

## GENERATIVE RESEARCH AND THE CREATIVE ANALYTIC PARADIGM

*Anthony Barnett, University of Worcester, Worcester, England  
Email: a.barnett@worc.ac.uk*

**Abstract.** Whereas quantitative research values quantitative data and qualitative research values qualitative data, the identity of the new concept of generative research is in its valuing of generated ideas. The paper will present the case for generative research in terms of approaches to evaluating the quality of research and include examples of potential candidates for inclusion within this category of research. The Creative Analytic Paradigm (CAP) can be understood as a prototypical paradigm within generative research. The paper will also present an outline of this approach and give particular attention key concepts in the CAP. An illustrative example of the application of the paradigm will be drawn from the context of the early-years physical learning environment (Reception/Nursery aged children). Both the concept of generative research as well as the potential afforded by the creative analytic paradigm would be of general interest to practitioner researchers at all stages of education. The specific illustrative application of the CAP to the early-years physical learning environment would be of particular interest to early-years practitioners.

Categorization of research is not a simple process of using concept indicators to identify category membership. Although classical rule-based approaches aim either to identify attributes that are necessary and sufficient or, less precisely, assign items to categories where one or more attributes are possessed, in practice it may not always be possible to establish clear and unambiguous rules or boundaries. Approaches to categorization in light of these difficulties have included use of exemplars, prototypes and idealised cognitive models (Poitrenaud, 2005; Dey, 1999; Lakoff, 1987).

The idea of category levels for research methodology in terms of superordinate, basic and subordinate was suggested by Lakoff (1987). In relation to research methodology the concepts would be ‘type of research’, ‘research paradigm’ and ‘research design’. The concept of research design would be identifiable as a subordinate category resembling Kuhn’s (1977) construct paradigm. The research paradigm as a basic category resembles Kuhn’s metaphysical and sociological paradigm where the methodology is influenced by ontological and epistemological beliefs. Examples are ethnography, action research, grounded theory, critical theory as well as post-positivism and constructivism. However, social research also tends to be referred to generally as quantitative, qualitative or mixed methods. This more general way of referring to social research is the superordinate category. The position adopted in this paper is that ‘generative social research’ is an encompassing superordinate category in contrast to the qualitative, quantitative or mixed methods types of research.

The rationale for considering generative social research as a separate superordinate category relates to the evaluation of the quality of social research and to potential publication outlets. This is relevant specifically where stretching the boundaries of qualitative research locates any particular research study as marginal, e.g. arts-based research (Leavy, 2009). The literature in this area is extensive and covers a diverse range of views on a range of issues. Within the context of the growth of an audit culture Smith & Hodkinson (in Denzin & Lincoln, 2005) suggested that the quality evaluation framework of Spencer et al (2003), produced as a UK Cabinet Office report, had the unarticulated aim of providing a definitive set of criteria encompassing almost all forms of qualitative research, with the associated implications for publication and funding. More generally, when focusing on lists of criteria as micro and macro political processes, they drew attention to the EPPI centre list of criteria noting how “many high-quality research papers would be rejected if all these criteria were seriously enforced” (p.925), referring to ethnography as an example of potentially high quality research, even those ethnographies without a clear methodology. Though a research study may be high quality research within its own terms of reference, it may therefore be more appropriate to include it within an alternative superordinate category if there are several alternative paradigm studies with a family resemblance.

In view of the complexities associated with categorisation my approach is to consider existing forms of research that have some resemblance to a cognitive model of generative social research: exploratory research, critical pedagogy, arts-based research, approaches involving semiotics and a more detailed outline and exemplification of the prototypical Creative Analytic Paradigm (CAP) which is being developed as a PhD thesis.

### **Exploratory research**

Although Stebbins (2001) referred to several forms of exploratory research, typically exploration of the field and the generation of ideas is a stage in a larger research design. Within grounded theory, for example, the ongoing analysis of data, generation of ideas and theoretical sampling process suggests exploratory activity is an integrated component of the grounded theory methodology. From the point of view of the connection with 'generative social research' it is significant that, "exploration aims to *generate* new ideas and weave them together" (Stebbins, 2001, p.9), "the accent in exploration is forever on the inductive *generation* of new concepts and empirical generalizations" (p. 9) and "these materials can be juxtaposed to *generate* new ideas born of the contrasts that sometimes appear" (p. 24) (emphasis added).

