The activity and artistry of solo vocal performance: Insights from investigative observations and interviews with western classical singers¹

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• ABSTRACT

This paper draws on data collected from four professional solo classical singers as they prepared and performed the same piece, each working with the same accompanist. It examines their thoughts and feelings — inner mental states — as recalled and expressed in interview, and their perceptible outer states as observed in their physical behaviours. Data were collected from both talk-aloud reflections on the activities of practice, rehearsal and performance, and observer evaluations of rehearsals and performance as observed in video recordings. The aims of these reflections were to investigate: i) the nature of mental and bodily action for technical and expressive musical communication; ii) the nature of social interaction within the rehearsal and performing contexts; iii) overall, this work is undertaken to broaden knowledge and understanding of how an expert vocal performance is prepared, delivered and perceived. Results suggest that a subtle interplay of social and musical communication is necessary to achieve a “good performance”. These ideas are discussed in terms of a social theory relating to how inner and outer mental states are displayed through the body in musical performance.

BACKGROUND

For more more than fifteen years (see references to my work from Davidson 1991 to Davidson 2006), I have been fascinated by the ways in which physical action generates and presents musical performance, and enables the development of thoughts and reflections on music. Nowhere is the case more intriguing than in singing, where the sounds produced emanate from inside the body (the vocal

(1) This article includes some material published by the author elsewhere (e.g., Davidson, 2005 pp. 112-17, Davidson & Coulam, 2006, pp. 125-35), but adds new data and theoretical ideas.

mechanism being in the larynx, and dependent on breathing and resonating mechanisms also within the body), and then being communicated through the whole body in various postures and gestures out to the audience. I begin this paper by providing an overview of singing as a mental and physical activity. Then, through a specific focus on bodily movement, I explore how the entire singing activity is communicated. From this context, the results of work with four singers are discussed.

LEARNING TO SING

Virtually all technique books on singing discuss the physiology of the singing voice, and there are practical methods which have developed to optimise the use of position of larynx, focus on resonators and breath flow, all so that the "placement" of the voice results in the production of an appropriate tone and volume. Generally, these voice methods are consistent with an understanding of vocal anatomy and overall bodily functions (*cf.* Benniger & Murry, 2006). One of the best examples of this work has been in a recent volume by Chapman (2005) which relates each technical aspect of singing to anatomy and physiology research as well as holistic medical practices, all aiming to assist in good vocal hygiene and health. For example, she examines mouth shape and position for singing different vowels and consonants in different languages; also, the use of facial and torso muscles and resonating cavities; and deep breathing with diaphragmatic support with overall head, neck, shoulder and back posture. Of course, the coordinated action of breathing, use of larynx and associated resonators requires a good technique and this emerges from highly refined and developed cognitive strategies. The strategies rely on metaphor, owing to much of the vocal apparatus being inside the body, and not being readily malleable. Allusions to space, motion, and emotions aid in training specific interior physical actions. Here I cite three examples from different practical singing teaching contexts, with transcriptions being made from personal observations and recordings:

"Ok, this time, try to imagine that your voice is moving like this: [hand gestures a shepherd's crook shape with a movement above the back of the head]... You need to have *that* [repetition of the gesture] to feel the swing down onto the sound."

Me, giving a classical singing lesson to Holly; Australia, February 2006.

"In the next bit, you're feeling your body support your sound 'deep in your soul' [hand gesture with the hand pressing downward to the limit of the arm length, with the palm down and in a horizontal position. Arm makes a strong smooth movement.] Ok, now sing those lines with your heart. You need to feel that suffering to put the right character into your voice."

Nicole, teaching a group an Afro-American Spiritual; Portugal, September 2005.

"Keep your conscious attention focused forwards, with your head and neck in an aligned, long position; then as you take your breath to sing, feel as though your lungs are filling like

spreading wings [arm and hand movements illustrate the opening]. Make the sound in the line of focused attention [hand gestures, at eye level, a forward pointing action], and then direct your voice towards the back of the hall. Let me hear your voice fill the room like an angel opening giant wings.”

Paulina, rehearsing a large choral group for a community music concert of Chinese folk and popular choral music; Hong Kong, April 2006.

Thus, the bodily motion (allusions as well as actual gestures) and emotion metaphors seem to facilitate the development of the correct coordination of anatomical elements with physical actions to create appropriate technical and expressive singing. Though singing is a particularly interesting “interiorised” physical skill, such metaphorical and embodied action strategies are common in many forms of training ranging from throwing the javelin, making a pen and ink sketch, dancing a tango, to making a dramatic speech. It seems that both real and suggested (metaphorical) activities are primary means of stimulating thoughts and new actions (see Davidson & Correia, 2002, for more on embodiment in music). They assist in a multi-modal manner to form an internal representation which each singer is eventually able to produce automatically, and from this automatised skill base, can gradually encode new material or manipulate known material for a specific context.

The ability to generate and use mental representations efficiently is, of course, a characteristic of expertise, and applies across all coordinated thought and action tasks. Singers at different stages of competency have different levels of such thought and action coordination. A beginning student’s mental representation of how to sing a single note might typically comprise carefully planned, conscious breaths and laborious mouth shape formation, thinking about jaw, tongue, and lip position. A more advanced singer might find these aspects relatively easy to produce and thus may also represent strategies to create a specific tone, with varying use of vibrato, and diaphragmatic pressure to create specific musical effect. The motion-kinaesthetic production of the voice and a visual representation of how the score looks may also be integrated into a mental representation of singing, so that specific sequences can be reliably and fluently recalled and produced.

Lehmann & Davidson (2002) have discussed how skilled performers require at least three different types of mental representations and these correspond to (i) a goal representation, (ii) a production representation, and (iii) a representation of the current performance. Woody (1999) has named these as goal imaging, motor production, and self-monitoring. We might explain the bodily engagement of the performer, therefore, as being the consequence of performance goals (technical and expressive aims) and the self-monitoring that goes on during the course of the performance. These processes are inter-dependent, combining intellectual/conceptual understanding and motor skill.

A key feature of practice is to ensure that the coordinated activity and the piece (a song, an aria, or a whole stage role) being learned become so well established in

thought and motor activity that the process is automated, thus the performer is "free" to deal with the "in the moment" conscious aspects during a performance, such as problem-solving to cope with a suddenly dry throat while singing, and engaging in relevant stage behaviours such as spontaneous interactions with the audience. Having the skill to sing with automated thought and action, as well as the capacity to modify and bring to conscious control specific features is the desired state of mastery which differs radically from the novice's possibilities (see Lehmann & Davidson, 2002, for a more detailed discussion).

