genuinely[80] 'have applications far beyond the creative arts, design and related creative disciplines. For performative research is aligned with the processes of testing and prototyping so common in user-led and end-user research'.[81] Research through doing-thinking is important on a number fronts.

As I explain in Chapter 3, I am by no means opposed to words but, having recognized their slipperiness, we should give up the pretence that they are transparent and convey knowledge immediately. Though I have striven in my use of words here to be direct, even didactic, I acknowledge that they are inevitably coloured by my passions and interests, among which is a desire to see practical knowledge properly credited where, in the deep history of the Western intellectual tradition it has all too often been constructed as the negative 'other' of privileged theory.[82] I look in this book to bear out another contention of Brad Haseman, who proposes that

> [t]here is evidence enough to recognise that we stand at a pivotal moment in the history and development of research. Practice-led researchers are formulating a third species of research, one that stands in alignment with, but separate to, the established quantitative and qualitative research traditions.[83]

Nelson, Robin. Practice As Research in the Arts: Principles, Protocols, Pedagogies, Resistances. Basingstoke & New York: Palgrave Macmillan, 2013

2
From Practitioner to Practitioner-Researcher

When introducing PaR in presentations, I have come to speak about it as located at the confluence of different, but interlocking, spheres, notably 'the arts world', 'the mediasphere' and 'the academy' (Figure 2.1). Though this grouping is a section from a much larger constellation of interconnected praxical spheres, it has proved a productive means to emphasize what I call 'both–and' spaces in which aspects overlap. But there is a historical as well as a conceptual dimension. In the early days when PaR became a possibility, a number of established professional arts and media practitioners entered the academy perhaps to teach as part-time tutors, to undertake research or to work towards a PhD. Where misunderstandings arose about the differences between professional practice and research through practice, a number of issues needed direct address.

Though I mainly speak to established arts practitioners in what follows, it should be understood that the PaR methodology applies to all those who are turning to Practice *as Research*, though they may have a considerable record of practice and/or research through their prior education and experience. Some will approach PaR from the professions perhaps because they have found opportunities for study or employment in the academy. Others will come from the kinds of practice-based arts BA and MA programmes indicated in Chapter 1 in which their learning is already located more in doing than in the tradition of the Arts and Humanities dominated by book-based study with written outcomes. Some may even come from the latter educational tradition and have research publications yet see advantages in the different methodology of PaR. Since I am committed to creative cross-overs in an interconnected academy, I welcome also those who come from other disciplines.

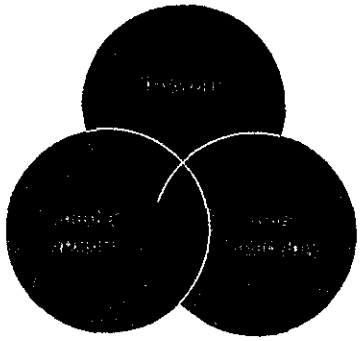

Figure 2.1 Interlocking spheres

As noted in Chapter 1, PaR was defined when arts practices came to be submitted as research in an academic institutional context. Initially there were misunderstandings on several fronts. On one hand, artists sometimes could not accept that their practices were not self-evidently research. Since each creative iteration is distinctive (even if it more or less follows a formula), it is in a weak sense 'original' and, since originality is a requirement for research, artists assumed their practices amounted to research. Indeed, on occasion resentments surfaced when candidates were asked critically to reflect on their practice and to document and perhaps write about it in essay form. But there is a significant difference between a fresh iteration of a creative practice and an original 'academic' research inquiry to yield new knowledge. On the other hand, established 'academics' could not comprehend that arts practices might be knowledge-producing and that the practices themselves might on occasion articulate a research inquiry.

To those already committed to PaR, it may seem that I am overly defensive in what follows. But one of the striking aspects of my involvement in the PaR initiative is that, when progress seems to have been achieved and arguments won, the same sceptical questions arise again in another quarter. From the accounts in Part II, it is evident that many colleagues in academia remain to be persuaded. Academics may simply be ruffled when their established culture is unsettled. Slow development, or even outright resistance, might be attributed in part to a fear in relatively new disciplines that an even more radical innovation may undermine the respectability recently achieved. Creative writing, dance studies, film, media and television studies, performance studies, and theatre studies, for example, are all (sub)disciplines newly established in

the academy, and still frequently marginalized. If it remains contentious that the arts and screen media are worthy of study at university level, then it may be even more questionable that their practices might constitute research. But as Raymond Williams observed, 'academic subjects are not eternal categories'.[1] Indeed, knowledge of the history of 'the academy' reveals many changes and accommodations since the medieval university curriculum entailed the study of grammar, dialectics, rhetoric, arithmetic, geometry, music and astronomy.[2]

Given the historical divide between theory and practice in the Western intellectual tradition, moreover, it is not surprising that misunderstandings within and without the academy arose when it appeared that arts practices were suddenly becoming acceptable in the research domain. It did not help that, misunderstanding PaR in believing their professional practice self-evidently constituted research, some would-be practitioner-researchers were reluctant to do anything other than they did as established professionals. This might be close to what is required in PaR, but, as we shall see, certain adjustments in approach need to be made. There are established protocols for research in the academy different from those in other spheres.

Some misunderstandings arose from different accents on the word 'research', as used in different spheres. In the arts world, it was possible to apply to the Arts Council in the UK for research and development (R&D) money to develop a creative practice; in the media world, people might be employed as 'researchers'. It is thus helpful to unpack several accents in common usage:

- *personal research* – involves finding out, and sifting, what is known;
- *professional research* – involves networking, finding sources and collating information;
- *academic research* – involves conducting a research inquiry to establish new knowledge

All of the above involve investigation, finding things out and drawing conclusions, even if it is personal market research to establish which digital camera is the best for your purposes. But only academic research requires that you must *establish new knowledge* or, to use the slightly softer phrase, afford *substantial new insights* (again the emphases are used to indicate the importance of these phrases). These criteria apply in all disciplines and, while it is possible to challenge established doxa – and indeed many challenges from practitioner-researchers have seen adjustments within the academy – these fundamental tenets

of academic research as they have emerged in the modern scientific tradition since the Enlightenment would be hard to shift, even were it desirable to do so.

