

Artists in the Academy: Reflections on Artistic Practice as Research

Sarah Rubidge (PhD)

Senior Research Fellow,
School of Visual and Performing Arts,
University College Chichester

Introduction

As the principles which underlie the mode of practice which is known as “Practice as Research” (more specifically in this context Practice as Research in the Arts) and the range of methodologies used within this mode of practice are adequately covered in the documents and working papers published by PARIP, RTI and PALATINE (amongst others)¹ I do not intend to rehearse these in this keynote paper. Instead I am going to use what I consider to be one of my more significant research projects to examine some of the implications underlying Artistic Practice as Research² in the academy. My reasons for doing this are to highlight the paradigms we operate under when discussing this mode of research, and introduce a problem which could occur with respect to the assessment of the products of practice as research.

I am a practitioner-scholar of long standing. The practice I have used in my work since its inception has taken on the strategies of the “reflective practitioner³. Alongside my practice I have consistently made a study of the ideas presented in theoretical treatises which have

¹ These are major Academic research project investigating the notion of Practice as Research in the Arts: PARIP [Practice as Research Performance] <http://www.bris.ac.uk/parip/sympapers.htm> PALATINE [Performing Arts Learning and Teaching Innovation Network] <http://www.lancs.ac.uk/palatine>; RTI: The Research Training Initiative, www.biad.uce.ac.uk/research/rti

² Practice as Research is common in scientific disciplines. We therefore may need to remind ourselves that the practice we are addressing is (generally) artistic practice. I will be using the acronyms Par and APaR respectively in this paper.

³ Schön (1983) uses this term to describe the processes through which my academic research has been actualized.

resonated with that practice, frequently embarking on a research degree in order to provide a framework for that study⁴. The theoretical ideas I have studied have had a significant impact on my work in a variety of ways. Concomitantly, my practice had a significant impact on the theoretical frameworks I have chosen to explore, for the former were selected on the basis of their relevance to the questions I was grappling with as a practitioner and, with respect to my artistic practice, on the contribution they might make to the ‘thinking in the work’⁵. The topic of my (practice-based) PhD concerned the ontological status of the open work. It culminated with a closely argued thesis, and a radical shift in my artistic practice from live dance works to interactive installation works. On completion of my PhD I became one of the first cohort of AHRB⁶ postdoctoral Research Fellows in the Creative and Performing Arts. I used this as an opportunity to re-address some of the problems inherent in the artistic works I had been producing during the period I was engaged in PhD research, in particular unresolved issues raised by one work which was made independently during that period. This period of research was practice-led.

Part 1 – Paradigms and their use in Practice as Research

In the preceding section I have invoked two terms to describe my research practice, practice-based and practice-led. Along with Practice as Research the term ‘practice-based’ is frequently used as an umbrella term for academic research which incorporates artistic practice as a research methodology. Practice as Research in the Arts as we are all aware is an emerging research methodology in the academy. It has not yet developed a stable terminology with respect to describing the different modes of research practice currently extant in our community. Although we are gradually developing a group of shared terms

⁴ I completed an MPhil at the University of Surrey in 1987, and some 13 years later a PhD at the Laban Centre. Both were embarked upon with a view to undertaken a focused reflection of my professional working practices, and each took some seven years to complete. Because my practice was concerned with entirely different aspects of dance at each of those times, both dealt with entirely different topics, and used very different research methodologies.

⁵ Andrew Harrison (1978)

⁶ Arts and Humanities Research Board, UK

Piccini (2003) and the AHRB (2003) point out that the meanings attached to those terms are fluid. However, in discussions concerning APaR unarticulated understandings of common terms and contextual and methodological paradigms tend to underpin the debates. It is upon these paradigms that participants ground their arguments. Loath as I am to embark on the definition game, before I embark on the body of my paper I would like to unpack the way I am invoking terms which are current in the APaR debate so as to provide a common ground for understanding the reflections I offer in this paper.

Research Paradigms

Doctoral/Postdoctoral Research

Practice as Research in the academy incorporates both doctoral and postdoctoral research. Discussions, both formal and informal, held at several conferences over the years show that whilst for one researcher the implicit paradigm for APaR might be PhD research, for another it might be postdoctoral research. This is significant as each of these research environments operates within a different framework, has different intentions, and has different criteria brought to bear on the research which emanates from them. For example, PhD Research is now frequently understood to be part of research ‘training’ for potential researchers (Morgan 2001, Piccini 2002). The contribution it makes to new ‘knowledge’ may be modest rather than groundbreaking (Nelson, R. & Andrews S, 2002; AHRB, 2002). Postdoctoral research, conversely, is implicitly expected to have a greater degree of originality, and to advance the researcher’s discipline significantly, either through genuinely new knowledge, or insights which generate substantially new ways of understanding the discipline⁷. Nevertheless, both modes of APaR share certain concerns, including the question of what it is that transforms artistic activity per se into bona fide ‘research’ in an academic environment.

⁷ Nelson R & Andrews, S: 2002

In this respect I would suggest that at present the bodies responsible for practice-based/led doctoral research in dance frequently require the presence of a greater degree of closely argued theory as validation of the research for it to be considered bona fide research, than that required of postdoctoral research in the arts which is undertaken through practice. Practice-based and practice-led postdoctoral research is expected to exhibit a deep interrogation of the practice, but not always as great a degree of verbal theorising as seems currently to be required of PhD researchers. This is perhaps because it is assumed that the postdoctoral practitioner already has a measure of the theory relevant to his or her work, knows how to incorporate theoretical insights into those works, and consequently does not need to give as detailed an exegesis of the theory as is required from doctoral researchers.

Research Methods

Another unspoken paradigm used in discussions of Artistic Practice as Research concerns the type of research methodology which is constituted in APaR. The methodologies are broad. In the context of dance, they might comprise: the generation of dance and/or movement studies to investigate, for example, the validity or range of a particular dance analytic concept; experimentation in the practice of, say, teaching dance to test the validity of theoretical insights about that practice; practical studio experimentation to evaluate the relevance of certain somatic theories to dance performance; creative artistic activity as a research methodology, and research product, in its own right. These paradigms are rarely made explicit in discussions about APaR, which frequently leads to misunderstandings and/or frustrating arguments that transpire not to be arguments at all. Although in the field of dance, artistic activity is frequently used as the central Paradigm for APaR, other modes of practice-as-research are legitimate methodologies within this research context.

Practice-based/Practice-led/Practice as?

Finally, I would like to look briefly at what have become generalised descriptors of Practice as Research in the Arts. These include practice-based research, practice-led

research, and what I am calling here research into practice, through practice⁸. The definitions of these terms are by no means clear, rather their meanings are fluid, their boundaries fuzzy. The way in which I use them are not necessarily the definitions accorded these terms by other researchers. Here I offer the working definitions of these descriptors which I operate under, distinguishing different modes of research practice which operate under the umbrella term of Practice as Research in the Arts⁹.

Practice-based research.

