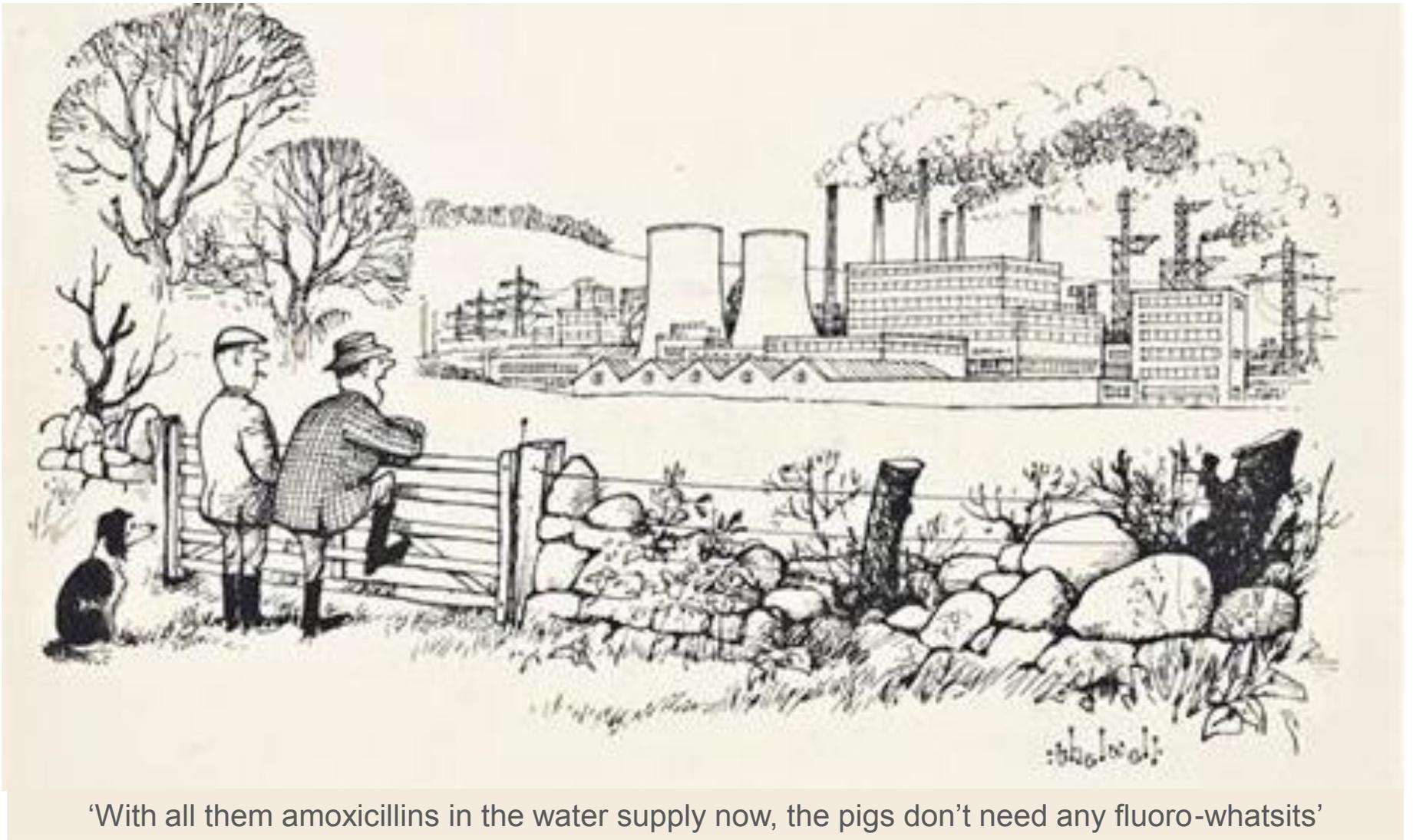
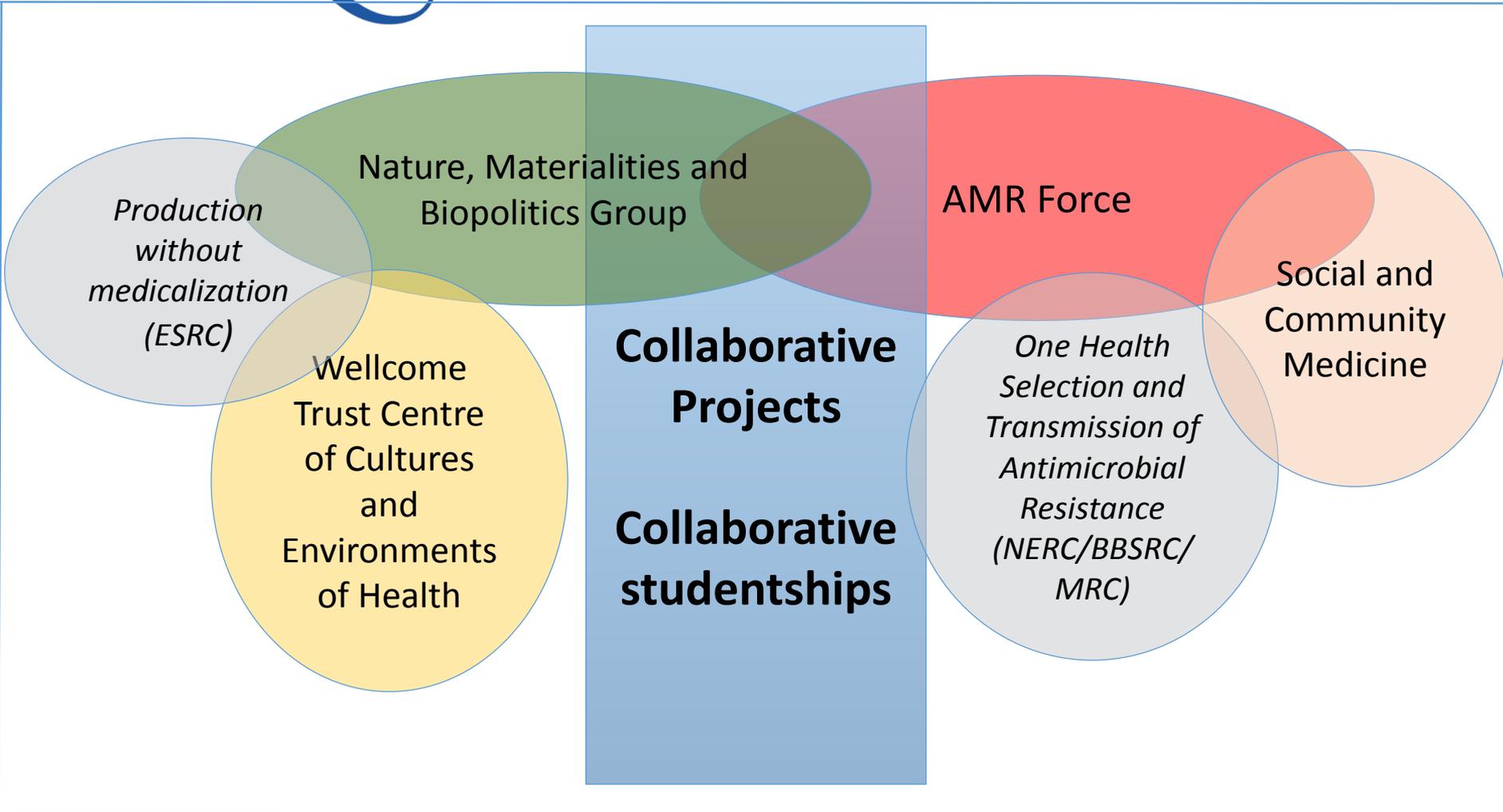