In one sense, I recognize and acknowledge that my approach to PaR has involved a reconciliation of the new with the old. I have sought to establish a model for PaR which is consonant with academic research as established and meets its criteria. For example, I have resisted the proposal (taken up in some contexts) to have a separate set of doctorates for the arts (D. Dance, D. Fine Arts, D. Theatre etc.) awarded according to different criteria for high achievement in an arts practice. Because (as will be explained in Chapter 3) I believe PaR can be demonstrably knowledge-producing, I have worked with others to secure the PhD award involving arts practices, and a model for PaR which maps on to established methodologies and criteria. This has not been an easy task in a context in which positivism and 'the scientific method' have lingered in informing a dominant understanding of academic research and the criteria for knowledge, even though many innovative scientists have moved far away from this nineteenth-century paradigm. But, in the regulations for PhD awards in some UK universities, it emerged that 'the scientific method' was a prerequisite for research and, needless to say, in such contexts, significant battles were engaged before changes ensued (see Chapter 5). Institutional adjustments have needed to be matched, however, by adjustments of professional practitioners entering the academy. So what is needed to be done?

The PaR submission

In my approach, a PaR submission is comprised of multiple modes of evidence reflecting a multi-mode research inquiry. It is likely to include:

- a product (exhibition, film, blog, score, performance) with a *durable record* (DVD, CD, video);
- documentation of process (sketchbook, photographs, DVD, objects of material culture); and
- 'complementary writing' which includes locating practice in a lineage of influences and a conceptual framework for the research.

The practice, whatever it may be, is at the heart of the methodology of the project and is presented as substantial evidence of new insights. Where work is ephemeral (e.g. theatre, performance, dance, live art) it is ideal if the practice can be experienced directly in any assessment process. In the context of UK PhDs it is now firmly established that the examiners experience the practice at first hand, typically making an additional visit prior to a viva voce examination for the purpose (see Chapter 5). Because, however, a durable record of all evidence submitted is required of PhD submissions, it is now customary for a recording (typically on DVD) of the ephemeral event to be bound into the hard-copy 'black book' on final submission. Where in other assessment circumstances it is logistically impossible for all practice to be experienced at first hand, the DVD recording is, in my view, better than nothing, though, of course, it has inherent limitations (see below and Chapter 4).[3]

Though I insist that a research inquiry can be evident in the practice, it is not typically self-evident. Both arts practices and research investigations take place in contexts. Indeed, many projects which produce substantial insights nevertheless follow tried and tested paths. Across all disciplines, the findings of relatively few research inquiries are paradigm-shifting; Einsteins are few and far between. In the case of the arts, it is possible to think of rare events which fit the bill. The emergent dance theatre of Pina Bausch might be one in my own experience. Historically one might think of Seurat's use of juxtaposed coloured dots informed by the visual science of his time, or of Beethoven's use of woodwind instruments.[4] The point, however, is that such self-evident instances of wholly innovative practice are rare – and, indeed, often not recognized in their own time. As Polanyi remarks, 'it took eleven years for quantum theory to gain final acceptance by leading physicists'.[5] But to set the bar for *new knowledge* at the level of the paradigm shift is to set it too high. Fortunately for most of us, *substantial insights* are more readily attainable and this is in no way to demean them.

Indeed, as noted, artworks are often complex, multi-layered and resonant. Accordingly, there are several possible lines of research inquiry, some perhaps compositional, some technological, some involving performance qualities (such as the 'touch' of John Irving's clavichord playing) and others conceptual. This is where, in the first instance, a clue to the intended research inquiry is additionally needed. It may constitute little more than an 'artist's statement' which indicates the line of inquiry upon which the candidate wishes to be assessed.[6] Once identified, the clew (thread) can be readily traced through the practice. But, because I take PaR to involve a multi-mode inquiry, evidence may emerge beyond the practice itself (if conceived as a final showing, the product of the research). Many insights emerge in the

processes of making and doing. Hence, documentation of process has emerged as another key dimension of PaR and such documentation should be appropriately sifted, edited and downloaded to a DVD for submission. Much more will be said about documentation in Chapter 4 but, for now, it is worth noting that it might include notebooks, sketchbooks, photographs, fabricated objects, scores, video footage, audio recording – indeed any of many things which artists customarily do as part of their practice but inflected to capture and reveal moments of discovery. An additional emphasis is placed upon documentation in the light of the research inquiry but I suggest the adjustment is likely to be minimal. As Schön has noted, '[a]lthough reflection-in-action is an extraordinary process, it is not a rare event. Indeed for some practitioners, it is the core of practice'.[7]

The creative process involves a number of aspects. In respect of devised performance, my first PaRPhD student, Anna Fenemore, has recently enumerated these as: '1. anticipation, imagination, and projection, 2. playing, pretence and pleasure, 3. direction, repetition and/or insistence, 4. editing, *mise-en-scène* and composition.'[8] Though research usually builds upon an advanced training in a subject domain, typically to masters level, the process of creativity runs throughout arts education. Techniques and skills may be developed in training but the creative process involves gestation, allowing time for the spark of an idea to be fired, and a process in which it is wrought into realization. The workings of the unconscious mind can be mobilized in sleeping and daydreaming. Some practitioners like to take a walk or a bike ride, others find travelling on a bus or train helps. It is also a matter of the studio practice of trying things out.

While education and training afford the know-how of process, new sparks are often struck by taking the risk of (re)invention in a leap of de-familiarization. Scientists are at times involved in enforced rotation since it is recognized that to become too deeply immersed in one way of thinking or a single process can be stultifying, when a move into another mode of operation can yield results. Such defamiliarization maps onto my advocacy of engagement in other disciplines rather than more deeply mining a 'home' discipline. I do not rule out the latter, but often creativity arises in the frisson of encounter between different approaches to research or knowledge paradigms. Collaboration and rich environments also foster creativity. A good reason for artists to engage with 'the academy' is the richness of intellectual environment and defamiliariztion it affords. I do not subscribe to the romantic model of the lone artist in a garret inspired by his or her muse; in my experience, inspiration comes

through working with, and sparking off, others. The research dimension also requires stepping outside the process to reflect on it.

