Section IV: Participatory Design's Impact On Learning – And Vice-Versa

Reflective Citizens: Learning At/With/From The Edges

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> *The architects spent time working separately without discussion; then came together (rather late) to pool what they had learnt about their materials and assemble a structure. Their offering was ambitious: a long arcing bridge of raw spaghetti. They had extended the length of the spaghetti using a novel joining mechanism that relied on penne pasta strips to tether points where two or more strands met. The bridge didn't stand up by itself and had a tendency to spring outwards, caused by tension in the spaghetti as it was made to arc. They agreed they would have needed longer to make it stable.*

A room of mixed professionals and academic researchers had been invited to discuss "collaboration" and, as a final exercise, was asked to represent what the term meant to them, collaboratively, using only some pasta and any other materials they had to hand. They were to identify their disciplinary roots and join a table. The tags on the tables read: architecture; arts and humanities; business and management; design; engineering; social science. Each discipline produced its own version of collaboration, which was the point of the exercise.

Dialogic Accounting

In this chapter, we use examples of our separate and shared community-based participatory design practices to open up questions of what collaboration involves across and between different disciplinary contexts and in complex situations. We use three projects' trajectories to reveal the emergent learning that ensued. Much of this learning happened in ways that no one had specifically signed up to, but, importantly, aimed neither to restrict nor to close down possibilities. We are particularly interested in making manifest the *latencies* inherent in participatory design– the nascent qualities and states that remain concealed and previously untapped, only becoming actualized and developed through design processes. This learning about ourselves and others speaks to the potentiality involved, not only in materially changing the world (as design is understood to do), but in the pedagogical project of 'becoming more fully human' (Freire 1993 p48).

As we understand it, latency is embodied not just in the 'space' of a project, but also its participants and in its methods. Latencies are inherent, but not inherently positive. We will show how such latencies can both lead to valuable developments and be fraught with difficulties, and will suggest some principles and methods for ameliorating the worst effects, whilst enabling productive potential to emerge. We ourselves come from different disciplines into design, one with a background in educational drama and media; the other in architectural education and practice. We find it valuable to co-explore the unspoken fissures created when we work together and with others; to start from difference rather than to smooth it away. Indeed, it has become a tenet of our practice, to *start from difference* as a learning strategy: and to be attentive to implications throughout a project. These are not merely differences in disciplinary knowledge or subject perspective that can be resolved through some kind of process of informal consensus. They are the both explicit and implicit differences in how participants' position themselves and others; and are positioned by, 'normal' social and material practices - what Lave and Wenger calls repertoires (1998) and Latour 'assemblages' (2005). Crucially, locating oneself (and being located) as a learner and/or teacher, researcher and/or activist and/or professional and/or artist and/or other is enacted through (not separate to) our ongoing everyday encounters, settings and artefacts. It is a relational and situated performance that dynamically creates, perpetuates, adapts, contests and transforms those everyday social and material practices through the *spaces in-betw*een participants (Boys 2016)

Collaborating through difference

> *"Opening up" was a one-day design charrette held in Turbine Hall at Tate Modern in London. It brought together disabled artists with architects to create temporary interventions into the space that 'spoke to' making the building more accessible, not just functionally but creatively. Each artist-architect team took a different direction; working together in more or less structured ways, some engaging the public and some not. One team decided to make a series of games: challenging the earnestness with which disability is framed in both architectural discourse and regulatory practices, and reclaiming the joys of childhood from a 'normal' commonsense that always assumes being disabled is child-like. This group made swings, threw balls, climbed the walls, and left dynamic traces – footprints, wheel-marks – in patterns on the floor.*

Fig 1: Architecture Inside Out Collaboration entitled ' ' Turbine Hall Tate Modern date

The collaboration exercise that opened this chapter, and the one described above (fig. 1), both involved cooperation through doing and reflecting. Whilst one took an opportunity to stop and think about what was happening within and between each disciplinary group, the other used cross-disciplinary pairings to act out in the world and to explore and test some ideas about how to change that world. Both, though, share a similarity of framework – that:

- tacit knowledge can be made explicit through the non-verbal means of making and doing (Polyani 1996)
- ideas, methods, actions and creations are emergent, rather than pre-framed, rather as Gaver suggests in exploring research through design as a pre-paradimatic process (Gaver 2010)
- transformative creative work can be supported through projects that build on intuition and reason but also reveal and resist simplified and normative assumptions about the world; as Deleuze says, creating knowledge *through* action (1994, 2003a).
- cross-disciplinary collaboration is a powerful means of enabling these processes.