### **Critical pedagogy**

The methodological approach of critical pedagogy is based on the "centrality of the writing process rather than any supposed research process" (Brown & Jones, 2001, p.8) and involves the practitioner researcher in the "construction of self in relation to the professional/social context" (p.78). Practitioner researchers utilising the critical pedagogy approach begin by producing written reflective descriptions of their practice. The written descriptions are produced as responses to past action as well as future orientation and sources of further writing. The ultimate meaning of any of this descriptive writing (also understandable as reflective diary entries) is never finally fixed but always deferred and open to reinterpretation as part of a circular hermeneutic process.

Critical pedagogy suggests itself as a candidate for inclusion within the superordinate category of social generative research because of emphasis on open ended responses to 'bafflements' and 'remarkable moments' (p. 140) as a way of opening up meanings rather than seeking secure answers. The process of deconstruction through revisiting and rethinking established teaching practice seeks to "invoke and provoke potential meanings and/or different perspectives" (p.135). The intention is not specifically to describe reality but to produce 'active interpretations' (Derrida, 1978, p.292) in order to question practice as part of a responsible approach to deconstruction.

### **Arts-based research**

Examples from arts-based research include the approaches of Rasberry and also Mullen & Diamond (in Bagley & Cancienne, 2002). The approach of Rasberry involved open-ended and unstructured weekly meetings with a group of eight year old children "purposefully engaged in acts of improvisation" (p. 109) within a music/drama context. The research sought to "bring dreaming and researching together" (p.106) as the research traced its "beautifully serpentine course" (p.105). Although aims were not formally specified the research process sought to contribute in a supportive way to living creatively in an uncertain world, "to live poetically and creatively in the world with others" (p. 108). Improvisation was regarded as part of the concept of research itself. Recording and representing data involved playing with the data, manipulating and fictionalising it as essential constituents of the concept of research as a process, and to encourage self-reflexivity.

A different way of generating ideas was suggested by Mullen & Diamond (in Bagley & Cancienne, 2002) who used "carnival as a transgressive metaphor for educational research conducted as entertainment and diversion" (p. 133). The role of the researcher is in this Postmodern Arts-Based Educational Research (PABER) is that of circus barker who orchestrates an extravaganza of poetry, prose and sketches. Participants, and co-producers of the poetry, prose and sketches, act in the role of circus troupe members such as tight-rope walkers, illusionists, jugglers and untamed animals. The performances generate the data which is described and commented upon as part of the researcher's role as barker.

It is evident from the review of these approaches that generating ideas through imaginative engagement with the data is an inherent part of the research process. For Rasberry in particular, the generation of unimagined possibilities influences engagement with the data as part of a way of living a poetic and creative life. In both approaches, generativity is not a type of exploratory stage within a research design but an integral component of a more holistic research experience.

### **Approaches involving semiotics**

Although semiotics can provide clear and persuasive readings of the object of attention as for example in some studies of clothing semiotics, it is important to realise that “semiotic analysis invariably consists of individual readings” (Chandler, 2002, p. 221). Junge’s (1994) article (‘The perception of doors: a sociodynamic investigation of doors in 20<sup>th</sup> century painting’) draws on different fields and disciplines including environmental psychology and semiotics to speculate about meanings of space. The interpretations are grouped into the major themes of ‘dialectical integration of inside and outside’, ‘interiors and the experience of intimacy’, ‘exteriors and the experience of separation’ and ‘transcendence’. The article is particularly interesting because of the speculative approach that also includes elaborative interpretation which, by its evocative subjectivity, invites the reader to suggest alternatives.