Critical reflection on process is an integral part of the research inquiry, as it might well be in the making of artwork.[9] But, because arts research is subtly different from arts practice and makes small, but significant, additional demands, it is necessary in PaR actively to promote critical reflection. As I see it, the thinking in intelligent contemporary practice is likely to resonate with ideas circulating in other domains and perhaps other disciplines. A programme of reading of all relevant kinds should be undertaken simultaneously with the commencement of the practical inquiry to mobilize an interplay between practical doing-thinking (what Carter (2004) calls 'material thinking') and more abstract conceptual thinking, typically understood to be verbally articulated (in books and articles). Bolt sums this movement up neatly when she writes of a 'double articulation between theory and practice, whereby theory emerges from a reflexive practice at the same time as practice is informed by theory'.[10] I will have more to say below, however, about how we might avoid the historical binary between 'theory' and 'practice' and about how the one can be seen to be *imbricated within* the other, but I agree with Bolt that critical reflection mobilizes a double articulation of thought central to PaR.

While PaR is ineluctably centred in practice, I also hold that reading, as in any research programme, is another mode in the multi-modal research inquiry. I take writing – of notes, scores or more formal essays – also to be part of a multi-modal process aimed at the tricky business of *articulating the research inquiry*. In short, I prefer to speak of 'praxis' to summarize all these research activities.

Summary of adjustments from practitioner to practitioner-researcher

- Specify a research inquiry at the outset.
- Set a timeline for the overall project including the various activities involved in a multi-mode inquiry.
- Build moments of critical reflection into the timeline, frequently checking that the research inquiry remains engaged and evidence is being collected.
- In documenting a process, capture moments of insight.
- Locate your praxis in a lineage of similar practices.
- Relate the specific inquiry to broader contemporary debate (through reading and exposition of ideas with references).

Based on a science model, many application forms for registration or funding ask for a 'research question' to be set at the outset. It may seem a small point but I prefer to ask for the specification of a 'research inquiry', partly because questions typically imply answers and, in turn, evoke perhaps 'the scientific method' in which data lead to the resolution of a hypothesis (see Chapter 3). In my experience, PaR typically affords substantial insights rather than coming to such definite conclusions as to constitute 'answers'. However, it is important to be as clear as possible at the outset about the line of inquiry you propose to follow. It is recognized that, as the research progresses, the direction might shift and perhaps become more focused in the process – and this holds for research conducted by all methodologies in all disciplines. But, particularly because there is a small but significant difference between making artworks and conducting academic research, it is important to mark the proposed line of flight at the research liftoff. Also, though the methods of PaR may seem somewhat playful, erratic even, in comparison with those of the established methodologies of the sciences and quantitative social sciences, it is unhelpful to overemphazise serendipity and simply say we won't know what the inquiry is until the praxis is underway. Indeed, it is worthwhile at the outset taking up the challenge of articulating your research inquiry, aims, objectives methodology, methods and outcomes with key guiding references on two sides of A4 paper.[11]

Once the process is under way, practitioners typically get so engrossed in the practical work that it has proved very helpful at the outset literally to draw up a timeline for the project and mark on it the times when the various activities of the research inquiry will take place. Significant time should be marked to step back from the busy doing to reflect on whether the research investigation is still on track. If it is not, the inquiry might drift too far away from initial intentions or be lost altogether. If the inquiry has found a new and justifiable track, then this can be identified rather than waiting until the notional end of the project only to find unhelpfully that you have arrived elsewhere than your planned destination.

Equally, it is advisable to think through in advance the variety of documentary strategies in which it might be helpful to engage and to be ready to mobilize them as occasion demands. For example, it is neither possible nor desirable to video every rehearsal of a performance production process. First, the presence of the camera can interfere with the process. Second, to record everything would be to end up with an amount of footage too massive to sift and edit in this context. So what is to be documented and when?[12]

Though this question is not easy to answer, to pose it in the first place is likely to heighten awareness of documentary possibility. Additionally, it may help to look forward to a notional end of the project anticipating what kind of documentation might be useful to *evidence the research inquiry*. In making work previously, you might have been aware of moments you would like to have captured – those moments perhaps when things began to take shape, to 'work'. If a sixth sense might be activated to keep a look out for such moments as they might occur in the current project, you will most likely be alert in the moment. If you have pre-thought the need to have a notebook, sketchbook, recording device or camera (stills or video) to hand, then the moment might be captured. What is needed in respect of documentation, then, is a disposition matched by strategies and organizational planning. If it is possible to have an assistant, somebody dedicated to supporting this task, life will be easier. Practices and issues of documentation are further unpacked in Chapter 4.

Another important PaR research activity is summed up in my phrase 'location in a lineage'. If we wish to claim that our praxis manifests *new knowledge* or *substantial new insights*, the implication is that we know what the established knowledge or insights are. In respect of arts practice it means that we know what other artists in this domain have achieved historically and, in particular, what other practitioner-researchers in the field are currently achieving. In actuality, this means that we know the backstory of our work and experience other people's practice as professional artists typically do. The small adjustment might be to write up the experience of a performance, gallery visit, workshop and so on such that a chapter locating praxis in a lineage in the 'complementary writing' can be included in the final submission. Even more important, assessing the achievements of other people's practice assists us in identifying what specifically our praxis is contributing to knowledge.

Perhaps the biggest adjustment practitioners need to make in the process of becoming practitioner-researchers is overtly to engage in conceptual debate. This part of the research inquiry serves two functions: defamiliarization and affirmation. My sense of the process, as noted, is that intelligent contemporary work is likely to resonate with ideas circulating elsewhere in culture and perhaps more specifically within other academic disciplines. On some occasions, differences ignite the spark of defamiliarization, while, on others, consonances emerge. Indeed inquiry related to arts PaR reveals similarities in approach in other disciplines such as anthropology, archaeology, architecture, education,

ethnography, neuroscience and many more. To realize this has helped us get over an unhelpful initial stance in arts PaR that artists have an exclusive way of seeing and doing which nobody else understands. There may be productive differences, but, to identify parallel approaches helps us more accurately to mark those differences as well as to acknowledge a consonance which, in turn, promotes a sense of belonging to what Polanyi calls 'a society of explorers' rather than (self-) exclusion.[13]

It is important, however, to reflect upon the nature of the relation between ideas and processes in one field and another. It might be analogical rather than logical or causal. Recent discoveries in neuroscience, for example, affirm a consonance between brain functions and creativity but it would be a mistake to say one causes the other. The least successful projects in my experience are those where practitioners engage in a practice first (perhaps because that is the most comfortable zone in which their background has taught them to operate) and only subsequently begin overtly conceptualizing and reading. At worst, in research submissions, 'theory' has been plucked out of the air in an attempt to lend gravity to a 'practice'. It seems like a rationalization after the event because it most likely is. My use of 'praxis' is intended to denote the possibility of thought within both 'theory' and 'practice' in an iterative process of 'doing-reflecting-reading-articulating-doing'.