In association with the development of mental representations for performance attainment, our anatomies also have a critical role in shaping the musical outcome. For instance, a singer with a square protruding lower jaw will have to develop his or her way of singing to achieve a high fortissimo "e" vowel in a manner which will be slightly different from a person with a much smaller lower jaw and protruding front teeth, even if the technicalities of producing the vocal sound are based on the same principles. We may apply slightly different physical principles to achieve differences in musical style. For example, a piece of Baroque music will demand less vibrato, using a lighter more flexible tone than a Wagnerian aria which will require ample resonance, and will typically depend on a full vibrato effect.

ECONOMY OF BODILY MOVEMENT IN THE PRODUCTION OF A SUNG PERFORMANCE

Studies on how motor control is achieved show that humans rehearse actions until they achieve an incompressible minimum; that is, the minimum action time involved in doing a specific task, which produces an economy of action, such as in rowing, or box packing (see Bernstein, 1967). In music, Shaffer (1982), working only with timing data, demonstrated the same principle in piano performance, with a specific combination of key presses having a unique timing profile. We can assume similar operations for vocal technique. But, there are other manipulations, specifically of arms and head, which are dependent on representations of musical expression, rather than simple biomechanics: timing extensions at phrase boundaries, for example; or expressing a particular emotional characteristic. As discussed above, these two kinds of movement information are co-specified, especially if the piece is extremely well learned and performed with a high degree of automaticity (see Shaffer, 1984, for more details).

Two relevant research findings that may inform us are: i) Todd's (1999) proposal that we enjoy the vestibular activity involved in moving to music, and it could be that in generating the performance, a perceptible swaying or circular action helps in the production of expressive effects, providing a regulatory device (the constant sway) around the musical timing which ebbs and flows as *rubato* effects operate; ii) following from the work of Cutting and his associates Kozlowski and Proffitt (Cutting & Kozlowski, 1977, Kozlowski & Cutting, 1978; Cutting, Proffitt & Kozlowski, 1978; Cutting & Proffitt, 1981), the swaying might provide an account for a physical centre within the body through which the musically expressive

information is produced. The term for such a point is the *centre of moment*. It might not be perceptible by an external onlooker, functioning as a subtler inner “imagined” state. Why focus on this particular aspect? Well, in terms of my own experience as a teacher, singer and dancer, I find circular motion enables a rhythmic pulsing of thoughts and actions and can be one of the most salient coordinating and expressing tools available to me. Cutting and his collaborators established their theoretical propositions on experimental work and it is important to be aware that the *centre of moment* theory for movement expression argues that there is a movement hierarchy, with different body parts expressing the same information but at a more local level. Thus, forearms and wrists might trace similar types of movement patterns to the overall body sway. This also helps us to explain why allusions to bodily motion are used to produce a technically well-placed vocal performance — as well as an expressive musical performance. Recent work by Vines and Wanderley (2003) has shown similar sorts of movement traces in clarinet players; and Windsor, Ng and I have found similar evidence by studying three pianists (Windsor, Davidson, & Ng, 2003), as have Williamon and I (Williamon & Davidson, 2002).

The *centre of moment* theory accounts mainly for the generation of action related to technical and some expressive aspects of performance. As a theoretical account, it does not deal specifically with the many socially learned and developed movements that we know performers use for specific co-performer and audience affect. Indeed, in the work by Clarke and Davidson (1998), it was shown that the pianist used a consistently identifiable repertoire of discreet movements which included actions like wiggling his back, or lifting his hand in a swirling gesture that seemed unnecessary for technical purposes, but which — at some level — appeared to be connected to an intention to express something about the music and the performance itself. These smaller movements were integrated into the overall swaying *centre of moment* motion which was consistent throughout the interpretation. In terms of how different representational processes interact, it is possible to assume that the discreet movements may be more socially focused, but that they become integrated into the overall representation (goal) and final movement (production/self-monitoring processes) of a performance.

BODY MOVEMENTS USED IN VOCAL PERFORMANCE

Although speech is a different channel of communication to music, Juslin and Laukka (2003) have argued that there is a cross-modal nature to expressive intention and effects. It is also important to recall that up to 90 % of everyday human behaviour involves gestures used to “convey some information from one person to another”, and most typically these gestures accompany speech (Vaananen & Bohm, 1993). Singing most typically involves words and narrative content, and so speech gestures inevitably will be used. The communicative power of gesture in speech is illustrated

when a hesitation or a word fails to be verbalised in a conversation — a hand or other body part gesture will often occur first (McNeill, 1992). People even gesture when they know that their movements cannot be seen (*e.g.*, gestures accompanying a telephone conversation). Thus, speech gestures help to formulate thoughts into utterances (McNeill, 1992; Kendon, 1980). That is, they are critical parts of the representational system of verbal communication. Therefore, these principles apply to the representation of singing and its communication.

PHYSICAL GESTURES AND FUNCTION IN SPEECH AND SINGING

At the most general level, hand gestures begin and cease as speech starts and finishes. At the most specific local level, individual gestures and words are synchronised so that the most energetic part of the gesture occurs just before or with the most prominent syllable of the accompanying speech segment. These gestures aid speech production, and also serve as cues for the communication of intention. When speech is ambiguous, for example, gestures help observers/listeners to understand. Furthermore, although speech errors occur, gestural errors virtually never occur. For example, if someone says “left” but means “right”, the hand gesture will be with the right hand (McNeill, 1992). This seems also be the case in music. For example, a small hand gesture away from the body might trace the air in a very smooth legato line — an intention of the singer’s — yet the sung notes may not be so smooth or expressive.

We know that physical gestures are not pre-requisites to understanding either speech or music, for example in a phone conversation or music played on a CD recording. But, since we make fewer gestures when there is no face-to-face contact in both speech and music, it would seem that whilst some gestures are specifically oriented towards generating the music, a proportion would seem to be used for audience communication effects. Also, we know that seeing a conversation or seeing a musical performance leads to a clearer indication of intention (*e.g.*, Davidson, 1993).

But what are the commonly used speech-accompanying gestures, and do they have correlates in singing? There are conscious *propositional gestures*, such as “it was *this* big!” (hands being used to demonstrate the size). The gesture is a key part of the speech, the “*this*”, being a significant part of the meaning. There are other unconscious gestures such as *iconic* ones in which some feature of the action or event is described. For example, “make sure you close it tightly,” with the hands tracing the precision of the potential action. There are *metaphoric* gestures such as — “she went on and on” being illustrated in a rolling process hand movement. The *conduit metaphor* is particularly common in speech. For example, talking about this paper, I might say “in the next section I shall”... and I might contain the words “next section” in a box-shaped hand gesture. *Deictic* gestures locate in the physical space in front of the narrator aspects of the discourse, *e.g.*, pointing left and then right when saying “she was looking at him across the table”. Also, *beat* gestures, those small

baton like gestures that do not change in form over the content of the speech, appear to have a pragmatic function, commenting on the speaker's own linguistic contribution. For example, consider speech repairs and reported speech, such as "she talked first, I mean second". Here, the hands flap up and down, displaying the error.