In the context of the arts I am taking Practice as Research to be research which uses artistic practice as a means of interrogating a pre-determined theoretical or technical issue. In dance, examples of practice-based research might include projects which comprise: an investigation through creative dance practice of the relationship of certain aspects of (say) Bergson's, Derrida's, Wittgenstein's philosophy to choreography or performance; an interrogation through practice of a claim made by a choreographer or theorist concerning the nature of choreographic practice; an investigation of documentation in dance, which uses a specially created work as a means of testing old, and developing new modes of documentation; an investigation into the efficacy of particular methods of teaching choreography or dance technique; a practical investigation of new possibilities within particular artistic techniques; an investigation of claims made with respect to eukinetics¹⁰. In projects such as these the research question/s tend to be clearly stated at the start of the project. Here practice is used as one mode of interrogating that question, and may play either a supporting or a dominant role in the research methodology. The results of the practical research, which may or may not be an art work, lean towards an illustration of and/or demonstrate the researchers findings with respect to the original research question. This kind of research often takes the form of hypothesis-based research (the hypothesis emerging from the research question) and is common amongst post-graduates undertaking

⁸ By dint of use Practice as Research has become an umbrella term under which various forms of practical research are subsumed. I have therefore used the more explicit formulation Research into Practice, through Practice to make explicit what I mean by Practice as Research as a mode of research.

⁹ As will be seen, my definitions tend to be determined by the starting point for the research, not by the methodology itself. If one uses the latter as a definition then one might find two or more modes of research being used in the same project.

¹⁰ Eukinetics, is known as effort theory in the UK and other English speaking countries, is the study of the dynamic qualities of movement and derived from Laban's research in the early part of the 20th Century.

research degrees.

Practice-led research in the arts is, I would suggest, research in which the research is initiated by an artistic hunch, intuition, or question, or an artistic or technical concern generated by the researcher's own practice which it has become important to pursue in order to continue that practice. It may not be linked initially to any formally articulated question, hypothesis or theoretical concern, although it may lead to them. Rather it is more on the lines of "What would happen if..." or "Would it be possible to....?" or "How might I resolve this artistic gap I am facing?". Significantly, a precise research question may not be formulated prior to the project, but may be generated later by the researcher's practice as their creative investigation into the artistic intuition or concern progresses (Bolt 2004). This kind of research, I would suggest, is variously a means of interrogating one's own practice as an artist, a means of developing new artistic strategies frameworks and insights in one's own practice, a means of solving artistic problems, and/or a means of locating any theoretical framework which might be implicated in your practice. Theoretical issues may be raised by the research, and addressed by the researcher both within the practice and in more conventional terms, but the researcher's artistic practice itself has initiated and driven the research. In many ways this kind of research is akin to what is sometimes called "blue-sky" research in the sciences. Another term for it might be discovery-based research. In dance this kind of research tends to be undertaken by postdoctoral researchers more frequently than by doctoral researchers.

Research into artistic practice, through artistic practice.

This mode of research privileges the practice in and of itself. A rigorous, systematic theoretical interrogation of concepts which are attendant on that practice is not a requirement here. This is this form of research that those practising artists in the professional world who we consider to be bona fide researchers in their discipline engage in. I am thinking here of artists such as Martha Graham, Merce Cunningham, Lloyd Newson, Ian Spink, William Forsythe, Hellen Sky and others of that calibre, who have pushed the boundaries of the discipline forward, but have never become involved in

articulating their reflections on their practice in conventional theoretical terms. Some such artists currently work in Higher Education in the UK, yet do not theorise their work in lengthy, scholarly papers in peer-reviewed journals. They just get on with the artistic practice itself. British artist Rosemary Butcher (AHRB Research Fellow) springs to mind here. The work of artists who have been awarded grants by the Wellcome Trust under their SciArt scheme¹¹ may also work in this way. I take the position that professional artists of this calibre who work outside the confines of academe¹² are undertaking artistic research which is of equal, perhaps greater, value to the ‘advancement of knowledge’ and/or ‘generation of significant insights’ in the art form as the creative research of those who work within academic confines. I have therefore included this kind of research in the arts as a category worthy of inclusion under the auspices of APaR. I believe that, as artistic practice as Research is corralled into the circle of academic research, we are in serious danger of marginalising genuinely innovative artistic practice which takes place outside the confines of the academy. The institutional context in which artistic research takes place should not be a criterion of worth. I would argue that it is this mode of research which lies at the centre of the development of genuinely new modes of artistic practice and genuinely new artistic insights.

Unfortunately, the value artists’ research offers to the advancement of knowledge in our discipline is becoming eroded by the bureaucratisation of artistic research in the academy. Its lack of what is considered in the academy to be systematic theoretical reflection renders it in danger of becoming seen as being ‘mere’ practice, rather than practice as research. The AHRB’s Review of Research Assessment in 2003 states its position unequivocally “Work that results purely from the creative or professional development of the artist, however distinguished, is unlikely to fulfill the requirements of research” (AHRB 2003). My question would be – Why not? Whilst it is true that not all artistic activity fulfils the requirement of research, certain artistic projects “...which result purely from the creative or professional development of the artist” undoubtedly do. I have found myself involved

¹¹ <http://www.wellcome.ac.uk/node2530.html>

¹² Recognising that many professional artists work simultaneously both within and outside of the confines of academia.

in heated discussions at conferences, round tables, symposia, meetings over the last six years with fellow practitioner-scholars who argue that this kind of work cannot be seen as ‘real’ research because it is not subjected to a theoretical exegesis by the artist which makes explicit the ideas they were exploring through their work. My argument is that, in those artistic projects which (in the terms outlined by the academy) do count as research, the systematic research and reflection upon that research is genuinely embodied in the practice. We must guard this kind of Artistic Practice as Research carefully, perhaps even provide a space for it in the academy to provide artists temporarily with a safe house in which to research new, potentially non-commercial ideas. However, if we take this route we must guard very carefully against allowing the bureaucratisation of artistic research in the academy to taint the pure research being undertaken by those artists we invite into our domain.

Within the context of the above discussion, two main types of research have become evident. The first is what we might call ‘hypothesis-led’ research (practice-based research), in which the research interrogates or tests pre-formulated questions and/or hypotheses. The second is ‘discovery-led’ research (practice-led research and research into practice, through practice) in which the researcher enters an initially inchoate field, at most having a barely formed speculative question or hypothesis, then using his or her professional experience insights and skills, embarks of a research journey in which initially even the research pathway may not be clearly defined. In this type of research, although apparently without direction at its commencement, as the research progresses underlying research questions make themselves known and the research gradually focuses its attention on those question. This kind of research relies initially on the workings of what neuroscientists such as Guy Claxton (1994) call ‘the undermind’, Gerald Edelman and Giulio Tononi (2001) name as ‘primary consciousness’, and Antonio Damasio (2000) discusses as the first stages of extended consciousness.¹³ Here observations, and responses to those observations, are

¹³ Extended consciousness in Damasio’s terms begins when there is not merely an autonomous physiological response to the environment (core consciousness), but also a sense of self, which can place those responses in a context.

intuitive¹⁴, and may not initially reach the level of ‘higher-order’ or reflective consciousness. It is only later that the artist becomes conscious of the implications of the results of their responses, and begins to reflect upon their implications to an evolving research process. This type of research is perhaps not for all. I would suggest that it its best undertaken by more mature artists, who have a practice to interrogate, a practice to research.