### **Creative Analytic Paradigm (CAP)**

Key parameters of the CAP are:

- Contemplative, dispositional concept of research
- No specific research question
- Central role of evocative objects
- Impressionistic rather than systematic or rigorous
- Concept of analysis as generative and divergent
- Developed through use of orienting concepts and the heuristic use of poetry
- Realised as a relational process in the form of satellite topics comprising a conceptual canvas

Research is typically regarded as an active process of data collection, analysis and interpretation of results as the outcome of investigating a precisely defined research question. By contrast the CAP entails the unhurried positioning of the practitioner/researcher in relation to a more generalised contemplative object – referred to as the primary sensitizing concept. The importance of this positioning is in the maintenance of this object as part of the perceptual/conceptual field during both the incubation of glancing impressions and also during the transformation of the perceptual/conceptual ground into figure. It is precisely because of the lack of differentiation of the encompassing field that the development of a state of being in relation to the field is so important. From this point of view there is an intention to develop a relationship with the primary sensitizing concept, a ‘getting to know it’ and a becoming acquainted with it, and in the process developing ways of thinking in relation to evocative objects arising out of this acquaintanceship. An example of a primary sensitizing concept for illustrative purposes is ‘the early-years physical learning environment’ e.g. Nursery/Kindergarten/Reception settings.

Qualitative research typically values ‘thick descriptive detail’ and is well illustrated by Eisner’s (2005) educational connoisseurship which involves savouring subtle differences in data made possible by intimate familiarity. By contrast the CAP focuses on glancing impressions, momentary encounters, ‘bafflements’ and ‘unfinished resources’ (Mason, 2005). With no specific research question, the research is not driven by the urgency of typically more focused approaches. Instead of filtering out details irrelevant for answering the research question,

- Ideas have time to incubate
- Possibility of acknowledging aspects of the phenomena not immediately relevant or meaningful
- Possibility of experiencing more fully
- Quality of the experience is central

There is a synergy with Eisner’s (2005) view that

“By productive ambiguity, I mean that the material presented is more evocative than denotative, and in its evocation, it generates insight and invites attention to complexity” (Eisner, 2005, p180)

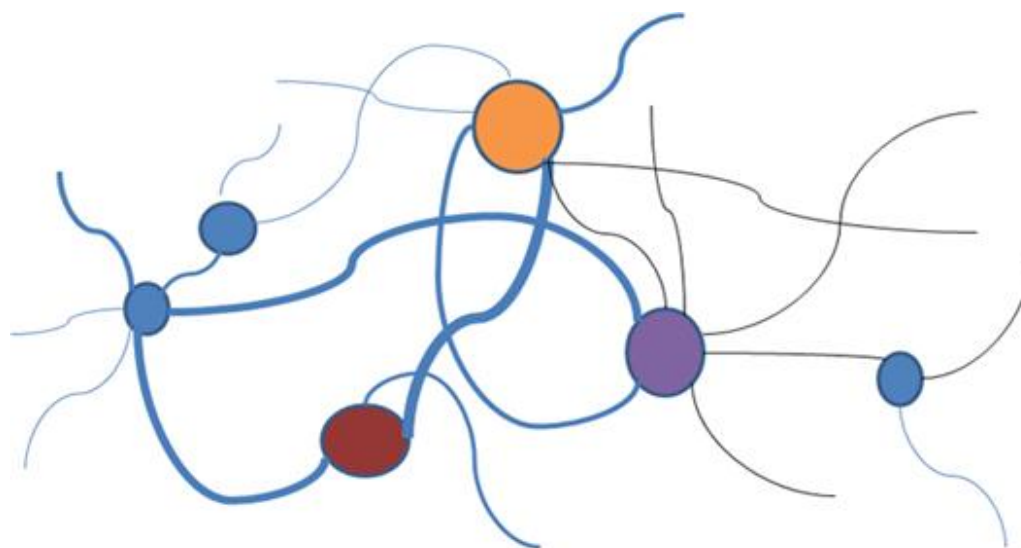
Research activity within the Creative Analytic Paradigm (CAP) is a contemplative relationship entailing differentiation of the perceptual and conceptual field at the manageable level of practical everyday experience. The emphasis is heightened sensibilities and alertness, multiple and elaborative interpretations, exemplifying possibilities and speculative thinking.

