The Abductive Leap: eliding visual and participatory in research design

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This chapter seeks to problematise some of our assumptions about visual methods and their role in relation to participatory design and ethics in educational research. We make use of abductive reasoning (Peirce, 1878; 1903) to explore the ways in which other researchers but most specifically we have attributed causality and connection in this area. Our experience in exploring these assumptions to write this chapter suggests that the use of greater precision and transparency in framing the relationship between the researcher's intent and the use of visual methods is a vital first step, which can set the context for a more reflective data collection process as well as a more reflexive discussion of intent, design and process.

Things that won't be appearing in this chapter

This is the place in an article where we would say something like *"Visual methods are increasingly popular in social science research"* and then we would re-work some of the overview of the field, historical description paragraphs that we've included in some of our other work (for example, Wall et al 2013; 2012). However, in a book like this that's a complete waste of everyone's time: you're likely to be reading this having already encountered many of the key texts (e.g. Prosser, 1998; Banks, 2001; Pink, 2007; Thomson, 2008; Margolis and Pauwels, 2011; Karlsson, 2012; Rose, 2007/2012) and if not, this by no means exhaustive list is presented as a separate section in the references.

The motive for undertaking this chapter was to challenge, both in public discourse and in our own thinking, the casual and increasingly frequent elision of 'visual' and 'participatory' in discussions of research design. To illustrate this point, we originally intended to take a cross-section of recent papers in visual research, to perform a qualitative hermeneutic enquiry into how the place of the visual in relation to the participatory has been presented. This posed a number of problems for us, most crucially that when we looked at our own writing on visual methods and other methodological and research design issues we noticed that we have always concluded that what should be privileged is the researcher's *intent* (Baumfield, *et al*, 2013; Lofthouse and Hall, 2014; Wall, *et al* 2013; Woolner *et al*, 2010). In trying to construct explanatory frameworks through what would essentially be a tertiary analysis, we might be able to demonstrate that the discourse around these ideas is ambiguous and problematic but we would have little if any warrant for saying anything about intent. Chastened, we realised that this chapter instead needed to be more reflexive, so we have opted to challenge the assumptions we carried into our own empirical work using visual

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methods and to 'come clean' about where we have found ourselves on a continuum of approaches to participation.

What was the immediate appeal of visual methods?

This section presents the evolution of appeal from the personal, though the interaction with participants and the experience of analysis and back again to the personal. We have found visual methods rather motivating for us as researchers, in part because we viewed them as intrinsically more fun than traditional methods like interviews, focus groups, questionnaires or observations. In our discussions we used:

"*attractive, engaging, novel, distracting, relaxing"*

and it would be disingenuous to pretend that this was not the immediate cause of our taking up visual methods. All the claims that we subsequently made for visual methods and visual data have to be filtered through this first level: we worked in this way because it sounded fun; we carried on working in this way because it ***was*** fun. It is important to note that the majority of our team had backgrounds in schools and were naturally comfortable working with concrete and playful activities. We can argue that because we were engaged and enthusiastic, this might have some positive impacts on the quantity and quality of the data collected but we cannot make a utilitarian argument about efficiency in relation to our intent. If, as it sometimes turned out, we collected data that could not have been generated by other means we can go on to conceptualise the visual method or tool as a secondary artefact (Miettinen and Virkkunen, 2006) but we cannot pretend that we knew this was going to happen. There is a terrible temptation to write about research as if more was known in advance and less was a series of happy accidents and this operates less consciously when the research process is a brief description in a paper that privileges the presentation of the data. However, much of what we discovered was the result of exploration, not of design.

As we engaged with groups of participants (ranging from 3 and 4 year old children to adults, encompassing different cultures, varying social, communication and literacy abilities) we began to collate our impressions about the process of visually focused or mediated data collection compared to traditional methods. Key common ideas from across the team (of 8 researchers):

"Participants volunteer more readily,
stay longer,
report finding the experience less intrusive than interviews

Methods themselves encourage creative and unexpected responses to the enquiry"

Claims have been made that a key aspect of visual methods' accessibility is to do with avoiding text (for example, Lorenz and Kolb, 2009) and while this may be an element, this could equally be argued for interviews. Since our normal practice was to ask creators for explanations of visual data (in the encounter) or alongside (in data collection at one remove) we felt that we were placing similar cognitive or social burdens on our participants to articulate their ideas through talk or writing as traditional research methods. The challenge level was similar; it was rather something about the visual activities themselves that was the root of the attraction.