Both hypothesis- and discovery-led research are important modes of research artistic practice in the arts, and may even make an appearance in a single project. This frequently happens when, during the process of discovery-based research, tentative hypotheses (for want of a better term) are formulated as a result of insights gained through the open-ended practical experimentation. However, because the arts are concerned with the possibilities to which questions give rise, as much as with proving those hypotheses, it is likely that further tentative questions will be raised by the testing procedure and the process started over again¹⁵.

Exposing the Paradigms used in this paper

The paradigms concerning the nature of APaR which frame my own discussions in the context of this paper are as follows:

- a) research in which artistic practice is a primary, not secondary, research methodology (this accommodates all three modes of practice as research)
- b) postdoctoral or advanced research.

The former (a) is the implicit paradigm for all my thinking in this field. I am aware that I must consciously keep in mind that I use this paradigm if PaR projects are forwarded which use practice as a secondary mode of research. Nevertheless in the context of this

¹⁴ Neither intuition, the undermind, primary consciousness or ‘core consciousness’ are irrational. Rather they are built on prior rationalisations of experience in the world which have become part of the organism’s ‘subconscious’ repertoire or behaviour and decision making.

¹⁵ This process of exploring an idea through action, evaluating the results of that action and formulating new questions and/or hypotheses from that evaluation goes under the name of Action Research, and has a long history in qualitative research circles.

paper, I will be using it as my paradigm for APaR.

My rationale for using the second paradigm in this paper lies in my concern that if we begin to formulate our models of Artistic Practice as Research on the conditions which are laid down for PhD research (which, as noted, is now increasingly recognised as comprising a vehicle for training for a career in research rather than the production of radically new knowledge or insights in a discipline) then we will be falsely constraining ourselves with respect to the development of strategies for APaR in the academy. This does not mean that I am diminishing the value of a focus on PhD studies in the field, merely that a concentration on it as a generalised Paradigm for APaR may lead to a narrower definition of what counts as practice as research than is desirable. For example, many definitions of PhD worthy artistic research emphasise the need not merely to reflect on one's practice but also to theorise that practice (Mcleod, 2003¹⁶; Morgan 2001)¹⁷ Whilst such a course may be appropriate for an artist just embarking on a career as a reflective practitioner, it may not always be the best way for mature practitioner-researchers to go about their business¹⁸.

Whilst there is no general answer to the debate concerning what counts as valid research in the APaR community, I have raised issues of which we should be aware. My central concern at present is that the increasing bureaucratisation of artistic research in academia could lead to the very real danger that we will begin to constrain the remit of advanced research in the arts in order to fulfill academic requirements formulated in the light of post-graduate study, rather than fulfilling the intrinsic requirements and benefits to the artistic disciplines which are generated by advanced artistic research in its own right. For these reasons, I am going to focus on certain aspects of my own artistic research in this paper, using them to raise issues which go beyond terminological concerns, or definitions of what constitutes Practice as Research in the Arts.

¹⁶ Available online on www.elia-artschools.org/elimages/pub/arch/On_the_Move.pdf.

¹⁷ Andrews and Nelson (2003) take a less emphatically committed view on this score. This paper is available online at http://www.lancs.ac.uk/palatine/dev-awards/par_report.htm

¹⁸ Nevertheless, a colleague in music recommends this course for doctoral students in music composition as, he argues, it is the only time most composers are likely to take note of the theory which impacts on their work.

Part 2 – A Case Study: Passing Phases

Whilst my doctoral artistic research constituted practice-based research, my postdoctoral, and prior to that some of my non-doctoral artistic research¹⁹, constitutes Research into Artistic Practice, through Artistic Practice²⁰. The work I am going to concern myself with here was non-doctoral research. Passing Phases (1995-1999) was by any account, a magnificent failure, and because of that is perhaps the most important project I have undertaken as an active artistic and scholarly researcher. It led directly to my experiments with Halo... in Performance, a dialogue with the installation Halo by Simon Biggs which constituted part of my submission for my PhD, to my first major postdoctoral research project, which culminated in Sensuous Geographies²¹, in 2003, and to other postdoctoral projects between.

And here we find ourselves confronted with what I consider to be a vitally important issue in the context of Creative Practice as Research in the academy, that is: what is the place in the APaR environment of artistic works which fail as works? In many debates concerning APaR, it is often taken as a given that the artistic product of that research (the work/s), both at PhD and past-doctoral level, must necessarily succeed as works in the professional milieu. My experience with Passing Phases indicates to me that there is room for an interrogation of this given, for in the context of APaR in the academy it is perhaps the works which leave us with the most intractable artistic issues on their completion, that is which are ‘failures’ in artistic terms, which advance one’s research most profitably. Counter-intuitive though this is, I would like to unpack this proposal a little.

As a practitioner I am engaged in an emerging mode of artistic practice. My artistic work is thus necessarily research into new ways of working and new ways of presenting

¹⁹ I use the term non-doctoral advisedly as whilst engaged in doctoral study, I was simultaneously engaged in artistic research which was not submitted as part of the doctorate.

²⁰ Strictly this is Practice as Research. However, this term has been co-opted as a generic term for research which takes place through practice. For this reason I have formulated this alternative designation to highlight the specificity of artistic practice as research.

²¹ Details of these works can be found on www.sensedigital.co.uk - under ‘artworks’

choreographic thinking. Since 1995 I have been creating interactive digital installations which have been intended to introduce the sensuous into the digital domain, and/or to generate emergent choreographic forms from the behaviour of the participants in the installations. With respect to the latter my interest is predominantly in the responsive behaviour of non-expert participants (the general public) rather than that of trained performers. Because it has been an emerging arena in the performing arts, my research over the last ten years has been spent in both developing this field of artistic practice in dance (alongside other pioneers both within and outside of the academy), and inevitably in making innumerable technical, and by extension artistic, mistakes²².

Many of my successful installations (e.g. *Time & Tide*, 2001; *Hidden Histories*, 2001), were devised as experiments. The works which resulted were an artistic success, inasmuch as they both achieved their artistic intentions²³ and were well-received by viewers. Whilst relatively low key research projects in relation to later research projects (which focused on the development of large scale interactive systems which would generate emergent choreographic forms when in use) they were an integral part of my artistic research. At one level the research for these projects was technical, and part of a much larger artistic concern²⁴. It was concerned with devising new processes, using video processing software, which would render raw video imagery increasingly liminal, such that it placed itself at the threshold of perception. This would require that the ‘viewer’ used senses other than sight, for example haptic senses²⁵, to ‘understand’ the work. This notwithstanding, it was genuinely artistic, for each work addressed an artistic as well as technical theme.