**Scientists, Humans and Other Animals:
Negotiating the vocabulary (amongst other
things) of Interdisciplinary AMR Research**

Henry Buller and Kristen Reyher



'With all them amoxicillins in the water supply now, the pigs don't need any fluoro-whatsits'

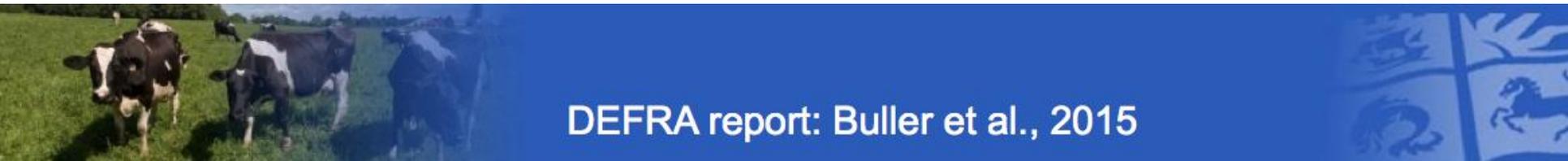


Current collaborative interdisciplinary projects

- A review of current antimicrobial practice in livestock farming to inform appropriate interventions to reduce resistance (Defra, 2015)
- Participatory Policy Making in antimicrobial stewardship (Waitrose Dairy Farmers and Coombe Farm, 2015-2016)
- Understanding on-farm medicine use in dairy cattle: Addressing the knowledge gap (Langford Trust, 2016-2019)
- Reducing antimicrobial use through Farmer Learning Groups (AHDB Dairy, 2016-2019)
- Diagnostic innovation and livestock (DIAL): towards more effective and sustainable applications of antibiotics in livestock farming (ESRC/NIHR/AHRC/BBSRC/MRC/Defra/VMD, 2017-2021)