It is likely that the specific gestures of singing mirror the speech pattern. But the gestures, as mentioned when discussing metaphor, motion and teaching, work within the context of strictly musical ideas too. For example, a musical sound being produced (*e.g.*, a rising crescendo phrase) may indeed be "*that* big!" I have discussed, for example, how a pianist plays one solo right hand passage in a Beethoven Bagatelle whilst tracing it in the air with the left hand (Davidson, in press). Here, at least, a significant function of the gesture involves acting out the expressive idea in space. So, in singing gestures for speech and musical production and clarification are likely to originate in similar physical codes.

Cassell (1998) highlights that speech gestures do not rely on a one-to-one mapping of form to meaning. For example, in one circumstance, a finger pointing down might mean "look at the mess on the floor", whilst the same gesture in a different context might mean "pick up that puppy". So, the gestural movement repertoire itself is limited, but what it has the potential to express is endlessly variable, depending on the context in which is used.

Of course, if we are principally considering gestures for audience effect, we might ask if these gestures are really useful for the optimal performance of the musical ideas biomechanically and expressively. We know that cultural etiquette will have a significant role to play. Indeed, there may be "optimal" forms of movement production, both for performer and onlooker. Jazz pianist Keith Jarrett, for example, despite his phenomenal musical expertise, is a source of great controversy with regard to the function of bodily posture and gesture. He makes many extreme gestures and adopts strange postures at the keyboard, often shouting and grunting as he plays. He has stated that he would not be able, nor would he want to produce his performances differently. Indeed, as an improviser, he says that the way he produces the music through his body is for him a "shadow of an attempt" to represent in sound what he hears in his mind (see Elsdon, 2003). For Jarrett, this is the only way to play. However, he has been highly criticised for the fact that his piano performances include him producing extraordinary physical movements and bizarre vocalisations, which, some believe, detract from the musical content. This is a fascinating case, because for Jarrett, the very particular gestures and sounds he makes are a part of his representation of the music, and so arguably are essential to the musical improvisation. Those on-lookers and listeners who object seem to want him to perform by complying with what other performers do on stage.

TRAINING

The link between bodily production, musical material and expression has been discussed by pedagogues across musical cultures. In the Western style, in 1834, for example, the violinist and professor at the Paris Conservatoire, Balliot, wrote a treatise on violin playing which suggested that performers could employ different types of body movements to perform music at different musical speeds. He reported that the adagio speed requires “more ample movements” than the allegro where notes are “tossed off”, whereas in presto there is “great physical abandon” (see Stowell, 1985). Along with those postures and gestures associated with optimal technical and expressive performance, some techniques of body alignment have been developed in order to prevent repetitive strain injury, and unnecessary physical tensions. The story of the actor F.M. Alexander and the complete physical tension, which gripped his body, causing a total paralysis, is a case in point. The Alexander Technique operates on the principle that the body needs to be in a subtle state of physical balance, and that an optimal achievement of control and expression comes through minimising movements (rather like Bernstein’s discussion of the physical “incompressible minimum” for action). But, as we have discussed in the previous section, the movements, whether helping to generate the musical ideas through the body, or reflect what has already occurred, need to be “expressible”. Therefore, any sensitive teacher would want to optimise the way in which the body produces and controls the many different aspects of the performance. In my own vocal and movement training, I decided to break away from Alexander Technique, for at a certain point I experienced some conflict between what I wanted to do with my body and what I was able to do by channelling the performance through the movement technique. However, different people work in different ways, and personal style needs to be acknowledged and respected.

Having considered the need for mental representations and how the link between physical control, expression and socially mediated movement/musical gestures seems to function, I shall now investigate bodily communication in performances adopting an integrated analysis. This will explore the specific technical, expressive and social actions involved in vocal performance, investigating which types of movements are used, which are favoured, and offer suggestions as to why this may be the case. At this point, it is important to note that in Western classical singing, it seems that specific criteria were valued by expert judges (Davidson & Coimbra, 2002, who examined judgement of vocal performance):

- Vocal excellence (good use of breath allied to diaphragmatic control and accurate vocal placing; consistency of tone quality; ability to control and so vary volume, vibrato and so timbre; clear diction and appropriate manipulation of language(s));
- Musical excellence (understanding of musical syntax and semantics; ability to realise these accurately using the voice);
- High degree of communicativity (understanding social and cultural conventions of performer and co-performer behaviours such as stage etiquette; delivering the

performance in a way that has a stylistically appropriate socio-emotional impact on the audience);

- High/some degree of creativity and novelty (in all areas have something of a "personal style").

In performance, research by Williamon (2004) and others, shows that in training performers we often find the technical and expressive musical demands being fore-fronted, rather than the social/communicative or creative ones. Thus, I feel that this channel of investigation is crucial if the full extent of the body and its communicative and expressive potential is to be understood in singing, whatever the vocal style. To limit my investigation, I focus on four classical solo singers. Moreover, I confine myself to a three-fold approach: i) an interview with four professional singers who sing in classical style; ii) an interview with their accompanist (a skilled classical pianist); iii) detailed systematic analysis of observations of all four singing from rehearsal to final performance.

PARTICIPANTS

Four singers participated, each having established solo careers. All were between 40-45 years old, and all were of national standing as professional singers. All had performed in opera and concerts throughout Britain and overseas as soloists. The pseudonyms Kathy, Sally, Julie and Katie are used here to protect their identities. For the discussion, informal questions were asked about what performance meant to them and how it was best achieved in terms of practice, rehearsal and performance. This was also related to video footage as they rehearsed and then performed their own interpretations of Gershwin's *Summertime*. The same accompanist was used in all cases (to be called Tim), and he added comments based on his interactions with the four singers. It is most useful to look at emergent themes across the participants. Sometimes these concern all women, sometimes only one or two. Where a particular matter is unique, it will be highlighted. The emergent themes are discussed as they relate to firstly personal practice activity, secondly the rehearsal with Tim and finally, the performance.

THEMATIC ANALYSIS

PRACTICE ACTIVITY²

Developing a latticework of connections and interconnections

This theme appeared in all the interviews, but is best summarised in comments made by Kathy:

(2) Note that this was only discussed as we did not film the singers practising. Also note that in the context of this paper, practice is to be regarded as an individual and private activity.