²² By this I mean mistakes which could become incorporated into the process, but mistakes which made it impossible for the project to be realised technically. Because many of those mistakes were responses to artistic desires, they were artistic as well as technical ‘mistakes’. (As an artist I do not merely acknowledge, but embrace in my process ‘mistakes’ (technical and artistic) which are the results of non-voluntary acts, but which offer new directions which I did not have ‘in mind’. These, however, are of a different order to the mistakes I am discussing here.)

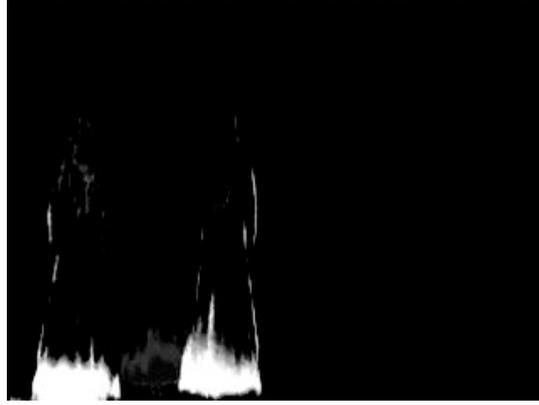
²³ To create work which introduced the sensuous into the digital domain.

²⁴ The impetus behind both pieces lay in this larger scale artistic intention, even though each had a work-specific artistic intention through which the former was explored.

²⁵ I use the term ‘haptic’ here in a Gibsonian sense (Gibson 1966), to incorporate not only touch, but also the kinaesthetic, proprioceptive and visceral senses.



Time & Tide: Sarah Rubidge and
Jane Rees



Hidden Histories: Sarah Rubidge and
Joseph Hyde

However, both these installations and *Sensuous Geographies* (2003), also an artistic success²⁶, emerged directly from what I consider to be the reasons underlying certain failures in *Passing Phases*. For that reason, in spite of its failure as an artistic work, *Passing Phases* is highly significant in the context of my artistic research. Now I understand that this is turning all common-sense understandings of what constitutes success and failure in the context of artistic research on its head, but bear with me and I will see whether I can construct a case for the place of artistic failure in *Artistic Practice as Research* in the academy.

Passing Phases was a multi-user, multi-modal, multi-screen interactive installation, initially developed in collaboration with digital artist Tim Diggins, later with artist-programmer Garry Hill. This was my first attempt at an interactive digital installation. It was developed in parallel with my PhD research, but was not submitted as part of that research, and was therefore part of my professional, rather than academic, practice²⁷.

²⁶ See www.sensuousgeographies.co.uk for critic's reviews.

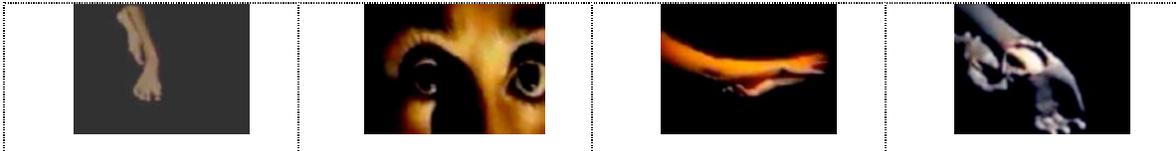
²⁷ The two strands of research were intertwined, inasmuch as my PhD research was concerned with the ontology of the open work, and interactive installations such as *Passing Phases* are manifestations of such works.

Passing Phases had several artistic agendas. The initial artistic imperative²⁸ was simply to integrate the sensual into the digital domain, a characteristic which, in 1995, was notable for its absence in interactive installations. (An exception to this was the work being undertaken by Char Davies, which resulted in *Osmose* in 1996, and *Éphémère* in 1998). Additionally we wanted to introduce a subtle emotional tone to the installation, without overtly dealing with emotional subject matter. Implied in these artistic imperatives was the use of embodied experience, rather than sight alone, as a means of ‘understanding’ the installation. In Antonio Damasio’s terms our state of ‘being-in-the-world’ is constituted by ‘background emotions’, which are experienced at a deep, autonomous physiological level (Damasio: 2001). I was interested in finding ways for viewers/participants to use these ‘background emotions’ (Claxton’s ‘undermind’) to access the artwork, rather than to rely on reflective consciousness. A second artistic imperative was to develop an interactive work which functioned through co-operative group interactivity, rather than individual interactivity. That is, I wanted to make an installation in which the data which drove the interactive system comprised the composite activity of several viewer-participants, not the individual behaviour of single participant-viewers. This too was not common in the field of interactive installations at this time. A third artistic imperative was to create a performative environment in which the behaviour of the participants took on the appearance of a group performance event when they were interacting with the installation, the structures of the interactive interface being a guide for their trajectories through the installation space.

As can be seen, this was an ambitious project, particularly for a novice in the field. Additionally it was undertaken at a time when technical capabilities for creating the conditions for collective or group interactivity were in their infancy, and the affordable technology which would have facilitated the development of such conditions was not easily accessible to artists. It was a project ripe for ‘failure’.

²⁸ In the context of APaR this is often known as a research imperative.

The first set of artistic imperatives were, however, achieved in even the first showing of *Passing Phases*²⁹ The imagery seen by the viewers was constituted various body parts (hands, feet, mouth, eyes, etc.) all engaged in intimate behaviours, most involving touch. Hands gently touched hands, feet stroked ankles, eyes slowly closed and opened, tongues traced the outlines of lips.



The visual quality of the original images emphasised the pleasant edge of the sensuous – often with heightened colour tones, soft focus, etc. However, whilst most of the actions were sensuous in the pleasant sense of the term, some had the potential to make the skin crawl³⁰. These were incorporated to afford a range of responses in terms of physiological and emotional effect³¹. Additionally, in order to generate very different emotional readings from the original movement images, a compositional strategy was devised which allowed tiny fragments of longer gestures to be isolated and looped. In this way a pleasantly sensuous gesture could be transformed into a repetitive gesture which was full of tension, nervy, even potentially repellent³². These temporal manipulations gave a difference sense of emotional significance to those displayed by the original gestures³³. Both the full versions of the gestures and the manipulated versions formed the image database for *Passing Phases*, allowing for the generation of an ever-changing emotional landscape in the installation.

²⁹ This work was mounted in public four times: *Split Screen*, University College Chichester, 1996; *Digital Dancing*, London 1997; Queen Elizabeth Hall, 1998; *IDAT 99*, Arizona State University, 1999. We held week long research periods prior to the last three events to which we invited people to test out the system

³⁰ Both types of image articulate a kind of intimacy in the quality of their touch, but whereas one type of intimate touch was gentle, caring, the other frequently verged of the border of violence.