Our own sense that the activities were more fun appears confirmed by the ease of recruitment and length of engagement, though of course the social desirability bias inherent in all research encounters may have produced a degree of mirrored enthusiasm. The positive feedback led us to theorise about the mediating properties of visual activities in interviews and to speculate that they might encourage wider and more authentic participation (Woolner et al 2009). This, of course, provided additional motivation to use visual methods with more heterogeneous research groups both to continue to test the attractiveness of the methods and to test the creative flexibility that we thought we had identified.

As a research group, we came from a number of initial disciplines (History, Geography, Classics, Education, Psychology, Mathematics, Criminology) and had absorbed the cultural expectations of those disciplines in terms of what constituted high quality research data. Research design that reflected these different paradigmatic expectations had been quite challenging, particularly in terms of generating data that might lend itself to multiple analyses, so instead we developed a form of methodological pluralism that (had we known Onwuegbuzie and Leech's (2006, p453) terms) we might have considered mostly *correlational* with occasional excursions into *comparison* (see Fig xx below). Therefore, we welcomed the potential of visual data to be analysed in a number of ways. That visual methods generate large quantities of data facilitates quantitative analysis, particularly in terms of descriptive statistics exploring iconic images and themes (Wall and Hall, 2008); that they produce data that is not over-structured allows for a grounded thematic analysis, with the potential to disrupt the assumptions of the researchers (Towler et al, 2009) and at the same time they produce a group of artefacts that can be treated as a rich data set, accessible to multi-method analysis (Wall et al, 2013). At the same time, visual representations can offer what we refer to as crystallisation, the capture ("when the shutter falls" in photography for example) of complex experience in a single piece.

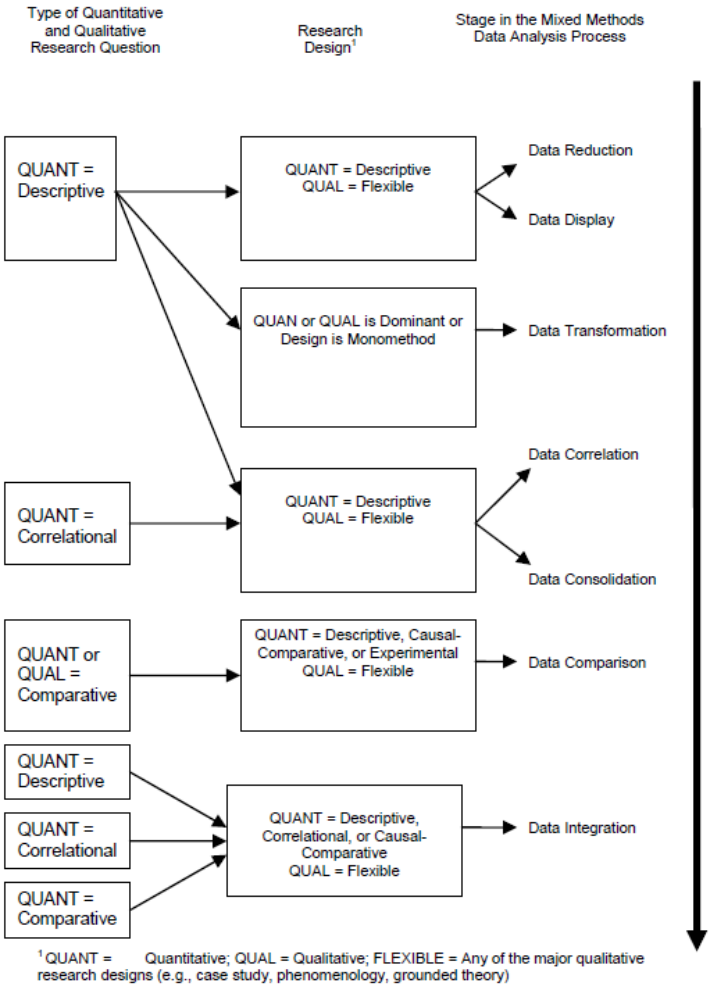

Figure 1: Models of mixed methods use from Onwuegbuzie and Leech (2006)

We expanded our repertoires to include the visual/spatial in tools and analysis (Woolner et al, 2010; Hall et al, 2011), all the time becoming more convinced by the epistemic and catalytic qualities of visual methods. Engaged and content (albeit daunted sometimes by the practical challenges of large ambiguous datasets: Hall and Wall, 2009), it is perhaps not surprising that we began to aggregate the personal and relational positives with the methodological ones.