"Practice serves many functions. There's practice just to enjoy singing. You know, going into a room and letting rip: letting it all hang out kind of thing. Then there's practice for vocal stamina, flexibility and all that. Oh, then there's the practice to get to grips with repertoire. But, over the years I've learned that it is best to try to fuse all these elements. I mean, when I work a technical aspect of my singing, I often do it within the context of some repertoire I'm doing. This saves time, and it means that repertoire I'm learning can be truly 'embedded'. Moreover, if you work in a focused way, you can often add the right level of emotional intensity. You know, when it comes to putting a whole recital or operatic role together, it is an exhausting and draining process in your head and with your emotion. So, the more chance you give yourself to 'build' appropriately the better. It is like a lattice-work of connections and interconnections."

So, here we have evidence of someone trying to construct an approach which produces maximal effects in an economy of time but with an intensity of intention. Sally expressed similar thoughts:

"The practice room is to get you up and running. You need to cover all bases for all eventualities in a performance, so careful practice working in a comprehensive manner leads to good preparation. Then thinking hard about the challenges of the performance, including the audience is good."

There is already a significant literature on strategies for good practice. Key contributions have been offered by Jørgensen (2004) who indicates three key stages for the individual to pass-through: i) understanding that planning and preparation for practice is necessary; ii) having effective ways of working in practice; iii) being able to evaluate and reflect upon the content of the practice. A balance between regular practice and novel activities including variety through the session is encouraged to keep the mental activity varied between automation and conscious and careful new learning. Jørgensen also promotes mental rehearsal, helping the musician to develop a mental map — can be thought sounds, actions, visions — through the music, and rehearsal to prepare for the audience's perspective, working deliberately on how to communicate musical ideas. Clearly, much in common with this literature was found in the four singers' thoughts about practice.

The four singers did place a strong emphasis on getting into the right emotional state for practice: an emotional state that noticeably emanates from the body, Kathy uses the word "embedded", but the word "embodied" could be substituted from very early in the practice process. Ironically, emotional involvement is something Williamon (2004), for example, recommends leaving until later, once the piece is technically under control. The women mention that with experience they have all realised that the best way to integrate technique and expression and to build physical and mental stamina and focus in their practice is to work with the emotional content of the text and musical material. Also, the emotional workout indicated by Kathy

(wanting to “let rip” in the practice room) was emphasised by the other women. Yet, this sort of use of the voice is not mentioned at all in the key existing research literature on practice. This is striking, especially since the growing evidence in Western culture indicates that keen amateurs as well as bathtub singers use singing as a way of mood regulating and adapting their overall behaviours (see Bailey & Davidson, 2003). If the professionals comment upon it, then surely this sort of cathartic use of their voices should be not only written about in practice manuals, but also positively encouraged? Perhaps it is a way to regulate personal frustrations such as dealing with emotions from other mental sources — thoughts about a personal relationship, for instance — as well as to prepare for a performance. Katie clarifies this point:

“Sometimes I get into the practice room and I’m on such a high, with loads of energy. Then I get out a fast and furious Donizetti aria to heighten the buzz and also to get the work into my brain! Contrarily, when I’ve some grief around, well there’s plenty of stuff to work on then! Mahler and I are good friends! Actually, doing this can also help you when you’re happy and you’ve got to sing Mahler: You know which emotions to bring up to the surface. Singing is so wonderful — complex, but always on an emotional nerve.”

Motivating practice

The women spoke about their motivation to undertake practice. Much of what they said again coincided with the regularly cited research literature in psychology of music (a good overview is provided by O’Neill & McPherson, 2002). The core aspects relating to motivation are encapsulated in key questions McPherson and Davidson (2006) developed: What is your expectancy for engaging in the practice? What is your commitment to the session, or more generally, your voice? How self-efficient are you? Do you match your skill level to the challenge you set? Do you understand why you get something right or wrong? How confident do you feel? These questions relate to major theories which have dominated the field of psychology for decades: Attribution Theory (Weiner, 1980, 1986), which highlights how we tend to attribute our successes and failures has a profound impact on our capacity to undertake a task; relatedly, Mastery Theory (Dweck, 1996) which shows that attributions tend to fall either into mastery focused (“I shall do it in the end try out self beliefs”), versus helplessness patterns (“I could not see a way to do it”; “it was completely out of my control”); Self-efficacy Theory (Bandura, 1997), relates to our sense of personal competency; Flow Theory (Csikszentmihalyi, 1990), where it is argued that for optimal motivation on a task, the skill level of the participant needs to be met or slightly surpassed by the challenge, so that the striving versus success cycle can operate, and so lead to more and more motivation.

All theoretical frameworks seemed relevant to the responses obtained:

"Even when it is wrong, I just go back and try to get on with it, even if it takes a thousand tries! Success comes in the end!"

(Positive, mastery-focused attributions.)

"I have always felt musically and vocally competent."

(Self-efficacy belief.)

"You also need to experience improvement, so I guess that I spend time adding more and more challenges to practice work."

(The balance of skills versus challenge as highlighted in Flow Theory.)

The key point emerging from these data, however, was the intensely profound nature of self-identity and how this had a positive effect on the cycle of practice motivation, engagement with music and desire to improve.

Self-identity

Sally encapsulates this point strikingly:

"I am a singer and to remain a full-time singer — a job which I love — I need to be good, and so I need to practice. I depend on it. The very essence of me, and so how people eventually see me, is developed in the practice studio."

The women speak about their mental and physical "self investment", even when doing the most mundane of practice tasks.

"Even scales need personal investment. I should always be singing with the full investment of myself. Sometimes I hear students in practice rooms, and their voices are all so disconnected from the person. When I say person, I mean my body and soul, not just intellectual thoughts and dry disconnected or un-integrated actions."

"I always have to be inside myself, be aware of *me* when I'm practising. You can't separate off. You can't afford to be a sort of 'practice you' then something different."

Kathy adds a twist to this concept of dealing with *self* in practice.

"I guess I sometimes practice *me*. You know, a *me* that is a larger and more public figure. The same *me* that hugs my husband, but who can present that intimate emotional stuff on stage. Practice is about trying *me* out for the public arena."

Her notion of a core self with different elements of self for different events or social encounters again fits within existing theoretical explanation for how we develop generally. Ibarra (1999) has discussed this in terms of a core self with provisional other selves: selves that are more appropriate to certain social

circumstances or tasks than others. Experimental identities are either confirmed or rejected by the core self or in relation to how they are received by other people (colleagues/family). So, practising the public self seems to be a useful strategy. Again, whilst existing research might indicate that such behaviour is natural and useful, no one has formerly identified this as a good practice strategy in precisely these terms. The use of the body in realising “self”, is of course also central to what the women mention.

