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How to move beyond the dialogism of the ‘Parliament of Things’ and the ‘Hybrid Forum’ when rethinking participatory experiments with ANT

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Section 1: Thinking about participation with ANT

In *Reassembling the Social*, Bruno Latour (2005a) describes the defining moment of ANT as that when three social theorists (John Law, Michel Callon and himself) each managed to persuade others that three objects formerly understood to be non-social (respectively: reefs, scallops and microbes) could be described as *associated* with social entities.¹ The concept of association inspired detailed redescriptions of such objects, in ways which showed that ‘they *make* others do unexpected things’ (2005a: 106). The work of the analyst, as these authors saw it, was to get closer to entities that were traditionally seen as non-social, follow them and trace, in minute detail, their relations, translations and mediations. In order to do this, the very meaning of the social and the natural would need to be ‘dissolved simultaneously’ (Latour 2005a: 109).

These early iterations of ANT worked primarily to produce better accounts of how *scientific* knowledge was made: The socio-material practices that went into creating indisputable ‘facts’ which were accepted as existing ‘out there’ in an ontological world that existed independent of human agency. This core orientation has significant implications for experiments in participation. In a world where scientific and political controversies are often inseparable (e.g. climate change, GM foods, avian flu, tobacco, human reproduction, etc.), attempts to unsettle ‘natural’ facts are vital to the tricky task of participating in contemporary democratic politics.

In this chapter, we will outline the basics of an ANT approach to participation. We begin with a discussion of three key texts: Callon, Lascoume and Barthe's (2009) *Acting in an Uncertain World*, Latour's (2004) *Politics of Nature* and Latour's chapter (2005b) *From Realpolitik to Dingpolitik* (published in Weibel and Latour's 2005 *Making Things Public: Atmospheres of Democracy*). These texts spark readers to reimagine the spaces, procedures and philosophies in play around technoscientific controversies in public life. The insights of ANT, their authors believed, could address the proliferation of such controversies, and contribute to better democratising democracy. Through subtly different but overlapping argumentation, they advocated:

- intervening in technical and scientific knowledge-making;
- opening out the idea of expertise through the championing of different understandings;
- reconfiguring lay and expert knowledges in research;
- building new evidence;
- creating 'spaces' or 'collectives' where people and things might gather together to discuss, differ and dispute; and
- supporting an explicitly experimental mode of engagement around controversy.

In each of the texts, the authors established specific ideas about how to achieve the aforementioned. We outline these in section 1. Then, in section 2, we explore the performance of these ideas 'in the wild' through an experimental participatory collective formed around blue-green algae in a lake, Loweswater, in Cumbria, Northern England. After that, in sections 3 and 4, we query what a subsequent project, which looks at how farmers make decisions about the management of cattle slurry,² can tell us about moving beyond these approaches in rethinking participatory experiments in the spirit of ANT.

Science in the wild: hybrid forums

We begin our whirlwind tour of an ANT approach to participation with the ideas of Callon, Lascoumes and Barthe (2009) in *Acting in an Uncertain World*. Here, Callon and colleagues advocate for widening participation in the socio-material construction of scientific knowledge via 'hybrid forums.' Participation is seen by these authors as an appropriate response to ontological uncertainty and scientific controversy. They advocate a 'technical democracy' – one where political institutions are expanded and improved, to open out controversies through inclusive, public collaborations in knowledge-making and research.

A *hybrid forum* (henceforth HyFo) is a group that comes together to address a problem. The HyFo is *hybrid* both because the members are heterogeneous (scientists; politicians; interested laypersons), and the problem is addressed in many different domains (technological; ethical; economic). It is a *forum* because it creates an open, public space for debate, from which no one (and no subject) is excluded. A HyFo's members explicitly recognise that knowledge creation – even knowledge creation concerning the natural world – is inherently a political act. That is, it involves a politics performed through (public) dialogue, rather than delegation to political professionals or elected officials. HyFos are therefore based on collective experimentation and learning. They scramble the division between laypersons and officially appointed experts. This makes the HyFo a 'normatively oriented space' and one that has specific 'dialogic procedures' (Callon et al. 2009: 161).