Antimicrobial use in selected livestock systems

- Use of medicines is complex, revealing awareness but lack of in-depth knowledge and understanding
- Antimicrobial governance requires regulation, responsabilisation and trust between farmer and vet
- Sector-specific knowledge and data are vital to identify the spaces for change in the trajectories of practice



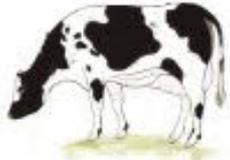
Actor motivations (in antimicrobial use)

- Use of medicines is complex
- Our understanding is incomplete
- Stakeholders are more open to change than we might think

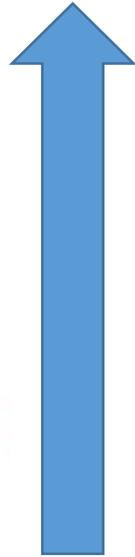
Factor	Description
2	THE MODERN BUSINESS - Farming works (The AMR issue may be over-stated. Modern, high-health livestock systems are already working well)
4	THE INTERVENTIONIST - The veterinary extensionist (Reductions in antibiotic use are both justified and achievable and require regulation and veterinary-led farmer education)
1	THE AUTONOMIST: There may be an issue, but it can be sorted in-house. Incremental improvements will happen and will be taken up.

Actor groupings

(from Q sort undertaken for Defra funded research)



WD Farmers



Participatory
Policy Making
(PPM)



Van Dijk *et al.*, 2016

Participatory Policy Making

- Innovative change to fill the void in public policy making
- Empowerment of stakeholders to
 - Formulate
 - Implement
 - Monitor
 - Evaluate
- Achieve sustainable farm practice change
 - More practical and implementable
 - Maintain control and sense of ownership

Presentation to gain understanding of farmer & vet perceptions of use of AMs and AMR & to raise their awareness, then focus groups



Evaluation at end of workshops to identify challenges and benefits to farmers

1. Identify policy need

2. Convene policy development team

3. Set policy objectives

4. Formulate policy

5. Review draft policy

6. Consolidate draft policy

7. Approve policy

8. Communicate policy to all producers

9. Develop policy implementation tools

10. Implement policy

11. Evaluate & update

4 regional workshops - all producers and their veterinarians (n=97)



Follow-up meetings with farmer representatives to refine policy

Interdisciplinary approaches to researching antimicrobial resistance: some reflections

1. Getting research results out there
2. Exploring the multiple meanings of 'practice'
3. Methodological cross-fertilisations
4. Mobilisation and Participation

1. Getting the research out there

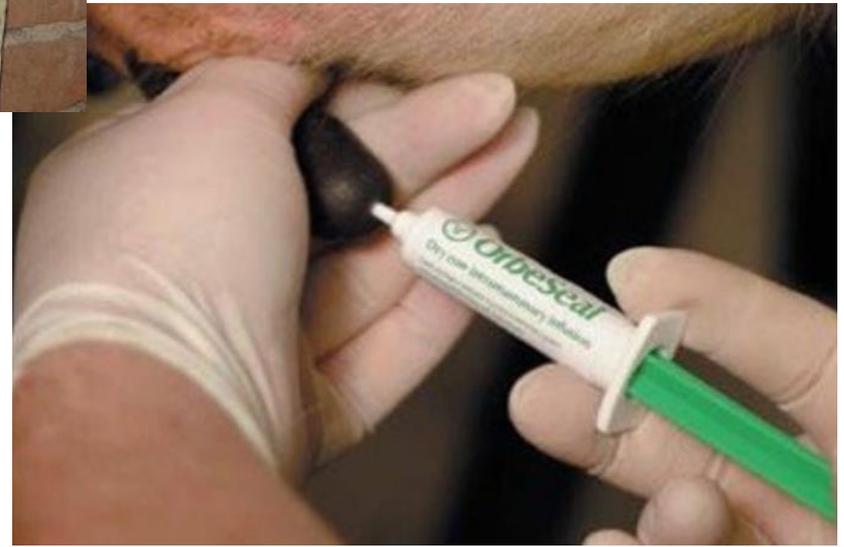
- Working directly with farmers and veterinary practices
- System developed, data exported from vets for benchmarking and development of KPI's
- Development of training material
- ~70% of farmers and veterinarians changed their use of AMs since workshops
- More data coming in



2. Exploring the multiple meanings of 'practice'



3. Methodological cross-fertilisations



4. Mobilisation and Participation

- *“made me think about antibiotic use more”*
- *“knowing the opinions of my fellow producers”*
- *“ideas for moving our practice forward, using drug usage as part of the Herd Health Plan”*
- *“helped make policy that works for the farmer”*
- 42% felt participation was challenging
- 58% envisaged making changes to AM use as a result of their participation in the workshops



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