It is very understandable, given the logocentric dominance of the Western intellectual tradition (see Chapter 3), that practitioners not deeply versed in the history of ideas by way of their education feel obliged to reach out for a weighty theorist to ground their project. In doing so, however, they may betray a lack of trust in PaR, ironically privileging theory over practice. It may be that supervising tutors inexperienced in PaR may also wish to settle their own nervousness about the knowledge-producing worth of a PaR project by proposing the anchoring of a practice with weighty tomes. Let me be clear. I am not advocating an abandonment of complex ideas. I am proposing that ideas circulating in the practical investigation might be clarified in the discovery of *resonances* with other research inquiries expressed in words. Because it is a two-way process, something has gone wrong in the PaR inquiry if a practitioner-researcher feels that she needs to grab at a theory to justify the practice.

It is important to remember that arts practices can be thoughtful and that, correspondingly, writing (of all kinds) is a practice. Not all practice is insightful, but Susan Melrose notes that 'some expert practitioners *already theorise* in multi-dimensional, multi-schematic modes . . . just as it can be argued some writers theorise in writing but not others'.[14] She points out

that, just as arts practitioners dance or write or compose to find expression for complex, and not easily apprehended, thoughts and feelings, writers coin tropes to 'cover over a gap in reasoning and a gap in material evidence'. She posits that Bourdieu's concept of 'habitus' is 'a creative invention, the outcome of a skilled writer's *expert-intuitive* leap'.[15] In doing so, she helps to dispel the historical binary opposition between 'theory' and 'practice' and between 'writing' and 'fabrication'. In commenting on Bourdieu, she is not making a criticism so much as acknowledging that writing is itself a practice and that writers do not simply express their complex thoughts and feelings in words of crystalline clarity but rather also gesture at articulation and work hard to achieve it.

As in all creative–critical practices, further refinements come with time and effort. My own articulation of PaR in terms of the succinct 'theory imbricated within practice' arose from my dissatisfaction with my earlier formulation that 'practice is informed by theory and vice-versa' which seemed to imply an unhappy separation of theory and practice and possibly a temporal relation of precedence. Similarly, as I see it, a process of refinement takes place in the arts studio in which practitioners strive for expression. Furthermore, a rigorous process of editing, refinement and reworking is entailed in the processes of practitioner-researchers and I firmly believe that better-quality artwork results.

Some artists hold that their work is intuitive and to engage in critical reflection upon it would be to extinguish the creative spark. I do not share this view, which is not to discount the 'expert-intuitive leap' of which Melrose speaks. While creativity has traditionally been located in a mythologized right side of the brain, recent research in neuroscience has found interconnections between the brain's hemispheres. As McCrone summarizes the position following Fink's research findings:

> at least there seems no prospect of a return to the old left–right caricatures that inspired so many self-help books exhorting people to liberate their right brains and avoid too much sterile left-brain thinking. As Fink says, whatever the story about lateralisation, simple dichotomies are out'.[16]

On this basis, and in the light of pedagogic experience, I hold that engaging in reading and writing of all kinds alongside the doing of an arts practice mobilizes a process of dialogic engagement. It is not a matter of going into the studio waving your copy of any theorist from Aristotle to Žižek but a matter of allowing ideas relevant to your project to circulate freely in the investigative space (actual or virtual). In respect

of *articulating and evidencing the research inquiry*, complementary writings of all kinds afford additional opportunities for dialogic engagement.

Content of complementary writing

In a typical PaR PhD under my supervision, the following chapters of complementary writing are likely to appear:

- location in a lineage by way of a practice review
- conceptual framework
- account of process

Literature-practice review

Custom requires a traditional PhD to begin with a review of literature. The purpose of this review is to establish the published knowledge in the field to date and, further, to demonstrate that you have exhaustively explored the domain of your particular research (see Chapter 5). I do not accept that a review of literature is always necessary (even for a traditional arts and humanities PhD) because my approach to research is open and interdisciplinary and thus less dependent upon a specific body of knowledge requiring prior mastery. As noted in Chapter 1 in respect of Elkins's concerns, where an arts research inquiry is specialist – in art history, for example – traditional approaches might well be appropriate.[17] In my experience, PaR is likely to be interdisciplinary and to draw upon a range of sources in several fields; and, while it is not possible for a PaR student to equal the specialist in all disciplines drawn upon, the shortfall does not amount to a lack of thoroughness. Rigour in this aspect of PaR lies elsewhere in syncretism, not in depth-mining. In addition to challenging the student, a PaR approach does indeed challenge supervisors and assessors. As Elkins remarks, '[t]he specialist no longer acts as a specialist in her own field',[18] and it is the case that supervisors need to develop an approach different from the traditional. But, as Mottram notes:

> We are starting to have a population of researchers and research supervisors who do form a community of research practitioners, and who may start to generate common understandings and shared agendas as part of their research culture.[19]

I do hold that candidates' knowledge should be up to date since how can new knowledge be asserted, if existing knowledge has not been

established? But in a PaR project, the location of work in a lineage of practice might be more appropriate than a literature review (though it is typically a matter of 'both-and'). I would expect this chapter to give accounts of several practitioners/companies working in similar territory with a disposition to distinguish what each has achieved. Such writing should set up a platform for the account of process to bring out the specificity of the practitioner-researcher's own findings.

The conceptual-framework chapter is likely to be the most traditional in form and content. I suggest that it is written in traditional academic, quasi-objective form (in the passive mode or third person), partly to demonstrate a mastery (if that is not too gender-loaded a term) of this mode of writing. The mode has been aptly critiqued for manifesting a pretence of objectivity by the middle-class males who dominated the academy. There has been significant debate about the possibility of a transparent or neutral truth language which I will take up in Chapter 3. I still hold that the aim of impartiality – or, better, maximum intersubjectivity – of the traditional mode of academic discourse has a value (as long as the deception that it is a neutral truth language is avoided). Indeed, it is part of my sense outlined above that it is a challenge to express ourselves fully and to articulate our thinking clearly in any mode of discourse (including arts praxis) and that we should take advantage of a range of modes of expression, particularly in respect of articulating a research inquiry.