Both the socio-material construction of science and the political implications of this construction are explicitly recognised in the HyFo, and participation in knowledge creation is extended beyond the milieu of the expert. Science leaves the protected space of the laboratory and goes 'into the wild.' Clear-cut decisions – the arrival at a final and absolute truth – are not necessarily

the desired outcome of the HyFo; instead, a favourable outcome is an ongoing ‘series of rendezvous’ (2009: 223), repeated meetings that make provisional decisions, open to change as information, circumstances or priorities change. In *Acting in an Uncertain World*, Callon et al. lay out guidelines for how the successful HyFo should be both executed and evaluated.

The participatory non-human: the Parliament of Things

Further contributions to ANT participatory thinking are found in Latour’s (2004) book *Politics of Nature* and in extensions of his arguments there in the essay ‘From Realpolitik to Dingpolitik or how to make things public,’ written for the exhibition catalogue *Making Things Public* (Weibel and Latour 2005). In *Politics of Nature*, Latour proposes a ‘new constitution’ to do away with the ‘illicit’ divide of nature (as represented by Science – note the capital ‘S’) and society (aka Politics). This new constitution would allow participants in democracies to work towards a ‘common world,’ not split into society and nature, where both humans (society, the realm of politics) and non-human ‘things’ (nature, the realm of science) are afforded due to political process. This, in other words, is a vision of an enlarged democracy in which the hybridity of nature-society is recognised. In his later elaboration of this argument, Latour suggested that ‘Dings,’ where ‘the Ding designates *both those who assemble* because they are concerned *as well as what causes* their concerns and divisions,’ needed to be brought back into politics (2005b: 8, our emphasis). Dings, Latour argued, should become the centre of attention in what he called an ‘object-oriented democracy’ (2005b: 8).

Dingpolitik, or the ‘parliament of things,’ involves a vital move whereby participants in democracies start to work around ‘matters of concern’ rather than ‘matters of fact.’ For Latour, a ‘matter of fact’ (henceforth MoFact) is firmly linked to a particular conception of ‘Scientific knowledge.’ Such ‘Scientific knowledge’ – an essential part of the post-enlightenment ‘modern

constitution' (Latour, 1993) – works by defining an objective nature. Latour deliberately gives this kind of 'Science' a capital 'S' to symbolise its power and to signal the way it closes down dissent and takes the place of politics in conventional decision-making fora. Latour suggests that such MoFact retain the power to render matter 'mute' and to make nature 'incontestable' (Latour, 2004:10). MoFact, in other words, work to stifle and deny politics, even in situations of controversy.

To address this, Latour puts forward a new concept: 'matters of concern. To conceptualise things as matters of concern (henceforth MoConcern) is to allow for the transformation of MoFact, impotent as they are in their Scientific form, into participatory 'things' that are lively and have agency.

Latour's proposition is that new collectives are needed to allow us to move away from Science towards a situation where – similar to within the HyFo – both lay and expert practitioners might engage in the making of knowledge. These new collectives would not be silenced by indisputable scientific 'facts.' Rather, they would become politically active in MoConcern. Non-human 'things' would play a vital role (Latour 2004: 69), and be recognised as having the power to trigger 'new occasions to passionately differ and dispute' (Latour 2005b: 5).

In the Parliament of Things (PoT), participants are not required (as Scientists are) to leave their attachments, passions and weaknesses at the door in favour of an imagined objectivity. All scientific and political participants of collectives have the unavoidable 'disabilities' of weakness, passion and attachment, Latour argues; it is impossible to adopt a 'view from nowhere' (Nagel 1986), or speak on behalf of the world objectively. We are all inherently 'politically challenged' and democracy demands we recognise this. Latour rhetorically asks, 'Are we not, on the whole, totally disabled?' (Latour 2005b: 20), and urges participants to embrace this 'disability,' rather

than chase the ideal of becoming perfectly eloquent, enlightened and objective disembodied thinkers.