The methodology is encompassed by the generative divergent analysis (GDA) model. Bold (2012) emphasised that the analytical process needs to be matched to the purpose of the research and justified in terms of its utility. She advised developing a customised approach to analysis. The GDA model was conceived as a parameter allowing for the more open process format of the CAP. This approach to analysis draws on the pioneering concepts of divergent thinking and creativity referred to by Guilford (1959), particularly the concepts of 'ideational fluency' which relates to producing ideas, 'spontaneous flexibility' related to producing unbounded ideas, 'adaptive flexibility' related to reinventing the problem when devising possible solutions, 'elaboration' related to producing coherent wholes from partial starting points and 'originality' which includes unusual responses and remote associations.

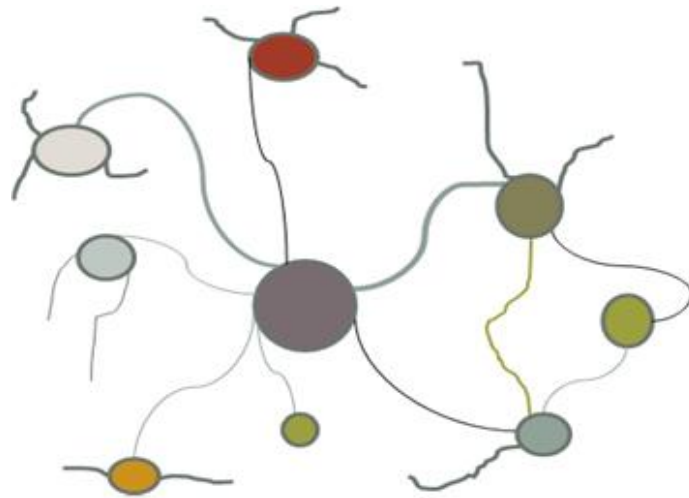
The GDA model is based on the empirical grounding of ideas in experience. Divergent and creative thinking is generated in response to glancing impressions, momentary encounters and 'bafflements'. This way of thinking originated in Turkle's (2005) concept of 'evocative objects' as objects to think with. Within the CAP, the associational thinking generated in response to these evocative objects is developed as an ongoing contemplative process, taking shape as satellite topics in relation to the primary sensitizing concept (e.g. 'the early-years physical learning environment'). The array of satellite topics effectively constitutes the research project's conceptual canvas. The specific progenitor of the conceptual canvas concept was Apollinaire's definition of Cubist Art as

"...the art of painting original arrangements composed of elements borrowed from conceived reality rather than from the reality of the vision" (Chipp, 1968, 219)

Fig. 1 and 2 are visual representations of how a conceptual canvas might evolve with either a rhizomatic form or a radial form. The circles and strands represent characteristically idiographic satellite topics originating in evocative objects (more developed satellite topics have larger circles and/or more strands (associated ideas) which suggests that some topics, although well developed, may have fewer interconnections than other topics).



(Fig 1: rhizomatic form)



(Fig 2: radial form)

### **An illustrative outline impression of an emerging satellite topic**

This satellite topic originated in a serendipitous 30 second observation of a four year old boy in a Reception class playing with a toy car. I wrote the following poem as a heuristic device to maintain the experiential flow of the event as part of the generative divergent analysis (GDA) model.

**Lying on my tummy  
On the ground  
Looking closely  
From the top  
From the side  
Underneath and all around  
Testing connection  
Container on the back  
But no imaginary ride  
On the surrounding track  
Absorption in the task  
And detailed view**

Initial meanings evoked through encounters with this evocative object related to the following themes, developed as narrative reflections supported by use of orienting concepts taken from related literature. The rhizomatic entanglements within satellite topics occur through the association of some of the themes with different satellite topics e.g. semi-private space has multiple associations:

- Play or Exploration and mastery
- Solitary play
- Ascetic / orgiastic play (Fleming, 1996)
- Miniature replica / stylised train
- Boys' toys (Francis, 2010)
- Narrative toys
- Developmental level toys
- Affordances of toys
- Curriculum relevance (Sutton-Smith, 1986)
- Semi private space (Gump, 1987)

- Spatial layout
- Zone of proximal development (Lippman, 2002 & 2004, Practice theory)
- Child initiated learning
- Old resources and bureaucracy (Fenech & Sumsion, 2007)

Brown & Jones (2001) re-emphasise how the developing professional conversation is not aimed at proving or confirming anything but is focused more on sharing of experiences, suggesting questions and raising awareness of potential decision points.