Moving on from the discussion of practice, I was able to sit and watch the participants’ reactions in both rehearsals and performance. From these observations, themes for discussion emerged that were specific to the particular piece and, in the context of the study, the performers’ approaches to it.

REHEARSAL ACTIVITY

Communication with the accompanist

Tim’s favourite rehearsal artists were Julie and Kathy. He comments:

“Working with these two was great. They’re straight on it, no messing about. We were working intensely, committed to the music. With the others, Sally doesn’t seem to be in a partnership with me, she’s away from me in the music...It’s not about sharing. Katie’s somewhere in between.”

Deciphering what Tim meant by “being straight on it” was not too difficult to do for it was possible to see big differences in the ways in which the singers interacted with him. Julie began the rehearsal by asking Tim very directly what he thought about trying to establish a “meaningful tempo.” So, it was evident that she was wanting to engage him and that his opinion counted: he was brought into the equation. However, rehearsal behaviours may also have had an impact upon him.

Social interaction

Watching each woman as she greeted Tim and began the rehearsal revealed many salient points. For example, Kathy did not speak a lot, but spoke gently and tried to keep the mood light. This is what she said upon entering the room:

“Hi there. Good piece isn’t it? No point in asking you whether you’ve got the music. But, I’ve been thinking to try it in B minor.”

The words seem simple enough, however, let us add in her pauses, glances and a little background information to explain why Tim burst into laughter and was immediately relaxed as they began the rehearsal.

“Hi there. [*Broad-beamed smile to Tim, spins around and smiles into the video too. Tim raises his eyebrows, shrugs gently to the video camera and smiles.*]

Good piece isn't it? *[Speaks very quietly as she takes her music out of a bag and flicks through the part.]*

No point in asking you whether you've got the music. *[She knows that he has been working with the other singers on the same task... Then, stops talking, walks over to stand close by him at the piano and looks out of the corner of her eyes in a sideways glance at him.]*

But, I've been thinking to try it in B minor." *[The aria is originally in B minor, but often performed in A minor, owing to the very high tessitura. All the other singers are lyric sopranos, singing it in A minor, Kathy is a mezzo.]*

In this exchange there is evidence of social grace and warm intimacy which makes it apparent why Tim found Kathy easy to get along with. She also proved herself to be a good technical and expressive singer immediately, by starting on a superbly controlled and quiet high note.

Sally is a more spectacular singer, with amazing vocal control and a formidably large and beautifully hued soprano. But, she was personally very low-key with Tim, choosing not to state an opinion about how to work on the piece, seeming to be happy just to run through a couple of times. She did not engage in much verbal exchange or eye contact, limiting talk to musical matters only.

So, we may have some indicators in these specific data to demonstrate that the singers need to draw upon a repertoire of social behaviours to optimise the rehearsal process. Davidson and King (2004) have written about the importance of these sorts of social interaction behaviours in instrumentalists' rehearsals. They highlight the profound impact of interpersonal dynamics in securing how a partnership will cohere and how this relationship can then shape the course of the music-making. They pin-point mutual respect as a key element, stressing the importance for each person to believe that his or her opinion is being heard. They also emphasise the role of non-verbal communication to smooth the way for social and musical interactions. With different gestures serving different functions.

Gestures

Tim and singers all used gesture to indicate how to work, either immediately or in a sense of development for the next time. Amongst these gestures included movements to help musical coordination or entrances and exits. I refer to these as "regulators of musical content"; and movements "illustrating" specific points (for a forthcoming crescendo, one singer made a large opening v-shaped movement with both her arms as she was singing; thus indicating to the pianist what to do). Again, Tim's favourite singers employed these strategies extensively in rehearsal, and tended to "gesture" rather more often than speak — a strategy commented upon by Davidson and Good (2002) to secure "effectiveness and efficiency" in rehearsal. All women spoke about their movements, Kathy offering the most insight:

"These movements short-circuit a lot of talking. I'm telling him what we could do in a moment. He also gives me a lot of information through movements. Actually, when I'm

rehearsing, I always stand and face the pianist so that we can read our non-verbal signs. You know in a typical performance position is with your face to the audience (standing in the bow of the piano). Then, you have to learn to read the signs with more subtlety because you only see the pianist in peripheral vision.”

They also used gaze and eye contact. Kathy and Julie in particular, engaged Tim by looking at him. Sally and, to a lesser degree, Katie did not engage in direct eye contact. We know that such eye contact avoidance can be interpreted as a fearful or even hostile indication (see Kendon, 1980; Ekman & Friesen, 1969).

Musical method

This theme was particularly intriguing for although Tim was the constant, being in all rehearsals, the approach to the music was quite different from woman to woman. In three of the four cases without much initial talk, the women sang the aria straight through. In the case of Kathy, she said the following:

“Since this has two verses, shall we have a go at the first, see how that feels, and then try the second verse? For me, getting the emotion right is important. We can set our scene in this first verse, and then decide how to develop it.”

After the first verse, she and Tim exchanged some comments about the overall volume level of the work. She pointed out that in some places she was delaying the phrase with a deliberate slow breath, but that she’d like it if he pushed her on, back into a tempo that was quicker than how he played the work for the other singers. He commented:

“Yeah, the kind of musical thing we get is good with her. I know what she wants, and it’s fresh. The faster speed actually creates more stillness and by doing this, the vocal line becomes so much more easy to control. I like it: energy, with a definite emotional charge. That’s it, the aria’s got an emotional vibe not really in the other ones.”

So, Kathy was the only person to express an agenda for the rehearsal. The others sang through. Sally was quite happy with a single sing-through, simply saying: “That’s fine. You can hear how I like to do it.” Tim agreed, but it seemed that he wasn’t that comfortable with the overall lack of engagement between them, and did not invest any personal effort into developing the partnership.

Julie asked if they could break the piece down sequentially, working line by line. She asked Tim about her tuning, and asked if he could play one of two of the chords in a strong, more accented fashion to match her emphatic diction. So, there was interaction, including asking for Tim’s advice and musical support. Tim seemed to reciprocate by asking if she was happy with his playing. They were friendly with one another, laughing at one point when Julie had a brief memory blank and simply did not start to sing.

Katie chatted with Tim after the initial run-through, asking if he had ever seen the opera, and whether or not he did much repertoire work. Tim engaged with the conversation, responding by asking what she'd been doing on stage. So, that was evidence of mutual empathy. Musically, she found timing the precise start of her first note a little difficult, so they repeated this several times. She sang each verse in a fairly similar manner, making a small tuning error, which Tim corrected. There was interaction, but less musical talk than with Kathy or Julie.