Taken together, *Acting in an Uncertain World*, *Politics of Nature* and *Making Things Public* advocate a more open model for doing science, which is inclusive not just of wider *human* demos, but also the vitality of the non-human material world – recognising that *matter* matters – in the production of scientific knowledge. Furthermore, all participants in the new knowledge-making collectives should acknowledge their own ‘constitutive attachments’ (Callon et al. 2009: 265) or ‘disabilities’ (Latour 2005b: 20) as essential to the work of democratising democracy. So what does this mean in practice? In the next section, we describe how several simple principles drawn from these ANT ideas were adapted and utilised ‘in the wild’ (Callon et al 2009: 104), that is, within a specific participatory collective that emerged in Loweswater, Cumbria, in the north of England.

Section 2: ANT in the wild: a participatory experiment in Loweswater

In 2004, a group of three ecologists working with farmers around a lake that was exhibiting deteriorating water quality invited two sociologists of science (Claire Waterton and Jake Morris) to join their team. At that time, the Loweswater Lake was subject to increasingly frequent and unpredictable ‘blooms’ of cyanobacteria, or ‘blue-green algae.’ Cyanobacteria are organisms that depend on, and are ‘limited by,’ high nutrient loads within lake water, typically attributed to farm run-off of fertiliser or animal excrement. These algae can be poisonous to animals and sometimes humans, and the deteriorating quality of the lake, situated within the popular Lake District National Park, was becoming an issue of public concern.

The sociologists learned that, from the early 2000s onwards, scientists and environmental agencies had been monitoring the lake water using specified sampling methods to detect

nutrients and to measure water flow. The data produced by this sampling would feed into a nutrient budget for the lake and contribute to a model that would enhance understanding of its thriving algal populations.

Asking the ecologists about the water quality sampling they had been doing, the sociologists heard about the use of standard techniques, the importance of replicability and the necessity that sampling was 'do-able' for scientists. Asking farmers about water quality and the possibility of monitoring pollution, however, brought up very different issues. Firstly, farmers questioned the possibility of deriving an accurate picture of catchment processes from samples that are taken only once every month. Secondly, farmers asserted that the ecologists' depth gauge was too far upstream of the lake to take into account the nutrient loading that four tributary streams were contributing. Thirdly, farmers spoke openly of the politics of monitoring. They knew that some of the issues in the lake concerned leaky farm infrastructures, but at the same time they felt that, for reasons of sensitivity, neither they nor the ecologists could realistically monitor these: *'You couldn't do samples outside of everyone's slurry tanks...'*

The controversy not only involved the politics of measurement. Whilst scientists were monitoring water quality under the observant eyes of farmers and local residents, cyanobacteria were 'blooming' with increasing frequency on the surface of the lake. When this happened, the surface of lake turned a lurid green and Loweswater farmers acutely felt the blame of those witnessing the unsightly blooms. They also felt the blame of the regulatory authorities – for example, the National Trust who owned the lake,³ the Lake District National Park Authority charged with preserving the beauty and health of the Cumbrian lakes and fells, and the Environment Agency (EA) responsible for good water quality nationally.

This uncomfortable atmosphere of blame, rising in concert with the appearance of blue-green algae on the surface of the lake, was oddly associated with one of the most taken-for-granted trends in the UK countryside since the mid-19th century: The ongoing ‘agricultural improvements’ since the invention and widespread uptake of technologies such as field drains, mechanised farm machinery, artificial fertilisers and so on. Such improvements allowed for increases in the acreage of improved grassland on farms, increased livestock numbers per farm and an increase in the yields of pastures. What the algae began to vividly evoke, by the early 2000s, it was a sense of the complex and unintended ecological and social consequences of these agricultural improvements which, in turn, engendered a tangible atmosphere of dismay, anger, stigma and shame.

If a participatory forum was going to be developed around the issue of the blue-green algae at Loweswater, it needed to acknowledge entrenched positions involving hierarchies of knowledge and feelings of stigma and blame, and to provide a way to understand the human, non-human, economic, social, cultural, historical, emotional and political complexities in which all participants were implicated.