“For me, the notion of behaving differently is caught up with wanting to resist resolution which merely repeats previous actions or strategies. Rather, I enter the next situation with residues of past experiences and it is these traces which prevent me from feeling complacent or satisfied with aspects of practice” (p.140)

### **Concluding statement**

Generative social research as a superordinate category is a potentially useful way of valuing diverse forms of educational research at the boundaries of qualitative research. For example, the collaborative fabrication of evidence undertaken by the participants in Rasberry’s research is very different from the more persuasive individual reading that is typical of semiotic approaches, and ideas generated within types of exploratory research may take the form of suggestions and questions rather than interpretations. Driven by the motivation of contemplative reflection rather than by the urgency of a specific research question, the Creative Analytic Paradigm itself, as a prototypical exemplar, will hopefully contribute to a growing literature relating to inclusive categorisation.

### **References**

- Brown, T & Jones, L (2001) *Action research and postmodernism: congruence and critique*, Buckingham, Open University Press
- Chandler, D (2002)(2<sup>nd</sup> ed.) *Semiotics: the basics*, London, Routledge
- Chipp, H. B. (1968) *Theories of Modern Art: a source book by artists and critics*, London, University of California Press.
- Dey, I (1999) *Grounding Grounded Theory: guidelines for qualitative inquiry*, London, Academic Press
- Derrida, J (1978) *Writing and Difference*, [online] Chicago, The University of Chicago Press <http://www.mediafire.com/?fmjzznmu5e> [accessed 10/12/12]
- Eisner, E. (2005) *Reimagining Schools: the selected works of Elliot Eisner*, London, Routledge
- Guilford, J. P. (1973) Traits of Creativity. In: Vernon, P. E. (Ed.) *Creativity*. Bungay, Penguin Education.
- Kuhn, T (1977) *The Essential Tension, London*, University of Chicago Press
- Junge, M (1994) The perception of doors: A sociodynamic investigation of doors in 20<sup>th</sup> century painting, *The Arts in Psychotherapy*, [online] Vol .21, no. 5, 343-357 [accessed 20/12/11]
- Lakoff, G (1987) *Women, Fire and Dangerous Things: What categories teach about the human mind*, Chicago, Chicago University Press
- Leavy, P (2009) *Method meets art: arts-based research practice*, London, Guilford Press
- Mason, J. (2005) *Qualitative Researching*, London, Sage.
- Mullen, C & Diamond, P (2002) Showcasing arts-based inquiries. In Bagley, C & Cancienne, M, B (eds.) *Dancing the data*, New York, Peter Lang
- Poitrenaud, S, Richard, J & Tijus, C (2005) Properties, categories, and categorisation, *Thinking and Reasoning*, [online] 11 (2) 151-208 [accessed 15/12/11]
- Rasberry, G, W (2002) Imagine, Inventing a Data-Dancer. In Bagley, C & Cancienne, M, B (eds.) *Dancing the data*, New York, Peter Lang

- Spencer, L., Ritchie, J., Lewis, J. & Dillon, L. (2003) *Quality in Qualitative Evaluation: A framework for assessing research evidence* [online] London, National Centre for Social Research [accessed 18/2/12]
- Smith, J & Hodkinson, P 2005) Relativism, Criteria and Politics. In Denzin, N & Lincoln, Y (eds.) *The Sage Handbook of Qualitative Research*, London, Sage
- Stebbins, R (2001) *Exploratory Research in the Social Sciences*, London, Sage (online, accessed 15/1/12)  
[http://www.derby.ac.uk/files/fathers\\_in\\_early\\_years.pdf](http://www.derby.ac.uk/files/fathers_in_early_years.pdf) .
- Turkle, S. (2007) *Evocative Objects*, London, The MIT Press.