The positive observations - the richness and diversity of the data; the potential disturbance in the researcher's frame of reference; the crystallisation of thoughts, emotions and experience into an image or series of images – were interpreted by us as *visual methods offer unique meaning-making opportunities*, distinct from that offered by interviews, questionnaires or observations. The range of potential uses for visual data appears to offer *both* a complexity that reflects the epistemic nature of the research enquiry (Knorr Cetina, 2001) *and* a simplification that allows for wider participation, ease of analysis and communication across audiences. This was interesting both in terms of data and in terms of the research relationships, actual and potential. We were increasingly framing our

work supporting practitioner enquiry as a form of practitioner enquiry, nested within a more reflexive partnership where expertise and learning belonged to all participants. The *unique opportunities* seemed to extend beyond data to encompass open-ended and crystallised perspectives on researcher and participant positionality. Working collaboratively on analysis necessitated clear communication about roles and expertise (particularly in repairing when things had gone awry), while re-framing research encounters as less bounded and certain challenged some of our safe assumptions about one another while making space for richer, more complex relationships in our research partnerships. The difficulty for this analysis is that these relationships were developing organically within ongoing projects, so we are cautious in attibuting all the catalytic quality to the visual elements. It did all seem to fit together: we were developing new methodological and positional possibilities and they seemed, to us, to be part of a coherent whole in which better data was emerging from more authentic relationships.

We imagine (because noone has said explicitly why they think this) that it is following experiences like these that researchers make claims for visual method as being *inherently* participatory, of being *necessarily* more democratic and inclusive – and therefore ethically more robust - or that the data produced will be *more likely* to be disruptive to prevailing cultural dominance. We certainly found this framing of our work seductive but over time we began to question: could any method be this multifaceted? If visual methods were so fantastic, what was the nature of our evidence that they were and could we go beyond a felt sense of this virtuous cycle to construct a logical framework to support these kinds of claims?

Using a form of mathematical reasoning from Peirce, we will explore the logical underpinnings of these claims. Therefore, a brief digression into forms of logic which draws on the excellent summary provided by de Waal (2013).

Researchers are familiar with the concepts of deductive (necessary inference from a principle) and inductive (drawing general conclusions from particular cases) reasoning and with their inherent limitations (deduction relies upon the principle being correct; induction relies on both a broad enough experience and an accurate analysis of it). However, Peirce demonstrates a third form, abductive reasoning which explains how we incorporate, swiftly and almost instinctively, new data:

> *"Upon finding himself confronted with a phenomenon unlike what he would have expected under the circumstances, he looks over its features and notices some remarkable character… which he at once recognises as being characteristic of some conception with which the mind is already stored, so that a theory is suggested that would* ***explain*** *(that is,*

> *render necessary) that which is surprising"* (Peirce, Baldwin's Dictionary, 2:427; cited by de Waal, 2013, 63)

The use of abductive reasoning allows us to begin to theorise about the new and surprising where deductive reasoning might reify the principle and encourage us to reject the data as an error and inductive reasoning might delay the development of a theory until more evidence from experience has accrued. The three forms of reasoning support and challenge one another: abduction provides the hypothesis, deduction provides the logical framework by which it can be tested and induction provides the experiential testing. However, whilst researchers make use of the three kinds of reasoning, Peirce directs our attention to the complex relationship between instinct and reason, which coexist in the *logica utens*[2]: *"a rather haphazardly formed but seasoned grab-bag of modes of inference"* (de Waal, 2013, p55). Since reflection on how we make use of the logica utens is necessarily a conscious act, it is inevitable that most of the time we do not question our reasoning. However, whilst unquestioned our (for example) abductive reasoning can be mis-labelled as inductive and subsequently the modes of enquiry we select to test our reasoning will be incongruent.

In this case, if we considered our experience as researchers using visual methods as an example of inductive reasoning we are drawn to defend a position that we have undertaken our visual methods encounters with a broad and systematic method of gathering data about the characteristics of visual methods *as* methods, allowing that data to accumulate as a way of building up a theory of what the properties of visual methods are. We didn't do that. We used visual methods initially as research tools, driven by a combination of attraction to the novelty and a pragmatic sense that they were at least as efficient as other data collection tools and as we did that, we met with pleasant surprises as the visual methods appeared to do more than we'd intended. Our development of theory about visual methods was essentially abductive, allowing us to weave the surprising elements in and continue with our work without having to pause and interrogate our reasoning. It is only as claims for visual methods (our own and others') seem to outstrip the weight of experience that we realise, faintly, that our reasoning has not been inductive and it is time to stop and think.