In each project, the balance of activities varied across and between groups. We saw differences across many dimensions: in the amount of talk, of experimental or representational making, of organizational structure and in role division. In the case of the collaboration exercise, these differences were a source of entertainment to the participants as some of the activities could be seen as almost caricaturing the different priorities and ways of working emerging from the different professions present (figs 2-7). Though even the willingness to talk about such dimensions and differences varied between tables. To continue the story:

The genesis of the pasta exercise was itself a collaboration. An international group of design researchers[i] was charged with running an "informative exercise on the nature of collaboration" as part of an invited workshop. I [Ann] was immediately put in mind of a task I had given to postgraduate students studying interdisciplinarity. I had asked them to work together in groups that reflected their original degree (including computer science, psychology and sociology) and prepare something to explain to others how they understood

the terms 'communication' and 'information'. (Readers can guess that huge differences were apparent.) As we considered this activity, we saw the value in getting people to make something – it was shaping up as a meeting of many presentations and we wanted to access a different part of people's brain. The idea of pasta followed as a construction material since it is cheap, easy to source and entertaining as a medium. Someone else had used it to good effect before so we decided to try it for our segregation exercise.

Thus each 'pasta' design group worked in isolation, and when we saw each other's images of collaboration, it was with heightened curiosity. As an organizer, I was not alone in wondering at how characteristic each response felt. Many were aware of the procedural aspects of what they had produced and some were articulate about them. There was a lot of 'reading in' of tendencies by both the presenters and other participants viewing the outcomes of the different tables.

There were differences in terms of style, ambitions and degrees of abstraction. And there was a related difference in how each group spoke about it, how they had worked together in making it and how they managed relations in telling us about it. Even the degree of reflexivity brought by the disciplines varied enormously, as did interest in social process in contrast to the design of the product. And responses were characteristic of disciplinary differences.

In this project, the most literal version of 'a collaboration' came from the engineers, who produced a model with a formal structure that appeared to be a professional hierarchy (shaped as spokes from a central point). They could name the role of each person involved in the project it represented and give their relationship to the whole. They held a quiet discussion about what to produce. When they showed their model, one person introduced it, courteously inviting each of his colleagues to add a perspective.

Figs 2-7 Pasta exercise

On a nearby table, business and management were putting the final touches on another structure that involved pasta people, carefully colouring the penne blue and red to show diversity.

In another part of the room, the arts table, a group who had worked spontaneously to make a hanging mobile, was arguing vociferously about what to suspend on the last arm. One of the team held it, while the others weighed up the objects at their disposal and considered balance. They rounded this off with a long and unstructured theoretical explanation of what each section represented, informed by argument and lively debate even at presentation stage.

It would now be unfair to readers with a design or social science background not to share what these tables produced. In short, the urge to explain found a different outlet with the social scientists, whose work was characterized by a lot of words in the shape of a labeled exhibit and a large sheet explaining their discussion and decisions. Everyone chipped in to help describe it.

The quietest table of all belonged to the designers, who had also been experimenting with their materials. They soaked their pasta in hot water for most of the allocated time, then wove it into a mat and made a punchy little video about their work. Short, laidback demonstrations told us all we needed to know. The artifacts were largely expected to speak for themselves, in direct contrast to the social science group. And there was an air about the table of having cleverly addressed the problem.

Apart from the joy of seeing so many people come up with markedly different ideas in ways that were not to be predicted (but at the same time seemed so right), there is a more serious point to the observations we are making in relating this. The exercise raised many of the issues that participation introduces through polarizing positions and revealing assumptions. It was striking how levels of abstraction/literalness and planning/spontaneity varied.