A new collective

The sociologists decided that a good way to respond to this situation might be to use some of the ANT participatory ideas outlined earlier. A new ‘Loweswater Knowledge Collective’ was proposed. This would be a PoT where it would be accepted that:

- nature is not self-evident;
- knowledge and expertise have to be debated;
- uncertainty is the main condition humans are in (rather than a condition of having knowledge);
- what is important is the creation of connections between people and things;

- doubt and questioning are extended to all our representations.

These principles were taken on board by participants from the very first full meeting of the new collective, which participants renamed the Loweswater Care Project (LCP) in June 2008.⁴

Thereafter, evening meetings were held every two months, until December 2010. At each meeting, questions – about nature, knowledge, expertise, representations, uncertainty, etc. – were raised, and talks and investigations proposed by participants were given and discussed. Wide-ranging issues were brought into the forum, including: The spawning grounds of brown trout; the use of household detergents in the valley; a recent piece of legislation, the European Water Framework Directive; the maintenance of the banks of streams around the lake; the existence of well-functioning and less well-functioning septic tanks; changing rainfall patterns; changing patterns of, and futures for, farming in Loweswater; and unexpected ecological relations in the de-oxygenated water of the lake.

The simple principles referred to above were used to appraise and interrogate the large quantities of new information coming into the collective. These principles directly questioned the ‘natural’ and the ‘factual,’ thereby transforming MoFact into MoConcern. They allowed all participants to inquire, contest and unsettle established facts as a *bona fide* mode of engagement, freeing them from the previous necessity to assign responsibility and blame.

Participants became inquisitive: Nature and natural processes were no longer taken as self-evident; all claims to knowledge and expertise had to be debated; doubt and questioning, including doubt of scientific methods and monitoring, but also of lay claims and counterclaims, were encouraged and nurtured. The principles also helped the collective think about fact making and knowledge in more provisional ways, accepting the inevitability of uncertainty. They helped

the collective build connections and create its own knowledge through a number of research investigations designed by participants themselves.

For example, drawing on the idea that ‘nature is not self-evident,’ participants invited a representative of the UK State’s agency for water quality – the EA – to explain the classification of ‘moderate ecological status’ that had been designated for Loweswater. The designation of ‘moderate’ as opposed to ‘good’ ecological status implied that the lake has a water quality ‘problem.’ This invitation highlighted participants’ weaknesses and attachments; they admitted that they had little insight into the way in which this complex classification had been drawn up, and were also aware of the threat that ‘moderate ecological status’ implied for farmers, as breaching environmental regulations carried punitive financial consequences.

The EA representative came to an evening meeting and described the way in which moderate status had been designated. She informed participants that four pieces of scientific evidence (regarding oxygen, plant life, algae and fish in the lake) were needed to make the designation. But as she came to the end of her talk, she admitted that the classification of ‘moderate status’ for Loweswater had been established with only three pieces of data, as the data on fish populations were missing. A heated debate ensued. A farmer intervened:

Farmer: *‘Sounds like guesswork science to me...’*

The EA representative was taken aback: *‘Sorry?’*

The farmer reiterated: *‘Sounds like guesswork science to me...If one of these things [the four pieces of evidence] can knock it back to ‘poor’ and you can’t count the fish, you haven’t a hope, if fish is one of them!’*

The farmer questioned the very basis on which the official designation had been given. Many participants in the room backed his reasoning. Not only the farmers, but also the scientists, were vulnerable now, with the EA representative acknowledging that there were ‘problems with the

fish classification tool we are using.’ The ‘constitutive attachments’ of different participants were visible to all. Following the farmer’s questioning, participants learned, through fraught and difficult discussion, exactly what combination of nature and artifice was involved in designating the ecological status of Loweswater. In addition, investigating water quality as a MoConcern, as they did here, the collective also embraced the realm of emotion, feelings and affect.

Affect is a complex term, but here denotes the ways ‘feelings’ or ‘emotions’ are inherently and pre-personally immanent in the material world (Massumi 2002; McCormack 2003, 2010: 643).

Affect is important. Discussions that took place in the collective were argumentative, passionate and moving. They exposed not only the vulnerabilities and attachments of participants but also their intelligence, inquisitiveness, creativity and sensitivity, and the emotional intensity of the forum had material consequences for the collective itself, the ‘things’ at its centre and the way in which its relationships were made.

