - 'us'
  - SciTS
  - AIS
  - Psych of Science
  - NORDP
    - Aim for presentation at next NORDP meeting
  - AAAS
  - Disciplines
    - Those that contain practitioners of STI (Soc Sci and Humanities)
    - Those that benefit from STI
      - Health sci
      - STEM

- Venue for Report
  - Social Epistemologies
    - Post as a pre-print and get discussion
  - BioScience
  - PLOS 1
  - Social Studies of Science
- Outcomes –
  - SciTS
  - Website (a la jasanoff)
  - Roars Transactions – possibly relevant journal (says Britt)
    - Journals – public philosophy
  - Gorman – we need a strong presence on a journal
    - Techne is looking for an editor
  - Next Meeting (agenda for)
  - Poster at Gabrielle’s conference
    - A sub-theme
      - With posters from each of the communities
- Start with a paper
- Reports
- Manifesto
- Britt – we are not I2S – (because we are not disciplining the area) – ASU is not an accident – we are creating a field – which is relevant to the ‘new’ American university
  - MGorman – fields subsumes things
  - Britt – 1,000 words today and invite ASU participation when MOR talks to Will Debars
- Executive summary/ manifesto for STI
- White paper for Kara Hall

### **Outlining the Paper & Executive Summary**

- Wanting to make sure that people can read themselves into the field, and find a sense of identity and a purpose for joining the field
- Make sure we don’t lose the themes from earlier that emerged yesterday (see above)
- Michael: The question of what can we do for you has two audiences – the labs and scientists (people who don’t always think of themselves as potential members of our community, but people who might be able to profit from interacting with our community) and the people who are engaging in overlapping efforts (I2S, solitary scholars, Philosophy of/as Interdisciplinarity)
  - Erik: Argument could be that this is a field, let’s prove it to you (enough theory, method, critical mass, movement, research directions, future projects, etc)
  - Michael: In both a top down (philosophical) and bottom up (data driven) could be the claim that there is an emerging, unified set of

efforts that can look disparate at first glance (all over the place, might not seem related), but if you reorient the perspective a little, they all line up

- Erik: To make the argument this is a field, start with the diversity and the heterogeneity, then make the move that there's actually an angle from which they line up. What looks diverse is actually coherent, and it has both momentum and structure, as well as theory, practice, and method. Do we end with an assessment/projection?
- Rune: The diversity creates a robustness of the problem – that we're on to something from different perspectives.
- Michael: Start off with diversity, then move towards a coherence or unity within the diversity, which motivations attention to sociotechnical integration as what accounts for the coherence. Then, STI gets unpacked in ways that reflect some level of appreciation for the details, for the complexity of the concept, and allows us to point in the direction of some of the issues (analysis and issues are critical here). Then, starting to dig into the communities of integration – similarities and differences; form, means, and ends.
  - EBK: Make the point that the pluralistic conversation gathered in STI is part of what facilitates this
- Britt: All of these are sort of descriptive. At number one, perhaps we put the need for this field.
  - Erik: I'm going to resist needs statements. Needs to be really embedded. With the exception of mine, that there's a groundswell of policies
  - Michael: It could be part of the coherence section
  - Erik: Policy pressure, and groundswell of the responses; issues are going to open up and seed what we talk about in forms, means, and ends
- Michael: This kind of form can find a peer reviewed home, but it can also lead to a more fleshed out form in the longer report. Issues represent departure points for the questions that we're tackling, which can be critical in the report especially
- Michael: To have the needs claim to remind the reader why this matters. Perhaps use this as the ending to leave the readers with it.
  - Mike: Can have this highlighted at the front, and filled in at the back
- Erik: Do diversity/policy in section one; and then come back to it in section five to instill the importance (otherwise they won't read past the first page)
- Erik: We want to include as much diversity as we can, but we don't want the article to be a laundry list
  - Britt: We want to strategically pick people who either want to be in or people who might have questioned it already
- Mike: What we did here was a proof of concept, that we can get this diverse community together and have productive exchange

- Erik: We do want 30-40 more in the appendix of the report eventually; pick things that represent the extremes of theory, method, and practice
- Michael: This can be seen as a collaborative contribution to an ongoing effort with the I2S folks; we're coming at it in a parallel way that will help and be collaborative
- Michael: This can build and resonate with the folks in Gabriel community if it's coming from the integrative and policy part of ASU, it helps to ease things with I2S. Meeting with Will Debars (Crow's co-writer) tomorrow, so we'll take a 1000 word executive summary to take to that meeting.
  - Erik: Fold in new American university as an example, but don't want to make it all about moving Crow's vision forwards – but, we're in tune with the silo-busting
  - Michael: Doesn't need to be mentioned in the article at all, but it will be clear in the affiliations of authorship
  - Britt: Can be mentioned in some of the boundary work and demarcation
- Sharon: discussions about integration have emerged elsewhere (NIH, modeling to integrate different data, call that came out last May, nano-informatics chapter)
- Britt suggested at lunch that we co-author with a group this size by each of us sharing a paragraph; alternative would be having a point person per section and delegate/write as appropriate; could spend 10 minutes now mapping out what goes in to each