Such a short exercise enables a revealing of, and opportunity to reflect on, the implicit frameworks, methods and assumptions that people bring to PD. It is possible for many of us to situate ourselves on one or other table, adopting a familiar strategy. We might any of us perform our discipline when challenged by other ways of thinking and engaging, either in this conspicuous way or more subtly. We might see our colleagues in this exercise showing us that designers are smart (and can be smug?), artists experimental, engineers logical, and business people concerned with diversity and people. It was a gamble to ask people to work together in this way, though something interesting must surely come out of inviting people to illuminate their

practice. Instead, the differences were so blatant that our positions – and the fact of our positionality (England 1994) – were held to our faces.

But such an exercise could not (and did not intend to) explore how such differences intersect throughout the duration of a collaborative project. It showed us nothing of how this might affect the quality of the process and its outcomes. When PAs participatory design embraces the latent and emergent - where not just outcomes but also educational 'scaffolding' protocols and procedures are co-designed (e.g. L&A, DiS) – then differences in both everyday unspoken assumptions and explicit subject positions can both increase potency and reduce effectiveness; can lead to resonant interactions and frustrating problems simultaneously. How, then, can we better understand the latencies in PD – using the term both in its general definition to mean what is hidden but has potential, and in its more scientific use; to describe the gaps or delays (the potential 'drag' caused by duration) that happens between a starting point and an actual change occurring.

Exploring latencies, then, is about what we have already called the spaces in-between - opening up to investigation how *potential* is released (both positively and negatively) through the embodied everyday enactments of a project as it is continuously performed through participant encounters with each other, settings, artefacts and 'normal' social practices. It is here, through *negotiating* these gaps, that learning in its widest sense takes place as we each attempt to make better sense of, and survive effectively in, the world. It is the very mundanity of such activity that allows it to go unnoticed and unremarked upon, when in fact it is actually *durational work* – what has been called 'problematic accomplishments' (Ryave and Schenkein 1974, pp. 65-274). It takes time and effort both to perform everyday routines as obvious and natural and to redesign or 'breach' them (Garfinkel 1967, pp. 37-38) as participatory design aims to do.

> *The brief that has been given to the disabled artist-architects teams at Tate Modern is 'welcome all ye who enter here.' Some take this as an opportunity to celebrate diversity and difference, others to make a critical commentary on the inequality of access to built space.*

> *'How many ways can you get from A to B' choreographed a public mass run down the Turbine Hall's ramp, asking participants to invoke as many ways of moving as they could. (Fig 8)*

'In/Security' involved the team dressing up as security guards and creating a performance of blocking measures that temporarily restricted public movement in often surreal and humorous ways. (Fig 9)

Each of these projects expressed a hidden latency in the space, in enabling it to be used differently (through playfully either increasing or decreasing ease of mobility).

Fig. 8 Architecture Inside Out: How many ways can you get from A to B
Fig 9 Architecture Inside Out: In/Security

The approach and content of each of these works at London's Tate Modern, the method of their implementation and the organizational roles and relationships again varied across teams. One team struggled to produce anything, and one showed some discontent with the work it produced. These latter groups were used to PD methods and worked hard together using mainly tacit and non-verbal methods – through making and doing. But their attempts to translate the latent potential of their artist-architect collaborations into an actual performance and/or artifact, was 'unsatisfactory'. That is, they were very dissatisfied with their results. Rather than emergent ideas and prototyping productions leading to resonant, positive and multiplying effects, there was instead a kind of dragging and interference, a reducing and lack of fit. The 'stuttering' within these projects' durations formed in the spaces in between:
- what each individual brings to the process, not just in terms of disciplinary context, knowledge and skills, but also of confidence, power and resilience, of expectations, perceptions and experiences
- how each individual locates themselves within the group, takes on and negotiates a role
- the explicit rules of the game, the equivalence and equity of roles and relationships
- the complexities of designing things and processes that aim to act as a critical reaction to/commentary on/improvement to the 'normal' world

We would suggest that in education, such spaces in-between may often be obscured by assumptions (and realities) about how teaching and learning 'works', what roles educators and tutors take within it, and what relationships of expertise they bring to it

(Austerlitz 2008). This has been particularly explored within disability studies where dis/ability tends to create just such gaps or stutters in the 'normal' workings of the university (Titchskosky 2011, Price forthcoming). These scholars show how it is often the very invisibility of the amount of work required to maintain the everyday 'normal' social and material practices of higher education, that perpetuate it in one form rather than another,

In community-based projects, the framing spaces of participatory design is also often blurred, or contested. The transitory and inventive nature of much collaboration in community and professional space contrasts with the fixity of much school and workplace infrastructures. So these different contexts can have an effect too. There may be a failure to notice that a 'stuttering' is happening at all (or an avoidance of it) when structures are too fixed. And it may be to be much harder to realize productive potential when matters round an unexpected corner, if processes are inconsistently fluid.