These strategies parallel those found in instrumental ensemble research by Goodman (2002), where most ensembles began rehearsals with a play-through, then had several different ways of working on the piece varying from a sequential approach, like Julie had done; or looking at "tricky moments", only playing the piece in sequence again after the "trouble spots" had been worked out — Kathy's approach. Indeed, Kathy only sang the second verse all the way through at the end of their rehearsal, when like both Katie and Julie she did a complete run-through of the piece. Note that Sally only did a single run-through with Tim.

Intriguingly, watching the video of the rehearsal Kathy added a new theme commenting:

"I've learned that this is an economical use of time not to run everything several times in rehearsals. I mean, I don't want Tim to feel bored, and I need to sort out my little problem areas. We nailed this interpretation quite quickly, so I think we worked well. You know, working with a new accompanist, well you always find a new way of doing the piece, and I think Tim and I got something."

Kathy's additional point about the novelty of the new partnership seems to illustrate that she was indeed looking for musical and creative aspects in her work. None of the others mentioned novelty.

REHEARSAL STRUCTURE AND APPROACH

Table 1 shows how the women used the rehearsal time, and given the popularity of Kathy and Julie with Tim, it seems that a balance between talk and action, especially when the music-making is focused on specific points, leads to a more effective rehearsal. Even if Sally is a great singer, the lack of social "talk" certainly left Tim feeling excluded from their partnership, which broadly speaking, seems to be undesirable. It could be argued that this task was a somewhat "false" situation, given that it was clearly a study, and so the women may not have been behaving "normally". However, these sorts of circumstances are not untypical of many professional music contexts, where two people meet, work for a very short time and then are expected to perform.

A good rehearsal strategy for these women and Tim seems to include engaging with some personal but mainly music-focused talk, making each partner feel included and contributing to the process. The overall interaction draws upon a

repertoire of social chat and illustrative and regulating non-verbal cues, as well as eye contact. Spending time on sub-sections, and specific spots, and finishing with a complete run-through seems to be the most favoured approach to the rehearsal. A summary of the gestures used in the final rehearsal run-through is shown in Table 2. It shows that illustrative and regulating gestures dominate the overall trend of singer gesture, though Sally does not use many gestures at all.

Finally, emotional connection and creative development within the music also seemed to be important, Kathy highlighted this in her brief talk with Tim and in comments in interview, as indicated above. Speaking generally about the rehearsals, the women commented that differences occur when working with different ensembles, but all were keen to highlight the importance of the good social dynamics.

PERFORMANCE ACTIVITY

After rehearsal, all women were to perform to the video camera operator, and critically, the video camera. It was explained to the singers that this video would be shown to an audience who were then to judge the performance. From this base, it was evident that postures and gestures, and an overall focus on "presentation" emerged. Table 3 reveals that the use of display gesture increased, but that the overall trend of Kathy and Julie offering most in terms of non-verbal signals remained constant between rehearsal and performance.

Stage presentation

From face to body: stage behaviours

Table 1
Proportion of time (in %) spent on different rehearsal activities

Name of singer and duration of rehearsal (in mins.)	Social talk	Music talk	Complete sing-through	Verse-level work	Phrase-level work	Individual notes
Kathy (14)	5	20	30	15	15	10
Julie (17)	10	10	30	-	50	-
Katie (21)	25	5	30	-	20	20
Sally (8)	-	50	50	-	-	-

Table 2
The gestures of the singers in their final rehearsal run-through

JULIE

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	4	6	6	3	-	19
Hands / Arms	12	6	6	5	-	29
Eyes / Face	8	-	2	5	3	19
Total	24	12	14	13	3	67

KATHY

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	10	7	6	5	-	28
Hands / Arms	12	5	8	5	2	32
Eyes / Face	4	-	5	2	-	11
Total	26	13	19	12	2	71

KATIE

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	5	8	4	-	-	17
Hands / Arms	6	3	4	-	-	13
Eyes / Face	4	-	2	-	2	8
Total	15	11	10	0	2	38

SALLY

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	3	-	1	-	-	4
Hands / Arms	2	2	1	1	-	6
Eyes / Face	-	2	1	-	-	3
Total	5	4	3	1	0	13

Eye movements/Facial expressions

Upward gaze

A behaviour shared by the women was the use of upward gaze which was used for seemingly dramatic effect to suggest: a) thoughtfulness and reflection, b) listening to both the music and perhaps the child (the topic of the song). It most commonly occurred during the piano introduction of the aria, perhaps as a device to focus and prepare to sing. Similarly, when this musical material returned to introduce the second verse, the gaze re-occurred, suggesting contemplation or, as before, preparation. Three of the four looked up and outwards during the walking-bass figure which signalled the conclusion of the work.

Closing of eyes/face frowning

The women generally kept their eyes open and tended to look up (as mentioned above). However, at some individually variable time, all closed their eyes for the majority of the phrase "and the livin' is easy". There are two possible reasons for this: a) accommodating the feeling of relaxation as the vocal demands decrease when the melody descends from its initial high note entry on the first word "Summertime"; b) a dramatic empathy with the word "easy", the closed eyes perhaps being representative of the relaxed nature of an easy lifestyle. The second occasion this occurred was at the end of the second verse when the singer delivers the line "with Mammy and Daddy standin' by". The eyes close on either "standin'" or "by". Since the melodic line drops even further in pitch, representing the end of the piece, the notion of relaxation might also explain the closing of the eyes.

Smiling

This was used by the women, particularly in the introduction and the instrumental bridge between verses one and two. This expression corresponded with the aria's narrative: a) looking affectionately at the baby during the introduction; b) the feeling of hope anticipating the second verse words "One of these mornin's you're gonna rise up singin'." It is important to note that in classical singing technique great emphasis is placed on the singer focusing their concentration into the resonance cavities in the facial sinuses which can result in the half-smile appearance. Places where the smiling seemed to be more technically than dramatically oriented were on the words "livin'" in verse one and "singin'" in verse two. This was largely — it seems — to keep the vowel sound bright and focused forwards.

Raised eyebrows

The singers raised their eyebrows at very specific locations. Firstly on the initial word "Summertime", then on "Fish are jumpin'" in verse one and then "One o' these mornins" in verse two. We interpreted the general use of the raised eyebrow again to be an example of a technical tool. Each time it occurred the singer had to enter a new vocal phrase on a high pitch — the highest pitch of the song. The eyebrow lifting seemed, psychologically at least, related to creating space at the back of the throat,

opening the soft palette and allowing the vocal folds to move freely, as the air was expelled through them.

