Knowledge and the University: an ecological approach

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Invited lecture, Universidad Santiago de Cali, Colombia, 9 August 2016
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Universities for the world

- Traditionally, universities were worlds in themselves
- Shut themselves off from the world – literally
  - With definite boundaries
- But, over the past 50 years, universities have been called out of themselves
  - Into the world
- But more, they are oriented towards the world
- They look in the direction of the world
- A silent revolution – they have turned around
The call for knowledge

• This change in the orientation of the university
• The result of the emergence of the ‘knowledge society’
• This is a cognitive society, built around understanding
• At first, the university was a pure winner
• Its raison d’etre, knowledge, was prized by society
• And so ‘research’ became the driving focus of what it was to be a ‘university’
Knowledge was not enough – it had to be useful knowledge

- ‘Knowledge for its own sake’
- This was the mantra of universities
- But society quickly asked for more
- It wanted *useful* knowledge
- Knowledge that could be put quickly to work in the world
- And so a new mantra appeared: ‘knowledge transfer’
- 2 meanings:
  - Knowledge should be capable of being transferred into the world
  - The university itself should transfer its knowledge into the world
The presence of the economy

- A strong connection between society and knowledge
- Greater impetus - assumption of interconnection with economic growth
- The new industries were knowledge-based
- Thesis of ‘triple helix’ – state/ universities/ industry (Ranga and Etzkowitz)
- The state was therefore willing to invest in universities
- On condition that they produced useful and economically valuable knowledge
- The primary ‘condition’ of knowledge was governed by the question: ‘What use is it?’ (Lyotard)
- Research should have demonstrable ‘impact’ (UK)
Extraordinary growth of universities

- 15,000 universities
- 200 million students
- However, only say 500 universities are ‘research universities’
- Considerable growth of private sector of universities
- Most – not all – are teaching universities (conduct little research)
- The state still invests heavily in higher education & universities
- Belief in the link between higher education and economic growth
- Emergence of ‘cognitive capitalism’ (Boutang)
The new knowledge: the Mode 2 thesis

• In this upheaval, knowledge itself undergoes subtle changes
• The ‘Mode 2’ thesis (Michael Gibbons and his associates)
• Mode 1 knowledge: traditional, formal, propositional, in journals in university libraries
• Mode 2: a new kind of knowledge emerging in the knowledge society itself
  • Knowledge in-the-world, *in situ*
  • Ephemeral
  • Produced as a result of teams coming together to solve particular problems in the world
  • Multi-disciplinary and even inter-disciplinary
If that was the shape of the new knowledge in the world, perhaps universities should follow that course.

Perhaps its mode of knowledge production should become more Mode 2 instead of old-fashioned Mode 1?

And we have seen signs of that:

- Larger teams
- Multi-disciplinary
- More of a sense of societal issues and problems
- More local and regional in character (not so ‘universal’).
A knowledge hierarchy

- There has always been a hierarchy across fields of knowledge
  - Ever since the Greeks and medieval universities
  - Some disciplines have been felt to be more foundational, more rigorous
  - And it has always been changing
  - But recently this hierarchy has become exceptionally marked
  - Now, across the world, it is the STEM disciplines that are favoured: science, technology, engineering, mathematics
  - In turn, the humanities are in difficulty
    - many of the newer universities do not offer humanities;
    - governments favour STEM disciplines in their funding.
A particular issue – on understanding

• Much talk of the need for students to develop their ‘communication skills’
• Does this take on a particular edge in a situation where students gain their education in particular disciplines
• Especially in STEM disciplines
• What does it mean for STEM-based students to develop their communication skills?
• Communication is partly a matter of understanding the audience, the recipient of a message
• But the matter of ‘understanding’ has been the province of the humanities.
• Does a STEM-based education deprive students of a deep ‘understanding’?
A 2\textsuperscript{nd} issue – democracy and critical citizenship

- Slide towards instrumental reason
- Knowledge only counts as knowledge insofar as it yields a potential for control over the environment
- NB: impact on natural ecologies, climate, biodiversity
- This emphasis on knowledge-for-control reduces the scope for critical reason
- And, in the long run, reduces the potential for students to become critical citizens
- Weakening of the humanities even endangers democracy itself (Nussbaum)
- There is a rhetoric around ‘students as global citizens’ – but this lacks a conceptual basis, and is itself in danger of producing world entrepreneurs.
Interdisciplinarity – is it arriving?