Principles of Resisting Definition

Fluidity, disruption and mischief were motifs of another project, employed as the means of destabilizing relations (and thus the learning possible by participating) in work that the two authors embarked upon together as university researchers in collaboration with community activists. This co-research activity had the ultimate aim of using participatory design to develop (through a series of invited participant workshops) a better understanding of what underpins community-based action; why people do it and how they keep going, often against the odds. It was a slippery project, where neither mischief nor disruption was ever quite confined to the methods or learning outcomes. This time, not just 'deliverables' were to be generated out of participatory design; but also the very underlying conceptual framework and language; the methods of development, implementation and communication; and the grounds of which the project as a whole might or should be evaluated. As Bjogvinsson et al suggest:

> Designing for, by, and with stakeholders may be challenging enough where common social objectives are already established, institutionalized, or at least seen as reasonably within reach. These social communities are supported by relatively stable infrastructures. The really demanding challenge is to design where no such consensus seems to be within view, where no social

community exists. (2012: 116)

In our experience, working together from locations within and across both university and social activism, it was not a failure of social commitment or lack of stable community that created 'stuttering', but an explicit questioning around how differences (and differential power) can act to frame public funded PD in one way rather than another. To give a focus to our work – and most crucially to avoid pressures to create 'normal' research outputs - we committed to collaboratively editing our various insights in a material form, ultimately a book (see URL). But even this focus was arrived at through considerable negotiation and the resulting product was a testament to negotiation in its loose structure and emphasis on juxtaposition, not synthesis.

A first principle: starting from difference, there is no 'we.' There will always be real and perceived differentials in who is seen to have the 'correct' expertise: to have power and control over, and to gain most from, the participatory design process.

> *Ann: Our encounters produced a distinctive form of research. It is difficult to talk about it without referring to the collective and I am not the collective. I do not speak for others' experience. Every use of 'we' is thus potentially problematic, even though a collective did form to make decisions, grouped to produce three events for fellow change-makers and brought this material together.*
>
> *I can only point to the plurality of the outcome and suggest that it wasn't accidental.*

. **A second principle**: concepts and processes are not already pre-framed. But neither do they emerge from an assumption that collaboration and participation through time (however patient) leads to consensus and a shared commonality. Rather, an attempt is made to let the latencies reveal themselves, to let them emerge in whatever miscellaneous, unexpected and even tortuous ways. We might also consider Björgvinsson, Ehn and Hillgren, (2012) on the angonism incipient in community relations and Bannon and Ehn (2013), who directly challenge the merits of consensus in participatory design contexts.

Jos: We collaborated with many participants to learn how best to share, celebrate and commemorate our perceptions and experiences of community action. Themes came and went, drifted sideways, re-focused and then took other directions. If thoughts and discussions began to revolve around notions of reverent actions, playfulness, trust, gentle disruption and enchantment, this was without the expectation of imposing an artificial consensus.

A third principle: starting from difference means that they can be no coherent, consistent and comprehensive 'result', more a move in a more or less coordinated direction that can inform others in what they do.

Ann: This is not without tension. A balance is needed, to hold the line, to push for transformation or challenge authority with a degree of grace in the way that people come together. Obstruction and flow are both present… and a sense of movement towards..

What emerged from the particular latencies of this project, then, was a design methodology and system of managing our creative output we called the *principle of loose bundles*. This was an approach that accepted difference as a starting point; it did not try to produce consensus, but instead looked for patterns of intensity and repetition in the events and materials we produced both together and apart.