Eye-contact with pianist

Only Julie used direct eye contact with the pianist in the performance. This seemed to act as a cueing device to indicate her vocal entry. Despite the overall lack of eye contact amongst the classical singers, Tim commented that Kathy, in particular, was very easy to work with due to her general body awareness which seemed to facilitate co-ordination with him and the audience simultaneously. During the detailed video analysis, for instance, it was observed that Kathy positioned herself directly facing the camera. Although the cues she offered Tim for timing co-ordination were essentially delivered forwards to the audience, Tim was easily able to interpret these signals from the rear of her back, head and arms.

In addition to these facial movements, there were many head and body movements that contributed to the performance.

Head and body movements

i) head nodding and shaking

These were used consistently by the singers in the same two places in the piece. The first occurred on the line "...and the livin' is easy" in verse 1, and the second on "One of these mornins" at the start of verse 2. In these two cases it seems that this gesture shows agreement with the words, both as a point of clarification and commitment to the ideas. Shaking was used by the same singers, specifically on the line "there's a nothin' can harm you". The purpose once again suggests an emphasis of the meaning of the lyric. The shaking is clearly representative of a *no* statement, whereas the nodding seems indicative of a *yes* statement, and so both parallel the gestures typically used in speech to emphasise these words.

ii) leaning and swaying head and body

All the singers combined a forwards leaning head and upper body movement. This occurred in all the performances during verse one, line 1, on the word "easy" and in line 4, on the word "hush". Again, this may be representative of the text, suggesting a conscious attempt to express the narrative. It may also be due to the low pitch of the word in the context of the melodic line, as the singer leant forwards and downwards with the falling pitch of the phrase ending.

A backwards body and head movement was evident in verse one, line 2 on the words "Fish are jumpin'," and ironically on the line "...rise up singin'" at the beginning of verse two. It seems strange at a narrative level that the singers should move back, away from words connected with upward movement. We could simply accept this finding as an anomaly. However, we know from vocal technique that singers are taught to feel diaphragmatic pressure deeper or lower, the higher they sing. These particular instances occur when singing at the highest pitches and so there is a need to feel a deep level of support for the correct projection of the notes.

Additionally, it makes complete physical sense for the singers to move back having just surged forwards on the preceding lines.

The points made above about leaning relate directly to an observed circular motion body sway. All the singers engaged in this more or less during their performances. However, sometimes it was only obvious in the pronounced leaning movements described above, and it is because of this that we have included leaning as a separate category of gesture. Sometimes it was such a small movement that it was only visible as a very subtle shifting of weight from one side of the body to the other — rather like a very controlled and small-scale tilting action. This relates to the rhythmical aspects and concept of a lullaby — the singers literally lulling or rocking the baby — and indicates how they perceive and react to the text and musical content. Moreover, the swaying, at times, became much larger and fluid, especially in the solo piano sections. At one level, this may have been because the singers were physically free to move their bodies in response to the music, but equally it could have been a more deliberate effect to communicate with the audience — dancing to them, perhaps.

iii) arm movements

The singers began some movement patterns with the arms in the musical introduction, initially raising them sideways and upwards towards a position where the forearms were level to the shoulders. All lowered their arms during the closing piano section, when the singing had ceased. It seems therefore that the arm raising was illustrative of the voice coming into use and the singer herself coming into contact with the audience.

Sally, however, used a series of static poses (display gesture). She began with a fixed body pose with her right arm on her chest and hand resting on her left collar bone. Her left hand rested on her hip, arm bent at the elbow and pointing backwards. She held this position until the middle of verse one. Then on the line “And the cotton is high” she gradually unfolded her right arm forwards and down, until the last line of the verse when she relaxed her right hand by the right thigh. At that point, during the bridge section, the left hand was also released and lowered to the left thigh. When verse 2 began, both fists clenched on “...mornins”, and “...rise up singin’”, then re-clenched on “...wings” and “...take the sky”. The arms opened and the hands made a small symmetrical gesture fanning outwards. Then the fists re-clenched and the hands asymmetrically rose on “...nothin’ can harm you”. She held this pose until her singing ceased.

In all cases all the singers seemed to use stereotypical illustrators of certain concepts:

- scooping as if picking up a child;
- leaning forwards and upwards like offering help and support;
- stroking, palms facing downwards movements, like stroking the child;
- pointing as if pointing to the child, to the future and even to the audience to include them all;

- arms opening in a wing spreading and taking flight action as the child takes off on life's journey.

So far, we have noted several points of commonality and contrast, indicating stylistic profiles and individual profiles. Indeed, amongst our data we have some indications about what might constitute a typical stylistic performance not only in terms of musical expression, but now from the stage behaviours too. Julie and Kathy, for example, work with the narrative of the aria, using poses and gestures, but maintain fluent body movements. Sally, a great singer technically, but not rated well as an interpreter by Tim, uses much stiffer and fixed poses. In all these cases there is evidently a strong physical awareness and confidence in the use of the body.

Overall, we see that some of the results may have been anticipated. There were matters related to specific style and vocal technique: smiling as opposed to frowning, for instance. The singers definitely focused on the lyric of the song for interpretation, and it seems that all the singers were active in their vocal and bodily behaviours to achieve the expressive ends of the text and their chosen interpretation of it. Tim's preferred singers appeared to be those who were completely fluent in their performance behaviours: constantly moving, showing the audience the music was "inside them", and perhaps more significantly, showing that they were in control of their behaviours. It is in a final analysis, however, that we believe we are able to demonstrate a new insight about performance behaviour.

Table 3 summarises the different types and numbers of gestures made by each singer. These are as follows: illustrative of an element of the song's lyric or the melodic contour; adaptive gestures, showing some personal and self-referencing movement like touching the face with the hand or rubbing the lobe of the ear with the thumb and forefinger; regulatory in terms of co-ordinating the turn-taking of the singer and pianist; technically regulatory such as making a movement that is clearly to aid the vocal quality, *e.g.*, lifting the hand in an arching shape mirroring the action of the soft palette; or display behaviours such as "showing off" to the audience. (Further details of these categories of gestures can be found in Davidson and Coulam, 2006.)

Several points are immediately striking:

- The more highly rated the performance by Tim, overall, the more gestures that are made;
- The better regarded performers make proportionately more illustrative and adaptive gestures than any other kind of non-verbal behaviour;

Contrarily, the higher the proportion of technical regulators and display gestures in a performance, the less highly regarded the performer (Sally has many display gestures, more than ones illustrative of the song's content, and she is regarded as a "stiff" and "uninspiring performer" by Tim).