³¹ In compositional terms the images were carefully choreographed to generate a variety of spatial emphases (vertical, diagonal, horizontal, elliptical), and framed in such a way that an image could segue apparently smoothly from a hand and wrist to an ankle and foot from time to time. This also allowed one image to be overlaid on another to create a composite image in which it appeared as if, say, a hand was stroking a leg, or an eye was sited in the middle of a mouth whilst the tongue traced the outline of the lips.

³² The effect depended on which part of a gesture was selected, and the way it was treated. Some gestures looked as if self-harm was taking place, although the original gesture had no such connotations.

³³ Recent research in neuroscience (Gallese et al 2002: 2004) has shown that observed gestures initiate in the observer activity of what are known as 'mirror neurons'. This activity emulates almost precisely the activity of neurons in the active mover. However, I was unaware of this at the time of developing this installation.

The use of this imagery achieved one of the primary artistic aims of the installation, inasmuch as it introduced a very sensual world into the digital domain. It also created a fluctuating emotional landscape for the viewer/participants to experience, and thus achieved another artistic imperative. Viewers stayed for lengthy periods of time simply letting themselves experience vicariously the sensations and/or emotional responses initiated by the imagery which surrounded them. In terms of aesthetic surface the work was undoubtedly a success. Nevertheless, the use of sight as the dominant sense was still privileged. By virtue of the representational quality of the imagery the ‘undermind’ was called on less fully than I had hoped.

‘Failure’

More significantly, the other, equally important, artistic agendas (to create an interactive system which would facilitate co-operative interactivity, and generate an implicit choreographic form from the behaviour of the participants) were not achieved. It is for this reason that I consider the work (as a work rather than an actualised work-event³⁴) to be a failure, for these artistic intentions were an integral part of the work – as conception, as artefact, and as event.

The interactive interface for *Passing Phases* took two forms. The first interface lay in the placement and display of the images. It was to these that the participants-viewers were responding. As noted this response suggested that the first artistic agenda was fulfilled. The second interface constituted the interactive programme which responded to the behaviour of the participant-viewers. The images were displayed on a circle of computer monitors mounted on plinths.

³⁴ The distinction between work and work-event is outlined in my PhD thesis. In the context of the interactive installation work, the work-event is the materialisation of the potential embodied in the work. The work is the interactive environment and system (which includes the digitised imagery) which gives rise to the actualised work-event.



Passing Phases: Sarah Rubidge, Garry Hill, Tim Diggins, Nye Parry [sound]

Each monitor was connected to a single computer. Each computer held the same database of images. These were accessed in a randomised non-linear succession³⁵. The images in the image-database on each computer were accessed individually in response to data sent via the central computer as it responded to the spatial weighting (clustering or dispersal) of the participants in the installation space. It was the intention that the latter, not the behaviour of the individual, would be the guiding principle of the system.

Our (as it turned out erroneous) prediction was that participant viewers would become attracted, and/or repelled by the images they saw on individual screens, and thus move towards and/or away from the monitors as the images changed. It was also anticipated that clusters of participants would gather around a monitor if a particularly pleasant (or unpleasant) image was on display. The interactive system was to be designed in such a way that it would attempt to initiate a cluster of viewers by attempting to make certain monitors 'attract' viewers towards it (through the display of certain types of images), and/or attempt to disperse the viewers by displaying more repellent images, or by electing to display a blank screen. We envisaged small clusters in front of some monitors, and others with no-one viewing them and others with a single person. The decisions made by the system as to which images to view were to be grounded in an analysis of the weightings of the clusters

³⁵ We fondly imagined that people in the space would see two people staring at a screen and would find themselves wanting to see what was so interesting, and so would join them.

of viewers in the installation space. The behaviour of the images in the space (from monitor to monitor), we hypothesised, would create a shifting spatial configuration in the behaviour in the group, which in turn would generate changes in the configuration of the imagery. We further hypothesised that eventually the group members would realise that it was the clustering and dispersal of the group which was causing the different balance of images, rather than individual behaviours, and that they would begin to engage in collective activity.

Indeed, it was this principle that underpinned the design of the interactive interface, which we hoped would lead to co-operative interactivity, and to the generation of an emergent choreographic form. None of this occurred, in part because the system itself was too complex, in part because it did not always operate as we intended it to. The participant-viewers remained in the installation space for extended periods, but after a time made no attempt to affect the behaviour of the images, either individually or collectively. They simply enjoyed them, and the sensation of the space. As an element of the interactive system the participant-viewers were redundant. Although as viewers they became immersed in and intrigued by an experiential event, with respect to the underlying principles of the interactive system (that is that the engagement and responses of the viewers would be part of an intentional inter-active dialogue) no viewer-environment dialogue took place. The work did not do its 'work'.

The failure to generate co-operative interactivity in the participants occurred for a variety of reasons. Some were to do with inadequacies in the interactive interface itself; some to do with the complexity of the conception of the human/computer interface we were working with; some to do with the simple fact that we failed to take into account that, in an open-ended environment, people do not respond to the same environment in the same way; some to do with the fact that, artistically, the concept was too advanced for the technical expertise of the collaborating artists, and indeed the equipment available to them. These factors were an outcome not only of the artists' lack of experience of constructing multi-user interactive spaces of this complexity, but also of the innovative nature of the research

project itself³⁶.

When I have presented this work as an example of failure at other conferences and research presentations³⁷ my position has been vigorously challenged, on the grounds that, if the audience enjoyed it, the work could not have been a failure. A further challenge, which invokes the notorious ‘intentional fallacy’, has also been mounted, namely that, even though we did not succeed in our artistic intentions, the audience clearly found aspects of the work which worked for them at an experiential level. Consequently, regardless of its failure to realise our artistic intentions, it succeeded as a work. I would suggest, however, that, in context of this work, this is a misuse of the notion of the intentional fallacy, for part of the work of almost any interactive work is its ability to initiate and foster purposeful interactive engagement with the installation. This work was a failure as a work because it did not do this. Consequently it did not realise this very central aspect of what Andrew Benjamin calls the ‘work of the work’ (Benjamin 1994)³⁸. The intention that the temporal display pattern (choreography) of the imagery on the different screens, and the appearance and disappearance of that imagery, was initiated and sustained by collective interactivity was not an incidental feature of the work but was central to its ‘work’.

One reason that *Passing Phases*, as created, could not realise its work, was that no single viewer could ‘read’ the connection between them and the activity of the images on the screen. The images simply appeared to be randomly accessed and displayed, or not displayed³⁹. As a consequence of this compositional⁴⁰ inadequacy *Passing Phases* did not ever work at the level of user legibility, that is at the interface between human and work.

³⁶ Although there were nascent experiments with spatial interactivity in live performance contexts (e.g. *The Intelligent Stage*, Arizona State University) most multi user interactive installations at this time did not attempt to guide group behaviour in any significant way. In this respect, then, the project was genuinely innovative.

³⁷ e.g. *PARIP 2003*, *Chichester Research Seminar 2004*.

³⁸ Although Benjamin did not have such a technical understanding of the ‘work’ of the work in mind, I have appropriated his concept as it articulates the hidden work of interactive installations very clearly.