In order to make our reasoning available for reflection, Peirce suggests the use of structures and symbols that demonstrate the basis for the argument and the relationships between them, in particular the conscious deployment of *illative transformation*: 'therefore'; 'causes'; 'leads to'. When accurately and faithhfully employed, this technique produces a system for assessing the strength of an argument, up to the point of satisfaction for the individual researcher and in the long

[2] Logic in use, contrasted by Peirce with logica docens, logic studied

run, to the point of completeness: *"a complete argument is one that is structured such that, if thhe premises are taken to be true, the conclusion cannot be said to be false without violating the system's rules."* (de Waal, 2013, p59). To this end, therefore, we have constructed a number of premises and relationships derived from our experience using the notation in table xx below.

Table xx: notation for the arguments

A	Attractive		
O	Open ended data		
C	Crystallised data	**=**	Equals, is the same as
R	Range of Responses	→	Leads to, causes
D *(D)*	*(potential)* Disturbance	↑	Increases, makes more likely
I *(I)*	*(potential)* ease of Interpretation	↓	Decreases, makes less likely
p	participation in terms of engaging in the activity	∵	Because
P *(P)*	*(potential)* democratic Participation	∴	Therefore
Q	Quality of the data collected	**[] []**	Different, co-existing groups
W	Warrant for inference based on the data		

When these arguments were first presented to an audience of doctoral students, we were asked why, in a lecture about visual methods, there were no pictures. Our response is that these arguments are in themselves a form of visual crystallisation, in which the complexity of assumptions and arguments are rendered a simple, static form, amenable to analysis. If the underlying logic of the argument is felt to have sufficient warrant, then data (pictures, drawings, diagrams, maps, sculptures) can be introduced to test the argument but the data themselves being used as primary evidence would be another good example of an abductive leap masquerading as induction.

We began with the premise that visual methods are attractive:

V = A

We can confidently draw on our inductive experience, triangulated amongst the team and given greater validity by repetition in different contexts as described earlier, to confirm that ***we*** find visual methods attractive. In order to feel confident about the strength of the more global argument, we would have to examine how we understand the label 'attractive'. When we say that George Clooney [please feel free to substitute your personal favourite here] is attractive, we do not mean that everyone is attracted to him, merely that many people are and many of those who are not would acknowledge his theoretical attractiveness; we do not mean that the attraction is sexual, merely that 'being attractive' contains responses made up of one or all of desire, admiration, approval and a positive predisposition towards the attractive person. The argument *"George Clooney is attractive"* does not appear to be threatened by the unarguable fact that some people have neutral or negative reactions to him; perhaps because the number of positive reactions are more numerous or the

negative ones not strong enough to impact on the sales of movies or magazines. If we are going to make use of this (relatively weak but recognisable in an everyday sense) standard, the global argument would need to run: *"Visual Methods are attractive in that most people have some form of positive response to them and the negative or neutral responses of the minority do not impact on the success of the research encounter"*.

This is where we run into trouble, since we have not collected systematic examinations of non-participants, so we do not really know whether the visual elements repelled some potential participants or whether their contribution to the research in some other form would have materially altered our understanding of the study. Moreover, since a lot of our research has been conducted in schools, we cannot be sure about the nature of the consent given and high response rates may just reflect the power relationships inherent in the situation – while we as researchers always offer participants the choice of whether or not to join in and offer multiple opportunities to withdraw – schools are places in which it is expected that everyone will join in (Dockett *et al* 2009). When visual methods are offered, we have informally noted (particularly from adults, who presumably feel less constrained to express these) a number of negative reactions, which can be categorised as *technical, structural and emotional* (examples in table xx).

Table xx: examples of negative reactions

Technical	*[when given a camera] I've never used one of these ones, the photos might not be very good* *[when asked to draw] I don't like doing this, I'm rubbish, I'm not the creative type*
Structural	*[when asked to make a map] Should I use a scale, or particular symbols? How will I know I've got it right?* *[when asked to select photos for a diamond ranking] Why can I only have nine? What if I need more?*
Emotional	*[when modelling with plasticene] I'm remembering how I felt then, I was really worried* *[when offered a fortune line, pointing to the sad face] I'm not sure I want to get in to that*

Technical objections to visual tasks tend to focus on the unfamiliarity of the media or on the intrinsic ability of the participant but they always centre on the additional demands of the visual methods, compared to traditional verbal inquiries. By inviting participants to *show* us their responses as well as tell, an anxious response is likely to occur alongside or instead of the interest and enthusiasm we hope for. Structural reactions are very common and are linked to the open-ended or crystallised nature of the task, though what is particularly important to note is that sometimes different participants *in the same task* appear to feel that there is not enough or too much structure. While that can be attributed to individual desire for or resistance to structure, it may also come from a lack of clear intent from the researchers about the interpretive goal and we will address this later on.