*Jos: this looseness has itself become our method - what we ended up calling the principle of loose bundles**.** The multitude of diverse voices and moments generated out of project events formed our raw data. Performances, talks, songs, writings, drawings and activities were recorded. With the project team working together, we recalled what was resonant, important, relevant to each of us; selections were made and argued over; laid out into groups, and then other groups as various patterns resolved and dissolved. Out of this, particular notions slowly coalesced together and literally became loose bundles as we worked.*

[….] Crucially, these loose bundles made sense to everyone in the project team (even if what we each see in the groupings includes different angles of emphasis and interpretation). Where pieces overlapped between bundles - which many do - we have used colour-coding to reference connections.

From the beginning this project did not want to tell people what to do; or to make a handbook or toolkit for 'how to do' community action; or to impose the appearance of a coherent structure on diverse voices. [….] We hope that the principle of loose bundles, which holds onto many layers and entanglements, and does not imply either completeness or consistency, allows those many voices to communicate both our communality and our differences.

The project, perhaps ironically from this distance, was called 'Effectiveness in Action'. We were courting the unknowable and unstructured in our choice of working partners (who were organized to be fleet of foot, not representative of other people in their doings) and our methods (which evolved in answer to the question, which was evolving too), so it is no surprise that we would emerge with many different understandings of our achievements and measures of success. This too can be regarded from the perspective of education, both informal, which our work might be considered to embrace, and formal, where different forms of success are a political issue. A challenge for us is that the learning in a research project should not stay with only the participants of the project, but be available to those who have commissioned the project: in our case, the British public by proxy of the UK research councils. In many other learning situations, the only group being targeted is 'learners', but this idea of a one-way street where only designated learners learn is a narrow conception of the possibilities (e.g. exploded by Freire's teacher-student and student-teachers, 1993). Even if we allow that everyone is a student acquiring new knowhow, we can see success in a multitude of ways: as new understanding, new practices or, more cynically, the capacity to respond to hoops by jumping through them to the approval of others.

Framing this specific plurality (and varying degrees of indifference to the need for formal learning in the shape of some research outcomes) is the wider discussion as to what might be regarded as effective participatory design… or, indeed, what might be seen as a good *co-research* and *co-design* project? This is a better question, since we had eschewed the easier option of organizing round an established heart of action, as participatory design practice must organize if it is to be participation *in* something. Our ambitions to make relations and questions from the ground up pointed towards something more balanced and equal, even as we recognized the impossibility of such leveling.

Ideas about purpose and types of outcome (and the need for a way of recognizing them) was a difference that cut through the collective in confrontational ways, not because the academic researchers were traditionally goal-oriented; but because they were perceived to be hoping for a project successful enough to capitalize upon. Despite many conversations, this area of distrust persisted, fuelled by the spectre of accountability for public money and the hard fact of different professional orientations. Success itself was contested.

Beyond that were shades of resistance to assessment that everyone shared; such as a discomfort with academic, or governmental, modes of accessing effectiveness, value for money, performance measures (and indeed the industrial values of improved commercial design); instead seeking to explore questions residing under the surface; those that are not often acknowledged; those we would like to start giving a voice in some way.

> *Jos: It got me thinking about how social action often challenges what it is ordinarily 'sayable', about how activists speak (and act) around and against the taken-for-granted language and concepts of contemporary society; whether insisting that landscapes are about more than just property rights, or refusing to accept that choices about social provision should be based on the free market. This kind of speaking is about opening up cracks and fissures, about revealing what is invisible or undetectable, precisely because it is being left unsaid or undone in the smooth surface of the 'normal run of things'. And not only have these gaps to be found, they have to be expressed in ways that are shared, resonant and robust.*

> *The many words […] thrown up by this project - irreverent reverence, tricksterism, pleasurable insurrection, mindful audacity - begin to capture something of this resistance to not just 'the way the world works' but also to the manner in which it talks and 'explains' (justifies) itself to us. Not surprisingly, these modes of creative subversion also resist being pinned down, explained and analysed, in case this just becomes a return and reduction to the 'normal world', a capturing and controlling through imposed 'understanding'.*

For academic researchers on the project, this elusiveness was a potential problem. The underlying co-designing structure means not just that activists are researchers but also that researchers are activists – there may be no 'we', but there is also is no 'them and us'. We accept that this may make us radicals in the sense that Freire (1993) uses it, that we see developing together as a praxis, and 'reality' as 'really a process, undergoing constant transformation' (p56).