Section 3: An omission in the parliament: can we learn to worry about slurry through theories of care?

The interactions of the LCP bring up an issue of vital importance for the dialogic experiment of the HyFo and PoT. Namely, that the attachments, weaknesses and passions that Latour encourages us to embrace on our entry into the parliament, just like things themselves, have agency. Embracing ‘disability’ is not simply a process of drily accepting that we all have bounded rationality. Disabilities have affective and relational consequences, and produce and demand particular configurations of labour and sensitivity from all members of the collective, having indelible effects on the potentiality of directions the collective may take.

Think, for example, of the unwillingness (mentioned in section 2) to monitor farms’ individual slurry tanks, despite the widespread suspicion that these were important sources of nutrient

pollution. Slurry – the liquid mixture of cattle excrement and water that arises as a result of certain kinds of cattle housing on beef and dairy farms – was considered to be one of several contributing factors to water enrichment in Loweswater, as it contains significant amounts of the nutrient phosphorus. However, the LCP never worked out precisely how to formulate questions around slurry, or how to investigate slurry production, storage and use as a fertiliser in the catchment. Within the pre-existing affective atmospheres of Loweswater, the toxic culture of blame that had been wrapped around the ‘objective’ presentation of water quality played an important part here. The desire of participants to move away from these negative relations, and the need to rebuild trust, played a significant role in the unfolding of the forum and the democratic decisions it made.

This sense of affect steered how some issues were, and others not, opened out for scrutiny in the LCP, because of the difficult affectual atmospheres they contained. As one ecologist participant reflected:

It may be that there are things...like slurry tank management, things that we haven't directly challenged in this project that are a problem for some of the farmers. And you know, that is an issue.⁵

The forum, it seemed, could not apprehend slurry without re-energising the pernicious spectre of blame that would shut down discussion entirely.

Encompassing affect: from matters of concern to matters of care

How can we make sense of our finding that disability mattered in Loweswater and that participants' vulnerabilities had an effect? That attachments, weaknesses and passions didn't just allow for open debate, but drove debate in certain directions at the expense of others?

A useful resource for thinking with this is Maria Puig de la Bellacasa's (2017) *Matters of Care: Speculative Ethics in More Than Human Worlds*. Here, Puig de la Bellacasa proposes that we extend the movement from MoFact to MoConcern by further conceptualising controversies as *matters of care*. A matter of care (MoCare) weaves Latour's MoConcern into the rich history of thinking about care in feminist theory.

To care, Puig de la Bellacasa reminds us, is a verb; it is 'a necessary practice, a life-sustaining activity, an everyday constraint' (2017: 160). Care is unavoidable, an inherent part of the necessary yet mostly dismissed labours of the everyday maintenance of life. Care circulates unequally, and is not innocent: Its labours fall more heavily on some shoulders, be they human or non-human, than others (the night worker, for example, who cleans the academic's office, or the worms in soil that allow us to grow food). Caring for one thing can mean killing something else (as we dig up weeds in caring for gardens). As care is *always* happening, the important question we must ask is 'What worlds are being maintained and at the expenses of which others?' (Puig de la Bellacasa 2017: 44; see also Haraway 1994). Nothing holds together without a more-than-human chain of care, and those relations are deeply situated.

Circling back to Loweswater, can we understand the failure to open out the issue of slurry in the collective as a matter of care? Within the context of a historical situation of toxic blame, we can see participants attempting to balance care for the lake's environmental status with care for local farmers, so long villainised by Science. The need for the group to care for other things (such as farmers' emotional well-being) in order to ensure the parliament's maintenance and survival worked to render slurry 'mute' as a 'Ding.' Did this 'disable' the collective in the act of caring for the polluted lake? Does that mean the forum was ineffective? In the short-term timescale of 'traditional' political decision-making, yes. But as Callon et al. (2009) take care to mention,

hybrid fora and their attachments and entanglements take time and are iterative. The LCP developed, in time, into another community-run participatory forum, the Loweswater Care *Programme*, working in partnership with the West Cumbria Rivers Trust. As part of this, significant progress was made on tackling ‘point source pollution’ from leaky slurry tanks in the valley.⁶

A parliament for slurry: fact, concern or care?