Emotional reactions are especially difficult to examine critically since when participants become distressed we shift into managing and containing that distress and we are unlikely to learn whether the activity itself has triggered the emotion. We note, however, that in psychotherapy the use of visual and creative techniques is deployed to provide access to buried emotion and to heighten clients' awareness and experience of these feelings (see, for example, Carey, 2006). What is clear, from this limited and unstructured evidence, is that there is a distinct possibility that visual methods have attributes of technical and creative challenge, of structural looseness or tightness and of evoking feeling that some participants experience as negative. The best that we can advance as an argument is that visual methods are attractive to *some people* about whom we know more than those who do not find them attractive.

[V =A] ***[V≠A]***

So we proceed with caution: some people (including us) find visual methods attractive. What do we hypothesise is the reason for this attraction? In exploring what we had written about our data we noted two apparently contradictory characteristics that we liked: that it was *open –ended* and that it was *crystallised*.

[V =O] [V=C]

As we've already noted, it is unlikely that the explicit intent of the researcher is to produce both kinds of data in the same research encounter, though if un-questioned, there may be problems of communication with participants about what the goals are. The production of either kind of data is predicated on certain assumptions about their role in the research process, so what are the underlying characteristics of open-ended or crystallised data implicit in the arguments? In this discussion we quickly come up against measures of quality, which in turn are linked to underlying and often implicit, epistemological assumptions. We have tried to be explicit about the ways in which we have understood quality, since as Wittek and Kvernbekk remark:

> *"… it seems to us that even in the absence of an agreed-upon, unified definition of quality, we all (think we) recognize quality when we see it... We can tell the difference between good and poor student papers when we see them, even if we cannot pinpoint exactly the basis of our judgment. Art experts agree that one painting is better than another, even if they can point to no objective criteria. This is interesting, given the lack of a clear definition of quality. We still (think we) know what it is."* (2011, 675)

We can propose the argument that visual methods produce open ended data because they are capable of eliciting a range of responses, including those not anticipated.

V = O ∵ →↑R

Some researchers might therefore actively choose visual methods and deploy them in this open-ended manner in order to produce *disturbance*, to challenge their premises and to refine their research questions and iterative design. From an epistemological perspective, this use of visual methods fits with an interpretivist standpoint and the claims for quality that might be made for visual methods in this context would be those of authenticity (since a range of real world responses are gathered) and trustworthiness (since incorporating the range of responses requires the researchers' ideas to be made explicit). We might argue that open-ended approaches therefore increase the potential for disturbance.

V = O ∵ →↑R ∴ →↑*(D)*

If the attraction of visual methods is instead because of crystallisation, this seems to be linked to simplification through a reduced range of responses. It is easier to explain the structure of the task, the interpretation and analysis of the data is simplified because categories and themes are more explicit and these clear units of analysis can also potentially be explored quantitatively. This crystallised perspective aligns with more positivist and realist epistemologies, so quality claims rest on the validity of the framing of the task and the categories that emerge from it and the reliability with which that task is used across groups and time. If this potential for easing interpretation is realised, the researchers can enjoy the subsequent benefits when communicating the findings both within and beyond the research project.

V = C ∵ →↓R ∴ →↑*(I)*

These are both 'best case' scenarios and we have no warrant for suggesting that disturbance or ease of interpretation necessarily follow on from open ended or crystallised intent: hence the tentative italics and parentheses. What they do indicate, however, is the importance of researcher intent in directing the process of all aspects of an enquiry. If we set out consciously to use a visual research method to produce crystallised data then the recruitment and framing of the research encounter will be very different from using the same method to produce disturbance. There will doubtless be high quality ethical and professional standards underpinning the member-checking in the research in both cases but the nature of the conversations will differ; since in the first case the goal is to *converge* on a number of clear categories for understanding the data whilst the goal for the second case is to create more and more *divergent* perspectives. In both cases there will be paradigmatic expectations shaping the researchers' sense of *'how many categories is enough'* although these are unlikely to be explicit success criteria, rather an instinctive sense held in the *logica utens*.