In its development, the project had centrally challenged any academic analytical model that demands to explain a situation coherently and comprehensively, as ultimately known and controlled, evaluated and made more effective through 'solutions' (principles, toolkits, programmes). It refused the kind of 'thinking about' reflection that involves a standing outside, commenting on, looking down and distancing from the acts of lived and engaged participation that *are* the project.

What, then, can be said here? There are two intertwined challenges. As academics who are both also involved in social action, we may struggle too sometimes with the imposed rationality of much university research, itself captured and reduced by specific ways of framing research 'excellence'. Yet we are – in different ways - interested in how the alternative ways of saying and doing that come out of social action are able to create ripples outwards beyond a particular group of participants. The project wanted to take notice of and honour how people care when they undertake social action; to communicate something of what motives and sustains us in this work to others engaged in similar activities. This celebration through speaking up is not so much to offer the *unknown* but to articulate the *hidden* in such a way that people nod with recognition and see their concerns presented afresh in the (un)familiar language that others can bring.

But, as well as this, we are part of various scholarly communities - also with their own ways of speaking and doing – communities that are themselves always revisiting and revising their analytical methods, and their conceptual positions in and against the normal run-of-things. How, then, can these existing academic communities learn from this community-based project's refusals, subversions and interventions? This is to explore how we can share not only some of the ways of making 'sayable' social action from its participants' perspectives, but also ask how we can engage productively as *scholars* in these processes.

Writings by Isabelle Stengers has been central to such conceptual shifts, in critically exploring how academic work might be more open, relational and politically engaged. As she asks, how can one

   present a proposal intended not to say what is, or what ought to
be, but to provoke thought; one that requires no other verification than the way
in which it is able to "slow down" reasoning and create an opportunity to arouse
a slightly different awareness of the problems and situations mobilizing us?
How can this proposal be distinguished from issues of authority and generality
currently articulated to the notion of "theory"? (2005: 994)

To do this as academics we attempted to *stay within* the project, rather than stand outside at some evaluative point, so to reflect our conclusions on it. Instead, by being part of paying attention to and 'getting a hold on' what is being said/done, it is possible to act not from the artificial authority of analysis and reflection, but from the pragmatic position of a 'relay'. The passage of relays, Pignarre and Stengers suggest, implies:

> *not only holding but also giving. For the relay to be taken it must be given,*
> *even if those who give know they are not masters of what they give, that*
> *when a relay is taken it is not a matter of a simple translation but of a new*
> *creation.*
> (Stengers p123)

Relaying here replaces 'evaluating effectiveness'. If this project's process of co-designing began with the technique of gentle disruption (Ann) – another tool that operates from the *inside* as a form of shared elucidation – it might also use this concept of 'relaying' as a means of articulating the passing on of what has happened to others; as part of both a continuity and a shifting and changing, a getting hold of but not laying claim to.

In conclusion

Our coming together - Jos and Ann in dialogue through making the text here - mirrors the conception process for this chapter and the way we found we worked in the project just described. We take turns, review and build upon each turn, find ourselves moved by the turn the text has taken. Our ideas are close enough to allow us to

enjoy the discrepancies, the chance to reconcile perspectives (from different backgrounds ourselves), and our interpretation of each other's language through the practices of construction. For our purposes here, we are both slightly more concerned with process than form, assembling rather than closing down.

So we do not present an agreed analysis of how participatory design might grow and change to be more accommodating of difference, the different, the differently abled, the differently minded, the edges, margins, the unknowable and not to be resolved. We do not comment on how the practice of it might police the gaps and make spaces for the unusual, the uncommented upon, the political with a little 'p' and the lost nuances that fall between.

Instead, we draw attention to the three projects' trajectories as emergent learning, for everyone involved, in ways that no one signed up to. We note the latencies, the gaps and holes, tensions and misunderstandings and accept them as part of that learning, incorporating *designing* and *making* as means to think about, express and reflect on processes, status and ambitions without ever leaving the action, without always having to find words for what is best shown. And here we hand on the baton…

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