Slurry, then, was a troublesome ‘ding’ in Loweswater, and in 2016, the current authors had the opportunity to encounter it again, via a call made by a partnership organisation, SARIC (the Sustainable Agriculture Research and Innovation Club), to study (deep breath) ‘the provision of decision-support on organic slurry storage and treatment techniques to enhance nutrient use efficiencies.’

The assumption of the research call was that farmers needed to take better heed of scientific knowledge in their slurry management decisions. This was very much embedded in the ‘modern constitution’ of Nature/Science that Latour has critiqued. The ‘issue’ to be ‘solved’ was not slurry as a material entity, or the nature–culture practices entangled within it, but farmers’ ‘inefficient’ and unscientific decisions, the ‘fix’ for which – a ‘decision support’ tool – was decidedly technical.

As we got to know the material-semiotic landscape in which the research project was positioned, it became apparent that a semi-stable assemblage existed around the slurry controversy. This consisted of many MoFact: Devices for establishing water quality status (such as those we met in Loweswater), agronomic science determining crop nutrient uptake, and policy guiding and enforcing farmers’ activities. Importantly, this assemblage also included a huge number of

experts (scientists, policymakers and agricultural advisors) labouring to improve the status of freshwaters in the UK, to care for the environment.

However, this assemblage was not achieving its intended aim, so tweaking was considered necessary. As one soil scientist put it: *‘There are really good decision support tools out there, but a significant number of people don’t engage... We need to identify the barriers to engaging with this information.’* Within this Science-based chain of care, the ‘problem farmer’ was the weak link, making poor decisions with slurry on farm. If the problem farmer would change, the assemblage could achieve their two priorities of maximising agricultural output and achieving ‘good’ environmental status. Our expected role as social scientists in the proposed project was to produce the knowledge necessary to manage this ‘problem farmer,’ in the same way that Science allows us to manage Nature.

Of course, this positioning was deeply problematic, particularly from an ethical point of view. We therefore attempted to open up space within the research (which we called ‘Slurry-Max’) to let farmers – and slurry – speak.⁷ This process revealed a very different reality to that of the ‘problem farmer’ not understanding their ‘valuable resource.’ We learned that slurry was unpredictable, powerful and dangerous. There was usually too much of it when wet weather and ground conditions made it a pollutant, and not enough when they allowed it to be a fertiliser. Its qualities were variable, and didn’t fit neatly into the ‘book values’ denoted by agronomic science (the averages that make up official estimates of the nutrient content of slurry, which had huge standard deviations). Farmers, far from being uninformed, understood this well, giving considered reasons as to why they couldn’t follow the scientific advice. In short, ‘the thing’ of slurry, voiced through Slurry-Max’s empirical work with the material itself and with those that

were working daily with it,⁸ turned out to be very different from the concept of slurry that was embedded within the science-policy assemblage and the SARIC research call.

Section 4: Democracy in the wild

How could ANT thinking on participation help the researchers in this scenario? It was clear from the beginning that we would not have the freedom to establish a slurry HyFo or PoT. And even had we wanted to, the huge national scale of the ‘nutrient management’ science-policy assemblage would make that problematic. ‘Slurry’ as a ‘thing’ at this scale is too much, too diffused and too varied to truly be granted due process – the ‘ding’ loses the advantage of a position in the PoT. The HyFo and PoT, we found, can be difficult to achieve within the pre-existing assemblages – operating at pre-existing scales – which maintain our ongoing worlds. So, must we give up on the idea of participation under circumstances where the democratic conditions of the HyFo or PoT cannot be achieved, and layperson ‘publics’ and non-human things are not procedurally afforded due process? Should the Slurry-Max researchers have turned away from ANT, and provided the assemblage with the means to ‘tame’ the problem farmer, as they had been asked to do?