We have therefore set up a logical relationship that states that visual methods are attractive for at least two potentially contradictory reasons, linked to researcher intent.

$$\mathbf{V = A,\ \because\ [V \rightarrow \uparrow R \therefore \rightarrow \uparrow (D)]\quad [V \rightarrow \downarrow R \therefore \rightarrow \uparrow (I)]}$$

These different approaches can make epistemologically appropriate claims to quality and therefore, can claim warrant for the findings in their enquiry based on meeting those quality criteria.

However, the abductive leap that prompted us to write this chapter is the claim that research projects that make use of visual methods are of a higher quality, with findings that carry greater warrant because visual methods are inherently participatory and it is this participatory element, in combination with the disturbance or crystallisation that creates the quality and the warrant.

$$\mathbf{\uparrow Q \rightarrow \uparrow W\ \because\ V = P}$$

This is a much more complex argument because it is not reliant merely on the operations of one or other of the different approaches but on an intrinsic element of visual methods themselves and on an implied relationship between participation and quality (Torrance, 2012). Torrance makes the argument that participation drives quality through both the disturbance and crystallisation mechanisms, either by participants being able to expand the frame of reference for the enquiry or to co-construct and validate the units of analysis. However, given that quality itself is a normative judgement based on Wittgenstein's 'family resemblances' between instances of experience and *"Thus understood, quality becomes a concept that does not yield to the ideal of precision and the demand for an essence"* (Wittek and Kvernbekk, 2011, 683) we have to examine the 'family background' of participation to assess whether it is (or could be) a predictor of or mechanism for quality.

Torrance asserts *"Similar ideas are widely debated across the social sciences in discussions about new forms of knowledge production and knowledge transfer. It is now widely recognized from many different perspectives, including that of the empowerment of research subjects on the one hand, and also policy relevance and social utility on the other, that other voices must be heard in the debate over scientific quality and merit, particularly in applied, policy-oriented fields such as health and education."* (2012, 119). For these many voices and multiple perspectives to be accessed, we have to recruit as many different people to our research encounters as possible and one of the ways to do that is to make the activities in the encounter attractive. From a recruitment perspective, therefore, we can draw on our tentative conclusion that visual methods are attractive (to some) and that therefore we can encourage 'small p' participation, where more people take part, or stay longer, or

contribute more freely within the confines of the research activity. There are a number of problems to iron out here: small 'p' participation is based often on an implicit contract that involvement won't take very much time or be burdensome – often it is predicated on a single research encounter – so either the analytic categories have to be already in place and explicitly shared with participants to ensure that 'real time' member checking takes place or the researchers have to share with the participants the uncertainty – essentially asking them to hand over their ideas to an interpretation process that is only just beginning. Both of these positions are ethically defensible provided that they are explicitly stated and thus it is open to participants to choose not to engage or to challenge the position.

Our abductive hypothesis was that visual methods are linked to participation which is linked to quality. The hypothesis appears to be resting on a 'more is more' belief that, while persuasive, crucially fails to get to grips with the meaning of non-participation. I may be asked to stop on my way home tonight by a cheery person with a clipboard to discuss my views and given the lateness of the hour and the call of my supper, unless I have strong feelings on their product or policy I will just get on the bus. I might get the next bus if I am invited to engage in something active or fun. Getting more people to join in because the activity is attractive carries the risk that relative indifference will falsely present as strong positive or negative views. Of course, this is more likely within a traditional research paradigm where researchers decide what the question is before spending time with their participants. Could the link from participation to quality rest on the ability of the participants to edit the question?

This implies that it is possible to set the bar higher: there is an explicit use of democratic values as a marker of quality in Torrance's argument, where he offers a critique of 'participant member-checking' being subordinated to 'expert analysis' in mixed methods research and this begs the further question of the degree and timing of participation (Arnstein, 1967, Hart, 2013). 'Big P' Participation would include (at least) a degree of member-checking but might also include roles in analysis of the data, refining and challenging the categories and reflexively assessing the utility of the research tools or indeed re-framing the research questions themselves, at which point we are at the apex of the ladders where participants are co-researchers and democracy is the leading principle. To explore this further and in order to ask a number of questions simultaneously, we have used an analytic matrix (below).