Accordingly, in the account of process, and contrasting with the conceptual framework chapter, I propose the use of the first person. It would seem absurd to deperzonalise and write 'the choreographer went into the studio and . . . ', when that person could more straightforwardly write 'I undertook such-and-such a process'. As Macleod and Holdridge remark, '[t]he first person singular is axiomatic as is a specific intimacy with research findings'.[20] There is a sense of improvization, indeed playfulness, in much studio practice even where the research is most rigorous. It thus seems even more ridiculous to be formal about an informal process and, in my experience, first-person accounts of process read well. It may even be that more gestural poetic modes of expression are useful in this aspect of the complementary writing in the attempt to articulate in words what is ultimately better danced.

The account of process aims to bring out practical methods in the frame of the PaR methodology and to document and share the approaches which produced both the artwork and the research findings. I have on occasion found artists reluctant to relate the specifics of their process, first because they do not think that they will be of interest.

Because individuals and groups of practitioners have established ways of working, they overlook that these may not be self-evident both across the arts community and beyond. There are subtle differences, for example, in the ways dancers, film-makers, writers, musicians and theatre-makers approach composition, and in the accents on the vocabulary they use ('rhythm', for example, signifies different things in different domains). There are differences, too, within disciplines. Indeed, there is a considerable, under-mined territory of practices which might be better articulated and disseminated. But this brings me to the second reservation of artists. Some are reluctant to reveal their process either because they feel, as noted, that to do so would 'extinguish the spark' or because they are precious about what they do. Both these grounds might be legitimate in arts practice but sit less happily in the research domain which, despite notorious examples of competition, has a broad disposition to share knowledge for the general good.

I have used my preferred term 'complementary writing' without explaining why I opt for it. In the early years of PaR, much of the debate focused upon why any writing was required in a PaR thesis. People might say things such as, 'if I could put it into words, I wouldn't have to dance it'. While I have considerable sympathy with this point of view, it can be unhelpful. On rare occasions I do believe the practice alone may evidence a research inquiry. But an artwork cannot take account of the context(s) in which it might be experienced.[21] If we hold, from a poststructuralist perspective, that signifiers are multi-accented, dependent on dialogical negotiation in context to achieve any intersubjectively agreed sense of significance, and, if the impact of artworks might exceed their phenomenal properties, can we assume the research inquiry is self-evident in the practice? This open question will be addressed in Chapter 3.

The aim of complementary writing is absolutely not to transpose the artwork from its own medium into that of words. It is not a requirement to translate the work, as some have alleged. By way of complementing the practice, writings assist in the *articulation and evidencing of the research inquiry*. In the context of the academy, PaR is called upon to meet the criterion of disseminability. It should be possible for persons operating within an academic institution to share their research findings with non-specialists. Though I am not an astro-physicist, there is a sense in which I am able to access research in that domain through articles in refereed journals. Though I may not fully appreciate the intricacies, I would like to think I can at least follow the gist in a way which affords insights. Similarly, I believe the complementary writings

of artists might afford access to the complex process of making to non-specialists. It may be that expert peers best appreciate the nuances of research findings as articulated in both the work itself and the complementary writings – and peer review remains a cornerstone of formal academic assessment. But access to insights is afforded to a broader community in the first instance by a clue to the research inquiry, and then additionally by a clew through it, in documentation and complementary writing(s). I take this to be part of the noted disposition within the academy to share knowledge for the general good.

To express in diagrammatic form the multi-mode, dialogical, dynamic approach I have outlined, I offer the revised model shown in Figure 2.2.

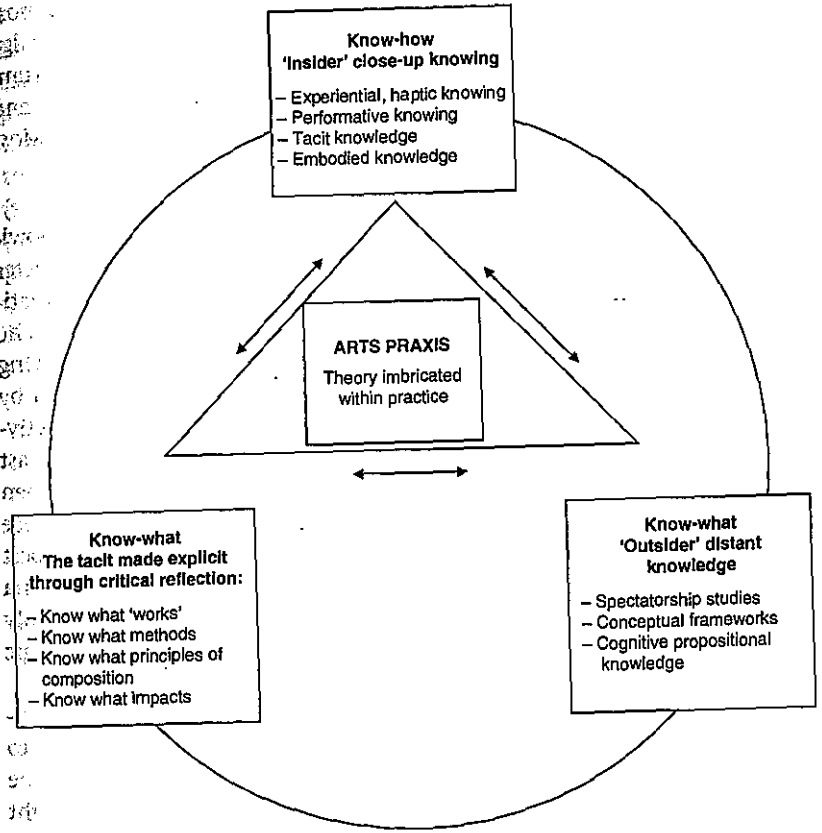

Figure 2.2 Modes of knowing: multi-mode epistemological model for PaR

Unpacking and using Nelson's PaR models

The model shown in the figure is a refinement for this book of previous models I have published. It is similar to the others in that it involves a multi-mode approach to PaR and evidence produced through different modes of knowledge: 'know-how; know-what and know-that'. It is specific to PaR in that practice is at its heart and it embraces modes of knowing (tacit, embodied-cognition, performative) only recently, but increasingly, acknowledged in 'the academy'. But it is far from exclusive in that it reaches out to knowledge established by other methodologies, although it calls into question their assumption of supremacy. Leonard and Sensiper propose the following:

> Knowledge exists on a spectrum. At one extreme, it is almost completely tacit, that is semi-conscious and unconscious knowledge held in people's heads and bodies. At the other end of the spectrum, knowledge is almost completely explicit or codified, structured and accessible to people other than individuals originating it. Most knowledge of course exists between the extremes.[22]

The explicit is typically associated with 'objective' (value-free) knowledge of objects seen clearly from a distance. It is 'know-that' in character since it can be represented mathematically in numbers or diagrammatically, or articulated as rules or laws in writing in the passive voice. The tacit might, by way of negative definition, include modes of knowing (such as embodied cognition) which cannot be readily formulated by these means. In various ways to be explored in Chapter 3, the 'objectivity' of explicit knowledge has been called into question over the past century while, at the same time, tacit, embodied cognition has been increasingly recognized. Accordingly, my model proposes that, since knowledge is difficult to establish, the pursuit of knowing might best be served by embracing all possibilities. However, since their criteria are not simply commensurate, different methodologies cannot simply be equated, though *resonances* might be discerned in their dialogic interrelation.[23]

I propose here to unpack how this model may be of use to practitioner-researchers in relation to the schema above for the various activities to be undertaken, the kinds of evidence each might afford and how the presentation in interrelationship of different kinds of evidence might add up to a 'substantial new insight' or 'new knowledge'. Considerable emphasis is placed on processes to articulate the tacit. It may not

ultimately be possible to make the tacit thoroughly explicit (that is, expressed as propositional knowledge in writing) but, if practitioner-researchers wish their embodied cognitions to be better recognized, means of identifying and disseminating them must be sought.[24] That is what the dynamic, dialogic process of my model seeks to achieve.

Feedback I have received has pointed out that, in its multi-dimensionality, the model might be prismatic rather than triangular and located in a sphere rather than a circle. I accept these observations but find that the more the diagram is made to reflect the complexity of the multi-dimensional process the less easy it is for practitioner-researchers to apprehend and use it. However, I recognize, too, that for pedagogic purposes, it may help some users to have a fuller understanding of what is at stake in the complex process.

Key to my approach to PaR is an acceptance that knowledge is not fixed and absolute. Though I accept that 'the scientific method' with its capacities of experimental testability, repeatability and falsifiability has proved valuable, the fact is that it does not produce absolute truths. Indeed 'the scientific method' has itself developed considerably since the high-point of positivism in the latter half of the nineteenth century (see Chapter 3). Results produced by means of scientific methods often prove inconclusive or contradictory, and quite frequently established positions have to be substantially revised or abandoned in the light of further research. Moreover, in recognizing since Einstein and Heisenberg that subjective elements cannot be ruled out in the process of positioning, analysing and measuring phenomena, twentieth- and twenty-first-century scientists accept that the knowledge they produce is not as 'hard' or 'objective' as nineteenth-century positivism assumed. Indeed, Polanyi has remarked that 'it is futile to seek for strictly impersonal criteria of [a discovery's] validity, as positivistic philosophies of science have been doing for the past eighty years or so'.[25] Thus a more fluid 'knowing' yielded in PaR projects might be located on the spectrum between types of knowledge rather than on the reverse side of an impervious 'knowledge/not knowledge' binary. The scientist-turned-philosopher Polanyi 'always speaks of 'knowing', therefore, to cover practical and theoretical knowledge', and I share this standpoint.[26]

Research in the arts needs, however, to demonstrate a rigour equivalent to that of the sciences. In my view, it is not sufficient simply to assert, on the basis of that common element of subjectivity, that 'we know what we know' and that knowing in the arts is personal, embodied and tacit. Since the eighteenth century, in Hank Slager's reading of Baumgarten, '[e]ven though artistic knowledge understood as *mathesis*

singularis – because of its focus on the singular and the unique – cannot be comprehended in laws, it deals with a form of knowledge'.[27] The challenge for advocates of PaR, then, is to develop a methodology and methods to frame that knowledge not based on the formulation of laws by way of deduction and induction (see Chapter 3) but on a different but nevertheless equivalently rigorous basis. My model is offered as a move in that direction. Drawing upon contextualization in relation to what is already known, and on critical reflection on what we might call practical experiments, it may indeed appear, as Van Gelder and Baetens have remarked, that 'the research methods of the hard sciences are closer to those of research in the arts than the methods and models of the humanities'.[28]

Praxis

Intelligent practice is at the core of my model and a practice is characteristically submitted as substantial evidence of the research inquiry. In 'know-how', I advocate 'doing-knowing', akin to what Schön, in a seminal study, calls 'knowledge-in-practice'.[29] Knowing how to ride a bike is a knowing-doing largely beyond verbal explanation. Arts practitioners manifest many kinds of know-how of this kind, much learned through practising with others (often in the context of formal education). Reflection upon this process of building knowledge (to be further explicated in Chapter 3) allows for the making visible of an intelligence which nevertheless remains fundamentally located in embodied knowing.[30] Both reading to acquire knowledge as traditionally conceived prior to the practice and critical reflection after the event take their place as methods to this end in my multi-mode PaR methodology, while discovery through doing itself remains key. Reflection on the kinds of knowledge practitioners bring to their workspaces is a useful starting-point to establish what knowledges are in play, and much remains to be understood, through research, of how arts practices function.