³⁹ This was, in fact, the case, as it transpired that the programming could never be refined sufficiently to enable this aim to be achieved.

⁴⁰ The interactive system constitutes the central structuring device of the installation, inasmuch as the programming of the system determines the temporal and visual progression of images, and thus the ongoing structuring of the installation environment in realtime. It is thus a compositional feature.

After a very short period of time viewers gave up trying to understand how the system worked, and simply enjoyed, as individuals, the surface aesthetic of the installation. At no time did they even have an inkling that their collective behaviour should have been affecting the installation. This meant that the parameters which had been built into the system to make the interactive interface work were never put into to play.

This was a technical issue. The work (as work) did not succeed because individual participants in the installation could not be individuated by the tracking system, which meant that particular individual behaviours could not be monitored by the computer, and recognisable responses to those (individual) behaviours produced by the system. If the design of the system was inadequate for its purposes, then from the perspective of the artwork as a work, and indeed the artistic agenda, this work at one very important level did not succeed. This failing was taken up later in a research project undertaken with composer Alistair MacDonald under the auspices of a Creative Scotland Award. This project resulted in *Sensuous Geographies*

At a risk of labouring the issue, at fundamental level, then, *Passing Phases* was a failure as a work, even though, at an experiential level, the work did work. The distinction between the compositional features of a work of art, and the aesthetic surface is an important one in interactive arts. Seductive human-machine interfaces (installation environments) are not the totality of the work. It is part of the intentionality of most interactive artworks to engage the participant in a focused, rather than serendipitous, interactive encounter. Without the possibility of that occurring for any participant one of the fundamental artistic intentions of the work is not realised.

Making the Most of Failure

I noted earlier that this is probably the most significant research project I have undertaken within the context of my research with interactive installations. The reason for this is because it failed at several junctures in the conceptualisation of this interactive-

choreographic system⁴¹. That system was developed through a close dialogue between choreographer and artist-programmer, with choreographic ideas being as important a part of the conceptualization of the system as more technical issues to do with computer code, for the latter derived from the needs of the former.

A vigorous and unstintingly honest reflection on the reasons for the failures in the development of *Passing Phases* followed each showing. This evaluation of both the successes and failures of the work led me to the insights which have driven my work forward for the last six years, and have led to what I consider to be my more significant contributions to knowledge in the domain of interactive choreographic installations. I decided to separate out the two central research concerns which were present in *Passing Phases*, that is (a) to integrate the sensual into the digital domain, and encourage the use of embodied experience as a means of ‘understanding’ the installation, and (b) to develop an interactive installation which functioned through a co-operative group interactivity which would eventually generate an emergent choreographic form.

The first led to a drive to create genuinely liminal imagery which would be experienced as ‘felt from within’ (phenomenologically) rather than as ‘observed from without’⁴². This research strategy came from the observation that incidental, very faint, imagery displayed on the screens on *Passing Phases* held people’s attention longer than the clearer more representational imagery, and made them feel a sensation-al response to the image more clearly than when viewing the clearer images⁴³. I later used this feature of people’s viewing behaviour as the basis for further experimentations with the development of sensuous environments. In 2000 I began to work with what Pelli calls the “Threshold of Perception” (Pelli, 1997), that point wherein an image has not yet been categorised as a

⁴¹ I have not pursued the research agenda I addressed in *Time & Tide* and *Hidden Histories* as my primary research activity because I succeeded in my intent, both with respect to the artistic output and to the underlying research agenda. I developed a number of artistic techniques needed to generate liminal visual imagery which would generate an aesthetic surface which could be understood as much through the embodied senses as through. I have used these techniques, or similar ones which have been developed out of the groundwork I laid down in *Time & Tide* and *Hidden Histories*, in subsequent installations

⁴² Which resulted in *Time & Tide* and *Hidden Histories*, and was one of the driving forces behind *Sensuous Geographies*

⁴³ This claim is derived from conversations with participant-viewers after they had been in the installation. As such it is anecdotal, but valuable to the artist for all that.

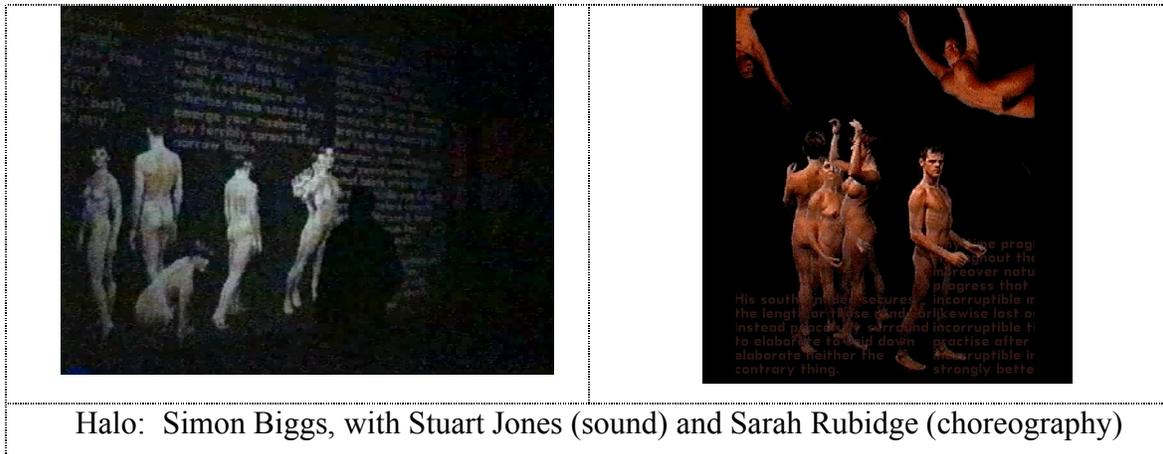
particular ‘thing’, but hovers on the edge of recognition. A different sensibility is brought to bear at this point, as the viewer waits for the mind to construct the perceptual image it feels is there. At this stage in visual perception other data is informing our understanding (our autonomous physiological responses to colour, luminosity and, in my imagery, motion) are brought to bear on our processing of the visual data. The ‘undermind’, is brought into service. Thus before we know ‘what’ an object or image is, we bring a different mode of attention to bear on our experience. It is this mode of attention which interests me as an artist, and this that I was seeking to facilitate through liminal imagery derived directly from human movement. The results were *Time & Tide* and *Hidden Histories*. I also used similar techniques in developing the imagery for *Sensuous Geographies*.