Researcher Intent			
Participatory Process	***Data sought***		
	Intent to converge	Intent to diverge	
Taking part ***('small p' participation)***	*visual methods are attractive and through this relationship appear to engage participants*		*argument*
	V → A → p		
	Visual activities likely to be more highly structured	*Visual activities likely to be more loosely structured*	
	V →C (↑I) → ↑ Q → ↑ W	V →O (↑D) → ↑ Q → ↑ W	
Member checking ***(Participation)***	*visual methods produce* ***crystallised*** *meanings, which are easy for researchers to interpret and easy to member-check*	*visual methods produce* ***open ended data****, which because of its unexpected qualities,* ***requires*** *member-checking*	
Collaboration in analysis and meaning making ***(Democratic Participation)***	*so interim findings can be analysed and critiqued by participants and disseminated widely*	*and this dialogue creates the potential to disturb the frame within which the research is understood*	
	∵ V →C (↑P+I)	∵ V →O (↑P+D)	
	accuracy	***authenticity***	Claim for Quality and Warrant

As the table implies, the visual methods themselves are subject to the researchers' intent, both in terms of the kinds of data sought and the framing of the research encounter in terms of the participation that might be invited or permitted. The same photo-elicitation task could be used with equal warrant for convergent or divergent purposes, though it is likely that how that task is introduced to participants will differ significantly and that these differences will be magnified by the type of participation that the researchers are consciously or unconsciously inviting. A 'small p' divergent research encounter might involve a very loosely framed engagement with a set of photographs, multiple forms of response (written comments, responses through drawing, verbal report, symbolic – by attaching stickers, for example) which would then be interpreted by the researchers using appropriate qualitative analysis techniques. In contrast, democratic participation convergent research would involve a number of structured and iterative agreements about meaning and interpretation: of the set of photographs chosen, of the modes of response offered, of the guidance given to participants, of the coding and analysis of the data and of the meaning(s) generated by the activity. Each of these would have to address their specific issues of rigour, transparency and ethical strength in order to make knowledge claims that have sufficient warrant but neither is inherently superior. The table therefore lays bare some of the mechanisms through which visual methods *could be* made more or less participatory and brings into the researcher's awareness what some of the issues of quality will be.

Unpacking the abductive hypothesis has meant a dismantling of the attractive elision of visual methods, participation and quality data. Visual methods may be more attractive (to some) but the attraction itself is not necessarily unproblematic. Where this attractiveness leads to more data, we cannot be sure that it is 'better' – indeed cannot engage meaningfully in a discussion of quality, without considering how we have understood the visual encounter in terms of intent to produce crystallised or open-ended data. The roles of all the players in participation are shaped by the goal of convergence or divergence, the more so as aspirations to a more democratic relationship enter the field. The questions researchers are faced with about the nature of their enquiry, how this shapes the data and the participatory possibilities are actually ***generic*** to all research encounters, rather than particular artefacts of working with visual methods.

However, to come full circle, we return to our own and others' experience in the field: there is something about visual methods, a catalytic quality (Baumfield et al, 2009) that recruits, that engages, that extends the encounter, that has the potential to facilitate agreement and to disrupt fixed ideas. Since we only partly understand how this works, the ethical priority is to be clear about our intent and to gather more than felt sense impressions about discomfort and non-participation.

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References

Arnstein, S. R. (1969) A Ladder of Citizen Participation, *JAIP*, 35, 4, pp. 216-224

Baumfield, V., Hall, E. and Wall, K. (2013) *Action Research in Education: Learning Through Practitioner Enquiry*. London: SAGE

Baumfield, V., Hall, E., Higgins, S. and Wall, K. (2009) Catalytic tools: understanding the interaction of enquiry and feedback in teachers' learning *European Journal of Teacher Education* 32, 4, 423-436

Carey, L. (Ed.) (2006) *Expressive and Creative Arts Methods for Trauma Survivors* London: Jessica Kingsley

De Waal, C. (2013) *Peirce: a guide for the perplexed.* London: Bloomsbury

Dockett, S. Einarsdottir, J. Perry, B (2009) Researching with children: ethical tensions *Journal of Early Childhood Research* 7: 283-298

Hall, E, Wall, K., Thomas, U. and Higgins, S. (2011) *"This is My Kind of Network": beyond age, stage and subject groupings for developing innovative professional learning*. Paper presented in Network 15 Research Partnerships in Education at ECER 2011 "Urban Education", Berlin, Germany, 13 - 16 September.