Any given instance of somebody iteratively repeating a process such as learning to ride a bike would not constitute research involving new insights. It merely establishes a mode of acquired bodymind knowledge. But the studio practice may also provide the context for devising anew in a process of invention. As Carter puts it:

> The condition of invention – the state of being that allows a state of becoming to emerge – is a perception, or recognition, of the ambiguity of appearances. Invention begins when what signifies exceeds its signification – when what means one thing, or conventionally functions in one role, discloses other possibilities . . . In general a double movement occurs, in which the found elements are rendered strange, and of recontextualization, in which new families of association and structures of meaning are established.[31]

There is a rigour involved in the double movement of devising processes in arts production: in the gathering of materials, in the juxtaposition of disparate elements, and in the selection and editing to shape the artefact. Both techniques and technologies are involved but, as Raymond Williams has observed, there is a significant difference between them:

> A technique is a particular skill or application of a skill. A technical invention is then a development of such a skill or the development or invention of one of its devices. A technology by contrast is, first, the body of knowledge appropriate to the development of such skills and applications and, second, a body of knowledge and conditions for the practical use and application of a range of devices.[32]

Insights in PaR may be in the development of technique. Equally they may be achieved in technology defined as practical use and application. Using algorithms as a new technique digitally to create sounds or visual images might be developed into acoustic music or digital artworks by way of application.[33] Thus practical invention has a public, social character. Indeed, as Bill Worthen, following Williams, has remarked, '[t]ools and technologies exist in a dynamic equilibrium; tools afford different acts in different technologies, which redefine the *affordance* of the tool'.[34] The term 'affordance' signifies the potentiality of an object, or an environment, which allows an individual to perform an action.[35] It is possible, then, by drawing upon a range of modern shifts in thinking about the fixity of the world and its absolute knowability, to begin to build a case for the validity of PaR knowing on the basis not only of the rigour of its methods but also of the originality of invention and the social impact of its findings.

Know-how

Know-how is sometimes termed 'procedural knowledge' in contrast with the 'propositional knowledge' of know-that.[36] Typically following the 'source-path-goal' schema of learning through doing,[37] procedural knowledge is gained incrementally (in dance technique classes, for

example) and amounts to a set of actions which facilitate complex tasks (such as riding a bike, swimming or driving). But to think of tacit knowledge only in terms of a set of rote-learned motor skills is to underestimate what is going on.

In his account of the reflective practitioner and knowing-in-action, Schön suggests that tacit knowledge has the following properties:

- There are actions, recognitions and judgements which we know how to carry out spontaneously; we do not have to think about them.
- We are often unaware of having learned to do these things; we simply find ourselves doing them.
- In some cases, we were once aware of the understandings which were subsequently internalized in our feeling for the stuff of action. In other cases, we may never have been aware of them. In both cases, however, we are usually unable to describe the knowing which our action reveals.[38]

Advanced students engaging in PaR bring with them to the praxis a baggage of prior educational experience and, typically, specialist training. Most hold a first degree and masters-level qualification and many have significant professional experience. Accordingly, they know how to engage in their practice. If they are dancers, they may have trained in ballet, jazz and tap and/or 'contemporary' dance. If they are photographers, video- or film-makers, they will be aware of different-length lenses, shutter speeds, white balance, camera movements, framing and so on. If musical composers or performers, they will have been schooled in a repertoire, are probably able to read and write musical scores and perhaps work with electronic modes of composition on a computer. If they are actors, they will be familiar with the protocols and procedures of rehearsal and probably have training in the mode of a significant practitioner (Stanislavski, Brecht, Grotowski, M. Chekhov, Le Coq, Meisner *et al.*) or in devised practice (e.g. Wooster Group, Forced Entertainment, Goat Island). They all have 'know-how' which manifests Schön's seminal idea of 'knowledge in action' which supposes that praxis involves an intrinsically intelligent 'dialogue with the situation'.

In some instances, their 'know-how' will be inscribed in the body. Perhaps most obviously, a ballet-trained dancer holds his body and moves in specific ways, but 'embodied cognition' is today a broader category which admits many modes of knowing which are inseparable from our being in the world. Polanyi holds that 'by elucidating the way our bodily processes participate in our perceptions we will throw light

on the bodily roots of all thought, including man's highest creative powers'.[39] Neuroscientists Francisco Varela and colleagues explain that

> [b]y using the term *embodied* we mean to highlight two points: first that cognition depends upon the kind of experience that comes from having a body with various sensorimotor capacities, and, second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context.[40]

In *Action in Perception*, Alva Nöe presses the case for 'enactive' perception in positing that 'perception and perceptual consciousness are types of thoughtful, knowledgeable activity'.[41] He notes that

> Kant famously said that intuitions without concepts are blind. The present point is that intuitions – patterns of stimulation – without knowledge of the sensorimotor significance of those intuitions, are blind. Crucially, the knowledge in question is practical knowledge: it is know-how. To perceive you must be in possession of *sensorimotor bodily skill*.[42]

Nöe, Varela and colleagues emphasize, then, that cognition is not the representation of a pre-given world by a pre-given mind but it is rather the enactment of a world and a mind.

In the light of the 'performance turn' and an increasingly accepted insight into the centrality of 'embodied knowledge' in perception and cognition, there are two practical implications of 'know-how' that need highlighting in a PaR context. First, such knowledge is often taken for granted by arts practitioners and, second, beyond articulation in doing, much of it is not easy otherwise to make manifest. Indeed, one of the key challenges of PaR is to make the 'tacit' more 'explicit'.

Tacit knowledge (to be further explored in Chapter 3) is sometimes seen as either an evasion or an intrinsic problem in the research domain. As Emlyn Jones points out, '[w]e need to be more explicit about what is meant by an enquiring mind in our subject at university level'[43] so as to answer the concerns of conservatives who argue that a theory of tacit knowledge seemingly confirms the unintelligence of art in the sense that is it is mind-less. The unsustainability of the presupposition of a binary divide between body and mind will be addressed further in the next chapter. The embodiment of perception, as briefly marked above, has fundamentally challenged such a view in recent years. It is certainly

the case that it is difficult to make tacit embodied knowledge explici and it may be that 'performative' knowledge resides ultimately in th doing-thinking. But more might be done in a research context to mak the tacit explicit.

Know-what

Know-what, unlike know-how and know-that, is not an established mode but, as I construct it in the model, it covers what can be gleaned through an informed reflexivity about the processes of making and its modes of knowing. The key method used to develop know-what from know-how is that of critical reflection – pausing, standing back and thinking about what you are doing. Put thus, it sounds straightforward, but in the actuality of PaR it demands a rigorous and iterative process.