However, the insights I gained from the ‘failures’ in *Passing Phases* were first fed into a major research project I embarked on in 1997 with digital artist Simon Biggs and composer Stuart Jones⁴⁴. This project led directly out of our evaluations of the 1997 showing of *Passing Phases* and constituted further research into the second aspect of the research agenda underpinning *Passing Phases*. I embarked on this project knowing that Biggs created multiuser interactive installations, and used spatial interactivity extensively, and that I would therefore gain insights into the kind of structures with respect to the interactive interface which are appropriate for multi-user installations. This project was undertaken by each artist for different reasons. For Biggs the project constituted the first stage of research for a new interactive installation. For Jones it offered an opportunity to experiment in situ with a dialogic encounter between dancers and interactive sound systems. For me it offered an opportunity to develop an understanding of the technical strategies required to develop a multiuser interactive system which could be both legible to the individual and capable of facilitating collective interactivity, and an understanding of the technical strategies which would create the conditions which would allow an emergent choreographic form to materialise as participant-viewers engaged with the installation. In

⁴⁴ Under the auspices of *Digital Dancing 1997*, the third in a series of workshops for professional artists which focused on dance and new technologies.

the first stage of the project we worked with live performers who activated both interactive visual imagery and interactive sound. This gave us semi-controlled conditions within which to experiment with our ideas. Biggs, Jones, and I each developed an interactive system within our own fields of concern⁴⁵.

Aspects of this preliminary research were used by Biggs in the installation Halo (1998). The full range of movement choreography for the group of virtual performers, which could be used both in an open installation context and as the choreographic frame for a cast of virtual performers to be integrated into a performance event, was used for Halo, as was Biggs' structure within his programming whereby the virtual inhabitants of the installation not only interacted with visitors to the installation space, but also engaged in both individual and group interactivity with each other.⁴⁶



The final stage of this research project constituted the development of a performance system for use with the installation Halo. Here I designed a choreographic system which would allow the virtual performers in Halo and live performers became part of a single

⁴⁵ In the visual system each of the virtual figures was independently interactive but, as a group, also operated as a collective. The interactive sound system was designed such that each of the performers had an independently interactive strand of sound which could not be activated or modulated by any other performer, alongside three areas of the stage which constituted generic interactive environments which could be activated by any performer. Spatial rules determined the activation of the sound, and the parameters for modulating sound. The choreographic system constituted a structured improvisation system, the rules of which were designed to integrate the choreographic, music and the visual systems. (Chapter 7; Rubidge, 2000, offers an extended exegesis of this research project.)

⁴⁶ This constituted one aspect of the choreography of the virtual performers, being in and of itself a form of improvisation system.

improvisatory performance system. I developed a live improvisation system with the interactive system which underpinned the behaviour of the virtual performers, adapting the spatial systems developed for the sound and visual system in the first stages of the research project. This was designed in such a way that it became intertwined with the interactive system when it was in action. This system constituted the conditions through which a series of performance-based work-events could be generated by performers with the installation. The result was entitled, *Halo ... in Performance* (1998). I did not fully attain my research intentions here in the sense that the work-events which emerged from the system were not entirely successful (Rubidge: 2000). One of the reasons for this was that the images were realistic representations of human beings, which encouraged the use of sight as a primary mode of establishing a connection between the systems (live and virtual). This led to the dominance of the use of reflective consciousness, rather than the 'undermind' in the improvisations. Nevertheless, because I had developed a robust understanding of the compositional requirements for a multiuser interactive system which was grounded in spatial interactivity, and devised the principles through which to compose a robust composite spatial choreographic framework for use in interactive installations designed to generate an emergent choreographic form, I had attained major advances in this research project.

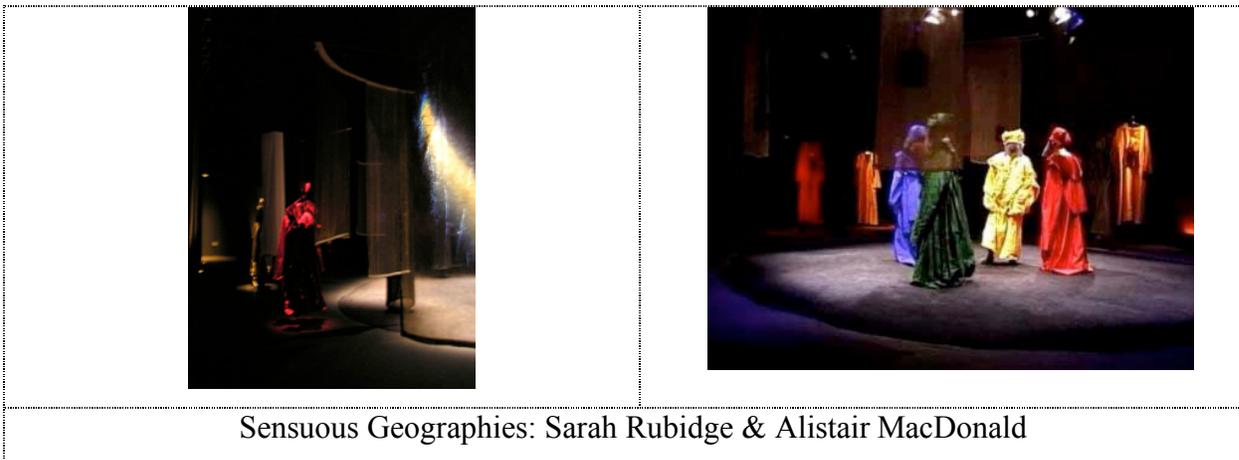
I finally resolved to my satisfaction the issues encountered in *Passing Phases* in 2002/3 during the practice-led research project which culminated in *Sensuous Geographies*, a collaboration with composer Alistair MacDonald⁴⁷. This was a major interactive installation which was predicated on collective/group interactivity⁴⁸. The central research imperative for this project was to develop an interactive installation for the general public, the interface of which was both legible to novice participants, and had the potential to allow them to generate a complex, intricate work-event⁴⁹. A second research imperative

⁴⁷ That this is so is intimated by the comment made by Tim Diggins, one of the original collaborators on *Passing Phases*, when we were discussing *Sensuous Geographies*: "It seems to me as if you have finally succeeded in creating *Passing Phases*." (Personal Communication; February 2003.)

⁴⁸ Created in collaboration with composer Alistair MacDonald.

⁴⁹ Too often the search for legibility in interactive installations compromises the subtlety and potential intricacy of the artistic events which are the materialisation of the installation.

was to design the spatialisation of the sonic and visual imagery so that it would implicitly guide the participants' individual trajectories through the space in such a way that a choreographic shaping of the group of participants emerged. The intention was that this would occur both through individual and collective interactivity. A third research imperative was to generate a spatialised and complex musical event from the installation's responses to the behaviour of the participants. A fourth research imperative was to design the aesthetic surface of the installation (sonic and visual) in such a way that participants would respond to the environment through their senses, rather than through understanding cognitively 'how the installation worked'. As such, this was almost a direct replication of the research agenda for Passing Phases. The result, however, was very different, as can be seen.