Hall, E. and Wall, K. (2009) *Dealing with data overload in visual methods: cartoons about learning* 1st International Visual Methods Conference, 15th-17th September, 2009 at Leeds University, UK

Hart, R. A. (2013) *Children's participation: The theory and practice of involving young citizens in community development and environmental care*. New York: UNICEF/Earthscan

Knorr Cetina, K. (2001) Objectual practice in Schatzki, T.R., Knorr Cetina, K and von Savigny, E. (Eds.) *The practice turn in contemporary theory* Abingdon: Routledge

Lofthouse, R and Hall, E. (2014) Developing practices in teachers' professional dialogue in England; using Coaching Dimensions as an epistemic tool. *Professional Development in Education. Now available at* *http://www.tandfonline.com/doi/full/10.1080/19415257.2014.886283*

Lorenz, L. S. and Kolb, B. (2009) Involving the public through participatory visual research methods *Health Expectations* Sep; 12, 3, 262-74

Miettinen, R. and Virkkunen, J. (2006) Learning in and for work and the joint construction of meditational artefacts: an activity theoretical view. In Antonacopoulou, E., Jarvis, P., Andersen, V., Elkjaer, B. and Hoerup, S. (Eds.) *Learning Working and Living: Mapping the Terrain of Working Life* London: Palgrave Macmillan pp154-169

Peirce, C. S. (1878) "Illustrations of the Logic of Science VI", *Popular Science Monthly* Volume 13, August 1878

Peirce, C. S (1903), "Pragmatism – The Logic of Abduction", *Collected Papers v.*5.195–205 Cambridge, MA: Harvard University Press

Torrance, H. (2012) Triangulation, Respondent Validation, and Democratic Participation in Mixed Methods Research *Journal of Mixed Methods Research*, 2**0**(5): 1-13

Towler, C., Hall E. and Wall K (2009) '*Developing an understanding of how network diagrams can represent and support communication across schools and colleges investigating Learning to Learn*', 1st International Visual Methods Conference, 15th-17th September, 2009 at Leeds University, UK

Wall, K., **Higgins, S.**, **Remedios, R.**, Rafferty, V. and Tiplady, L. (2013). Comparing Analysis Frames for Visual Data Sets: Using Pupil Views Templates to explore perspectives of learning. *Journal of Mixed Methods Research* **7**(1): 22-42

Wall, K., Higgins, S., Hall, E. and Woolner, P. (2013) 'That's not quite the way we see it': the epistemological challenge of visual data*. International Journal of Research and Methods in Education*, 36, 1, 3-22.

Wall, K., Hall, E. and Woolner, P. (2012) Visual methodology: previously, now and in the future. *International Journal of Research & Method in Education (Special Issue: Problematising visual methods: Philosophy, Ethics and Methodologies)* 35, 3, 223-226

Wall, K and Hall, E. (2008) *Visually-Based reflections on a learning dispositions framework* Paper presented as part of the symposium **Using Visual Methods in Educational Research: Issues in Developing Visual Methodologies** at the American Educational Research Association Conference, New York, March 2008

Wittek, L. and Kvernbekk, T. (2011) On the Problems of Asking for a Definition of Quality in Education, *Scandinavian Journal of Educational Research*, 55, 6, 671-684

Woolner, P., Clark, J., Hall, E., Tiplady, L., Thomas, U. and Wall, K. (2010) Pictures are necessary but not sufficient: using a range of visual methods to engage users about school design *Learning Environments Research* 13, 1, 1-22.

Woolner P, Thomas U, Todd L, Cummings C. How do visually mediated encounters differ from traditional interviews? *Presented at 1st International Visual Methods Conference*. 2009, Leeds, UK. Available at *www.ncl.ac.uk/cflat/news/documents/Leeds2009Woolner**Thomas**.pdf*

Key texts in visual methodologies

Banks, M. (2001). *Visual Methods in Social Research*. London, Sage.

Karlsson, J. (2012). Visual Methodologies. In Arthur, J., Waring, M., Coe, R. and Hedges, L.V. (Eds.) *Research Methods and Methodologies in Education*. London: Sage

Margolis, E. and Pauwels, L. (Eds.) (2011) *The SAGE Handbook of Visual Research Methods*, London: Sage

Pink, S. (2007) *Doing Visual Ethnography Second Edition*. London: Sage

Prosser, J., Ed. (1998). *Image-based Research*. London, RoutledgeFalmer

Rose, G (2007; 2012) *Visual Methodologies*. London: Sage

Thomson, P. (2008) *Doing Visual Research with Children and Young People*. London: Routledge

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