Schön has recognized that the sedimentation of know-how could render process repetitive and routine. He points out that '[a] practitioner's reflection can serve as corrective to overlearning. Through reflection he can learn and criticize the tacit understandings that have grown up around the repetitive experiences of a specialized practice'.[44] It is thus necessary, as indicated, regularly to step outside involvement in the praxis to monitor and engage with the research inquiry and its articulation. The know-what of PaR resides in knowing what 'works', in teasing out the methods by which 'what works' is achieved and the compositional principles involved. In the documentation of a devising process, for example, it may be possible to capture instances of where things are not getting anywhere alongside moments when things begin to work. Know-what may thus be illustrated (in an annotated DVD, for example), though it might not be expressed in propositional terms (articulated as rules or laws). Though each piece of practice may be individual, an aggregation of instances (such as is currently being established in the PaR community – see Chapter 4) allows for a broader know-what to be established. Informed by the practice review, it is possible gradually to identify what is distinctive about a given practice and the substantial new insights it yields.

In addition, as Haseman and Mafe formulate it, '[t]he reflexive defines a position where the researcher can refer and reflect upon themselves and so be able to give an account of their own position of enunciation'.[45] Reflexivity, then, concerns not only reflecting on what is being achieved and how the specific work is taking shape but also being aware of where you stand ('where you are coming from') in respect of

knowledge traditions more broadly. Reflexivity is particularly necessary in today's relativist intellectual context in which the lack of universal knowledge and limited consensus opens up the field of interpretation. Where, for example, accounts of embodied cognition are based on common human experience, common embodiment and common evolutionary history,[46] it is necessary overtly to recognize that such a position is not universally held. This is where know-that comes into play. Sullivan remarks that '[i]nterpretive acts open up a space among the artist, artwork and the setting as different interests and perspectives are embraced'.[47] The idea of 'standpoint epistemologies' and changing knowledge traditions will be taken up in the next chapter.

To achieve a profoundly critical reflection, an additional dimension is required to dislocate habitual ways of seeing. In my model such a dimension may be mobilized from within, from an element of playfulness in the know-how process, and from without, through engagement with a range of other perspectives and standpoints to promote the interplay with fresh ideas. Smith and Dean have constructed a model of an 'iterative cyclical web' delineating cycles of iterative processes which involve an interplay of 'practice-led research', 'research-led practice' and 'academic research'.[48] Though I insist that doing-thinking in the first two categories is a dimension of 'academic research', the iterative cycles of process they delineate resonate with the dialogical interplay of know-how, know-what and know-that in my model. Marking two possible approaches to research reflecting different mindsets – process-driven and goal-oriented – Smith and Dean note that 'the two ways of working are by no means entirely separate from each other and often interact'.[49] Likewise, my proposal that an open and playful approach to creative process might be offset by aims, objective and a timeline mixes aspects of a more goal-oriented approach with a process-driven one.

Know-that

The setting in play of 'know-that', the equivalent of traditional 'academic knowledge' articulated in words and numbers (propositional discourse) drawn from reading of all kinds, completes the bases of my model. It is added to, particularly in PaR, by knowledge gained through the experiencing of practices intrinsic to any specific research inquiry. The cornerstones of my model are interlinked by the two-way arrows along the axes of Figure 2.2 to mark a dialogic interplay between the bases. Indeed, the dynamics of process characteristic of creative practices

with an emphasis on becoming are crucial to my understanding of knowledge production. Although it might appear so in books and articles which efface the labour it has taken to produce clear utterances, knowledge does not arrive fully formed in neat parcels, clearly bound and visually available to more than one person at a time. All forms of research and knowing involve a process. But as my own model indicates, the process of PaR is perhaps more multi-modal and dynamic than those in other kinds of research.

The accounts of reflective practice by all commentators are characterized by movement. In Schön's account of the reflective practitioner, a play of elements is required, to 'surface and criticize the tacit understandings . . . and make new sense of the situations of uncertainty or uniqueness which he [*sic*] may allow himself to experience'.[50] More obliquely, Polanyi is instructive in conceptualizing the phenomenal movement from tacit know-how to more explicit know-what or, in his terms, a movement from the proximal to the distal:

> The transposition of bodily experiences into the perception of things outside may now appear, therefore, as an instance of the transposition of meaning away from us, which we have found to be present to some extent in all tacit knowing.[51]

Tacit knowledge may be too close (proximal) for it to be fully recognized. Moreover, through non-reflective iteration, it might become habitual. In order both to shake it up a little and to understand it more fully, a required movement away from the proximal towards the distal can be effected through critical reflection. The more embodied experience moves away from the proximal, the more it becomes possible to articulate its import in additional modes, including the intellectual, as patterns 'emerge' into discernible forms. In a number of disciplines, 'emergence' marks the way patterns and complex systems are formed from apparently simple actions and interactions.[52] In Polanyi's formulation, there is a stratified framework in which 'emergence' is defined as the action which produces the next highest level. In all formulations, the oscillation of thought from the proximal concrete to the more distant abstract and back again not only clarifies but also enriches through a layering of multiple resonances as the tacit doing-thinking in the creative process is made explicit.

The rigour involved in different aspects of the dynamic process above differs from that of the traditional (positivist) scientific method but is consonant with more modern conceptions of scientific knowing (such

as complexity and emergence), as they have developed in the twentieth and twenty-first centuries. Haseman and Mafe conclude that

> [t]he creative work is one research output but creative research itself is something that works with the creative component to establish something other, some critical or technological finding for example. So while there are emergent outcomes within creative practice, it is when this potent and somewhat unruly discipline is co-joined with research that creative practice-led research becomes truly emergent in its outcomes.[53]

This chapter has put forward a procedure for undertaking a research inquiry through a practice and has spelt out the additional tasks a practitioner needs to engage in to become a practitioner-researcher. Recognizing the particularity of each PaR project, it has offered not a meta-theory but a model to house distinct, but dynamically interrelated, modes of knowing or knowledge and to show how they may be mobilized in PaR. It has noted that complex ideas may well already be in circulation in the praxis, and that they may additionally be mobilized by activating know-that. It has suggested that much of what is required by way of documentation may already be a part of professional process but that anticipation, preparation and 'sixth-sense' awareness can assist in capturing key insights. Much of the dialogic engagement between the three key modes of knowing is aimed at bringing out in an academic research context what constitutes substantial new insights.