- The cause of interdisciplinarity has been advanced for 50 years
- After all, the disciplines developed through the 19th and 20th centuries
- They may not be an adequate basis for universities in the 21st century
- The 21st century – interconnected, fast-moving, challenges to frames of understanding, instability …
- The internet age – opens knowledge across the disciplines
- Connections with the wider world are growing
- Emergence of ‘ethno-epistemic assemblages’ (Irwin and Michael)
- Knowledge production – messy, less bounded, spreading across disciplines, policy, practice
Multimodality

- New technologies change our understandings of the world
- The relationship of screen to the world differs from the relationship of written text to the world (Kress)
- More: the media through which we access the world have recently widened – hence ‘multimodality’
- Real impact: should we allow film, sound, pictures, movement to form part of doctorate theses?
- Why should we stick to words on the page, when knowledge production itself is no longer confined in that way?
Embodied knowledge

- Increasingly a sense that we understand the world partly through our being in the world
- Through our bodily movements in and through the world
- Knowledge is not inert propositional knowledge
- But is active in the world
- And there are some innovations in higher education that respond to this line of thought
- For example, getting science students to act out what it is to be a molecule.
Professional knowledge

• An increasing interest in professional knowledge
• Different issues:
  1 The professional-client relationship was a hierarchy, with the professional being in command of knowledge
     • Now, a more equal knowledge partnership, with joint decisions
  2 Professional knowledge is now understood as a complex – technical knowledge, process knowledge, embodied knowledge; and in dialogue
  3 Professionals have to communicate, to take the part of the ‘other’ – calls for deep understanding (of communities), of empathy, of care.
  4 Professionals have a responsibility to speak out critically on key issues.

So professional ‘knowledge’ is all the time widening to become a kind of professional-concern-in-the-world.
Signs of universities-without-walls (Finnegan) emerging:
1. Researchers making their findings and data available to the public
   - ‘socialist knowledge’ (Peters)
2. The public being enabled to participate in academic research (astronomy, climate change, oral history, archaeology)
3. Emergence of ‘citizen scientists’
4. University academics contributing to public debates

Issues here of
• ‘the public university
• the university enhancing the public sphere (Habermas) & public understanding of issues
• public communication.
Initial summary

Knowledge changes:
• Not only in its technologies
• And in its forms of production
• But in its criteria – what counts as knowledge is changing
• Becoming more instrumental
• And more marketized

Problems of:
• Its divisions – can academics communicate across disciplines?
• Democracy – citizenship in a knowledge society
• Circulation of knowledge across society
• Communication – can academics communicate to/with public audiences?
An emerging knowledge ecosystem

- Flows of knowledge
- Different regions of knowledge – in and beyond the academic world
- Mixes of knowledge – knowledge assemblages (Deleuze and Guattari)
- Increasingly unstructured
- But also new structures, marked by power, finance, ideologies
- It is an knowledge ecosystem
- Fragile, impaired, falling short of its potential (for human understanding and for the improvement of the whole world)
The university and the knowledge ecology

- New roles and new questions for the university as site of knowledge production in navigating across the regions of this knowledge ecology.

- *Can the university work to repair and advance this knowledge ecology:*
  - To improve the circulation of knowledge
  - To enhance human understanding
  - To develop the public sphere
  - To inject principles of openness, rigour & criticality into public debates
  - And to work with a concern for the whole Earth? (Mickey, Riggio)

- *All this points to the need for*
  - a new set of ideas of ‘engaging with the world’ (Archer and Maccarini)
  - a new kind of ‘knowledge management’ in universities (Scott Metcalfe)
Conclusions

• Knowledge is spewing out, in universities but also across the world
  – It is becoming more instrumental
  – But there are also signs of concerns with its malformations
• This is a knowledge ecosystem, which is impaired
  – It is too bounded, too imbued with the interests of the powerful,
  – and with limited levels of critical reason
• The university has major challenges here
  – Can it help to develop this knowledge ecology so that
    the growth of knowledge is better fitted for this Earth?
• We can see some signs of universities doing just this
• But we need a more systematic and coordinated effort by universities
  – if they are to fulfil the responsibilities now before them
    ▪ and through its knowledges engage with the world
• We need a totally new kind of knowledge management,
  – University leaders have to become active epistemologists!
  – ethically oriented, & imbued with a concern for the whole Earth.
Brief bibliography