The research for this work took place over eighteen months. Preliminary research comprised the development of a performative paper, entitled *Choreographing the Virtual Domain*⁵⁰, which explored further the notion that one could design an interactive environment using a choreographic framework as an underlying structure. Drawing on my research for *Halo ... in Performance*, Alistair MacDonald and I designed a spatialised responsive/interactive environment, which would diffuse electronically generated sound around the space in response to the collective behaviour of the delegates attending the

⁵⁰ Presented at CADE (Computer Aided Design in Education) 2001. (The paper is accessible in the conference proceedings. (Rubidge: 2001)

presentation. The ‘paper’ was performed in a room empty of seating, the speaker traveling through the space, moving past and through the group of (standing) delegates who had come to listen to the paper, and in doing so causing them to unconsciously move and reconfigure the way they were grouped in the space. A kind of group choreography emerged from the movement of the delegates as they avoided the speaker.

From this initial experiment, we devised a further research project which entailed the development of a multiuser interactive system (using Max/MSP) which would generate an emergent choreographic form, and a complex musical event from the behaviour of the participants in a public interactive installation. I used the findings from the research project underpinning *Halo and Halo ...in Performance* to establish the spatial and choreographic principles upon which the interactive interface was based. In order to bypass the dominance of the visual sense spatialised sound, rather than spatialised image, served as the dominant interface. Each participant activated a sound when they entered the active space. This sound moved around the space with them as they navigated their way through the installation, indeed became one of the guides for navigation. As each participant moved ‘their’ sound would be modulated in accordance with various features of their trajectories through the space (e.g. direction, velocity, proximity to other participants). If two participants were in the space at the same time a sonic duet would occur, if four participants were in the space at the same time a denser texture of sound would result. Participants could control the spatialisation and texture of the sounds, and by virtue of the latter developed a spatial choreography as they moved towards a loudspeaker (say), or towards and away from other sound strands.

The research process took a cyclical form: discussion of ideas and decisions about the underlying spatial structures of the interactive interface: then the development of the interface in Max/MSP; then week long workshops in which the interactive interface was tested and refined with a group of participants; then discussions with the participants as to the legibility of the interface and their sense of being when in the environment, as well as our own evaluation of the compositional structures we were building into the system and

the sound worlds: then further refinement of the programming and the sonic environment in Max/MSP; then further testing in situ and so on. This process took place three times, in different cities and with different groups of participants⁵¹.

During this process various characteristics of the installation emerged which gave it its aesthetic surface. The necessity to have interacting participants in bright colours (in order for the interactive system to be able to track each participant individually and thus make the system legible) led us to the flamboyant costumes, and the somewhat theatrical ambience of the installation. During our experimental workshops we observed a tendency for participants to use their eyes to navigate through the space, rather than the sound. This led to the use of masks to obscure vision and bring attention back to the body and the spatialisation and quality of the sound (thus returning to the notion of using the haptic senses as a means of ‘understanding’ the installation). The restriction of the number of people to a maximum of four in the active space was in part a technical restriction⁵², in part the result of observations, and comments from participants, that there was an optimum number of sounds they could distinguish and hold in their consciousness at any one time. We then realized that eight participants could be in the space at the same time, if those wearing the same colour worked as a pair⁵³. Choreographically this allowed us to encompass duets, trios, quartets and full group events in the active space. It also led to the necessity for an installation environment which could accommodate both watchers (those waiting to go into the active space) and interacting participants, yet retain the sense of being one installation. This led to the design of distributed banners, upon which liminal video images were projected, creating a population of virtual inhabitants alongside the live inhabitants of the installation.

Gradually the installation we came to call Sensuous Geographies emerged out of the original (technical) research agenda we had set ourselves. This was an installation which

⁵¹ To get as broad a range of responses as possible.

⁵² Colour recognition tracking software needs clearly defined colours if it is to track consistently. Red, yellow, a very bright green and Blue are the optimum colours.

⁵³ The colour tracking system could not handle two instances of the same colour at the same time, if two were present the tracking of that colour became very erratic..

generated an emergent choreographic form from the interactive behaviour of the participants, which was (in general) legible to novice players, but also capable of generating complex musical and choreographic forms when the participants had more experience of, and thus gained more skill in the installation. It was an installation which could be accessed through bodily sensation (and thus continued to privilege the sensuous in to the digital domain) yet also approached more consciously so as to generate a musical form⁵⁴ which, because the sound was spatialised, led to emergent choreographic forms. In the light of this, in 2003 I consider that I finally succeeded in achieving the research agenda I set myself in 1995.

Conclusion

As can be seen, the drive to resolve the failures in Passing Phases led me on a research journey which lasted eight years. During this research journey I have not merely generated several successful installation works, but also developed techniques and strategies which now allow me to develop richer digital installations within the framework of my artistic agenda. As such, a piece which ‘failed’ in so many ways proved to be a success as a research project, because it required that I addressed significant artistic research issues if my work was to be able to move forward. It has led directly to the development of certain techniques which allow me to create the kind of aesthetic surface which facilitates understanding through the ‘undermind’, and to an interactive interface (the interactive programme which underpins Sensuous Geographies) which could be put into use for other multiuser installations.

And the research is ongoing. I have returned to the notion of creating images which lie even more on the threshold of attention in the research project I am currently undertaking

⁵⁴ Whereas my research agenda was to create an installation environment which would encourage people to use the ‘undermind’, their haptic (and well as aural) sense systems to navigate through the installation, MacDonald’s leant more towards using the awareness of the quality, and spatialisation of the sound to generate a spatialised ‘musical’ form. In this piece the two independent research agendas were symbiotic, rather than simply simultaneous.

with scientist Dr Beau Lotto⁵⁵. In this project, I am investigating the use of the physiological data which is generated when viewing moving visual imagery, to modulate the qualities of that same imagery. Here I am exploring in depth the nature of the physiological effects which are (or may be) generated by subtle moving imagery which is based in but does not overtly resemble human movement. As such, I am extending that side of my research which deals with non-conceptual modes of understanding art works, whilst at the same time attending to highly conceptual scientific claims concerning the ways we recognize human movement (e.g. Gallese's work on 'mirror neurons'⁵⁶).

I hope that, in this paper, I have made a case for the value of 'failure' in artistic research projects, and shown that in some ways advancement of knowledge in a discipline may ultimately be greater in these projects than in projects which succeed satisfactorily, but perhaps not as fully as they might. The former demands that problems be addressed, the latter may be accepted as an adequate result and not pursued further, or reflected upon with quite so much rigour. I also hope that, through the description of my own research projects, I have made a case for the use of artistic investigation in its own right as a viable form of research. My major research since 2000 have been predominantly concerned with developing new artistic techniques which would allow me to achieve two major artistic ends. Although deeply informed by critical theory with respect to their artistic agendas, this has not been the major thrust of the projects. They have, rather, constituted Artistic Research into Practice through Artistic Practice, and have not only produced new knowledge, but also new artistic processes. As such they stand in support of my argument that we should consider that some of the work of artists who work predominantly outside of the framework of academia has the potential to count as bona fide Research in the academy's terms.⁵⁷

⁵⁵ This is a project funded by the Wellcome Trust, a medical foundation which funds science-art projects.

⁵⁶ Gallese et al; 2002, 2004

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