Of course, the answer is no. But how can we move beyond the privileged space of the HyFo and PoT, to create the conditions for an expanded ‘technical democracy’ in the wild? We can find some answer to this by returning to *Matters of Care* (2017). Puig de la Bellacasa stresses that, unlike the HyFo and PoT, care is not a ‘recipe’ for doing our encounters (2017: 90), but rather a trope that we can use to think through a non-normative politics of knowledge. She writes that this is ‘always specific; it cannot be enacted by a priori moral disposition, nor an epistemic stance, nor a set of applied techniques, nor elicited as abstract effect’ (ibid: 90).

In the messy, imperfect fora in which most contemporary politics play out, such a standpoint can aid us in seeking a better democracy. If, as Puig de la Bellacasa suggests, we think of care as the ongoing, unavoidable labour whereby some worlds are maintained at the expenses of others, it is, of course, inevitable that we are constantly, in every act, *doing* politics. Considering this, we should perhaps move beyond thinking of participation as procedural politics, choreographed within bespoke ‘hybrid fora,’ and instead consider it as embedded within ongoing patterns of *taking part*. This implies that participation becomes a kind of unevenly distributed process of inclusion and exclusion, choice, care and labour, which is inherent to all our collective activities. Applying this to the problem of slurry management, we can see that the proposed SARIC project expected the most of, and listened the least to, two actors: Small farmers and slurry. Our concern as social scientists was then to attempt to ‘democratise democracy’ by amplifying the voices of these actors in the fora of the assemblage. In Slurry-Max, the researchers attempted to achieve this by close interrogation of the existing assemblage of care around nutrient management, tracing which participants – both human and non-human – were in danger of being objectified or silenced, or bearing an unreasonable burden of care. Then, we attempted in our own actions of world-making to respectfully ameliorate these conditions, drawing attention to which worlds were being supported and made, and at the expenses of which others.

In this way, we acknowledge that we are acting in a world where fully democratic cosmopolitical parliaments are not always possible – or at least, are always inherently bounded. We suggest that one way forward could be to think beyond participation as a discrete idea – or as something that can absolutely and procedurally be ‘achieved’ – and instead, attempt to live, as world-makers, with inclusionary care at the centre of our doings.

Politics in the contemporary world can sometimes seem a million miles from the ideal of the more-than-human democracy of the PoT. But that doesn't mean we have to give up on the work of democratising democracy. In a parliament in which we are all partial and disabled, it's vital to remember that this means all participants require care. By thinking about participation as an active process of taking care within the parliaments we are already part of, we can work towards participatory futures beyond the privileged space of a HyFo, and, disabled as we are, strive for a better world for all.

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¹ The three studies are: Law (1984), Callon (1984) and Latour (1984). *Les Microbes Guerre Et Paix; Suivi de, Irréductions* (see p. 106 of Latour 2005).

² Slurry is ‘faeces and urine produced by housed livestock, usually mixed with some bedding material and some water during management to give a liquid manure with a dry matter content in the range from about 1%–10%’ (Pain and Menzi 2003).

³ Technically, the National Trust owned the lakebed, not the water within it.

⁴ Participants voted to change the name of the collective to the ‘Loweswater Care Project’ (LCP). See www.lancaster.ac.uk/fass/projects/loweswater/noticeboard.htm for minutes of meetings of the LCP.

⁵ Ecologist Lisa Norton reflecting on the achievements and gaps of the Loweswater Care Project at the workshop, ‘New Forms of Participatory Environmental Governance: Experiences and Challenges from Loweswater, Cumbria’ Penrith, 3rd December 2010. www.lancaster.ac.uk/fass/projects/loweswater/noticeboard.htm.

⁶ <https://westcumbriarivertrust.org/projects/the-loweswater-care-programme>.

⁷ <http://wp.lancs.ac.uk/slurry-max/>.

⁸ Empirical research included: 11 in-depth farmer interviews, conducted on farm; three in-depth farmer interviews, conducted by telephone; focus groups with around 100 agriculture students in four agricultural colleges in England, Wales, Northern Ireland and Scotland; face-to-face survey questionnaires with 84 farmers at auction marts and agricultural shows in England, Wales and Northern Ireland; face-to-face survey questionnaires with 18 agriculture students in Scotland.