But, it is also interesting to draw contrast between this table and Table 2 which shows the rehearsal gestures, Kathy does less in performance, but for Sally's case she does significantly more gestures in performances: 26 gestures more, whereas the

Table 3
The gestures of the singers in performance

JULIE

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	12	8	6	4	1	31
Hands / Arms	10	5	1	-	2	18
Eyes / Face	6	-	2	5	7	20
Total	28	13	9	9	10	69

KATHY

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	13	11	2	3	-	29
Hands / Arms	12	1	1	-	4	18
Eyes / Face	4	-	6	2	5	17
Total	29	12	9	5	9	64

KATIE

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	9	10	3	-	-	22
Hands / Arms	-	1	-	-	-	1
Eyes / Face	8	-	3	2	4	17
Total	17	11	6	2	4	50

SALLY

	Illustrator	Adaptor	Regulator	Tech Regulator	Display	Total
Posture / Body	6	2	1	2	7	18
Hands / Arms	6	2	-	-	4	12
Eyes / Face	1	2	3	-	3	9
Total	13	6	4	2	14	39

others make only between 5-12 more gestures. There are no display gestures in Sally's rehearsal.

These findings are important for they indicate that performers must move in performance and rehearsal, to illustrate their interpretative ideas. In Sally's case it is perhaps because there is display and few illustrations or more personal adaptive movements that make her performance seem so stiff. The better performers reveal intimate personal behaviours in their adaptive behaviours. I have interpreted these results to imply that a balance between what we might consider outer projected and inner personal states is achieved, and this may be a critical indicator of the more accomplished interpreter. The adaptor itself seems to be a spontaneous, personal reflection in the moment, rather than a stereotyped, rehearsed behaviour.

DISCUSSION

Considering these results together, several performance characteristics are revealed linking both and differentiating the four singers:

- A focus on the specific musical elements: working with the lyrics and melodic line;
- Physical gestures, rather than fixed and static poses or postures, are preferred;
- The use of stylistic and technically appropriate gestures relating to the communication of emotion is important — tending to make the activity look easy, and effortless;
- A fluent and cohesive swaying behaviour is apparent, apparently to integrate all the physical gestures;
- The more highly regarded the performers, the more prevalent their use of illustrative and adaptive gestures than display or technical regulators.

Of the factors identified above, the sway is perhaps, as argued earlier, a central integrating means for expression through the body — the *centre of moment*. So, fluent movement might imply a more coherent conception of the musical work and its meaning for the performer. The flow found in the swaying perhaps integrates the performance, and additionally aids the perception of the individual effects such as illustrations of narrative content, as Tim suggests, the performers who sway are more effective musical communicators.

But, in addition to the physicality, embodiment, good strategy and direct communication which arguably enhances co-performer experience, a significant final theme emerges. Exploring the data time and again, additional points become clear: namely, that the best performers are those with an awareness of the psychodynamics of their activity.

Sally hints that she should be able to do the following:

"Performance is about showing yourself. A presentation of an element of who you are: the focus of attention, if you will. But, it can also show your vulnerabilities. Might I say, it

should show those. I don't do that in here. But, sometimes, I believe I expose the audience to who I am completely and utterly. I think I only ever achieve this state in performance."

It could be therefore, that performance provides a framework for personal revelation: a culturally developed ritual in which the self can be presented. These ideas are certainly consonant with the psychodynamic interpretations of ritualised behaviours as argued by Deleuze and Guattari (1980). They refer to performance as "an act of intimate self-disclosure".

Kathy says:

"Well, in singing, I show me... in performance, you get it all. [Looking at the video]... This is really OK, what I'm doing here. It looks genuine. It is full of heart and looks like it. I know I'm using those sort of performance gestures we all make, but that's the expectation. But, there's another layer: one of total sincerity. Somehow you can hear and see that... Well, I think you can. I hate the sort of 'surface' some performance give — just presentational gloss. The other thing is that I'm doing stuff and Tim is doing stuff we never rehearsed. This sort of spontaneous stuff is like a really up-beat conversation: it just builds and builds and it sounds, feels and looks good. You know, the opposite is when you've just got nothing to say to someone. Musically, for me when that happens, the result is dull, dull dull!"

So, it could be that Kathy was detecting the intimate adaptive gestures she was making, though she never specified what made the performance "good". We might also imply that some of the singing effects used (remember she was the woman who could control a very subtle and light *pp* effect) were also indicative of this kind of personal, reflective intimacy, which is of course, totally appropriate to the aria being sung. These views are consonant with those expressed above.

A further element raised by Kathy in the quote above is that there needs to be spontaneity and thus novelty in the performance itself. The sort of dynamic exchange she comments upon was certainly apparent, and was something Julie also managed to achieve. Sally very much did what she had done in the rehearsal, but added display gestures — the static postures. Katie was fairly consistent, though she was generally more alert and projecting her body in the performance.

Turning again to Tim's comments, he regarded Kathy as the most "daring and inventive", we might use the word "spontaneous" as she had done. He claimed that this depended on the following:

- she was very skilled as a musician;
- she was very fluent in all her musical and social behaviours;
- thus, she could express herself as she desired for her ability to interface both bold and intimate bodily and musical effects seemed under control and made her stand out ;
- she was not afraid to work with Tim "in the moment" to offer a new idea;
- the entire process was "conversational".

Tim's single report is a subjective and tentative indicator of what may offer high

level performance. However, the identification of both the boldness and intimacy of Kathy's behaviour does support the results of the movement analysis indicating that the more highly regarded performers used both illustrative or "outwardly focused" gestures and adaptive or "intimate" gestures. Self presentation might, indeed, function as a critical factor in excellent performance.

Let us turn briefly then to a discussion of the performer's *persona*. The term *persona* was coined by the psychoanalyst Carl Jung who argued that each individual possesses a number of different *masks* to protect the "core self". An individual spends time in social contexts (through conscious and unconscious means) learning how and when to use appropriate masks for public and intimate discourse. If this is so, then optimal vocal performance in the classical context as shown in these data may be about presenting several masks at once. Frith (1996) investigating the role of individuality and personal style in pop performance, discusses how performers have multiple social tasks to execute when they are in a performance situation: they present their musical material; they interact with their co-performers to co-ordinate the performance task; and they have to communicate with and sometimes interact with the audience. For a singer, there are arguably more layers to the performance task, for not only is there the music, but there is the narrative of the lyric. The singer's role is also to "become" the character in the song. In order to achieve a certain character, and working with Runeson and Frykholm's (1983) principle that actions specify their causes, we know that physical behaviour must be taken into account in this characterisation process. Frith (1996) also observes that "acting performance involves gestures that are both false (they are only put on for the occasion) and true (they are appropriate to the emotions being described, expressed, or invoked)". So, singers are always creating "a tension between an implied story (content: the singer in the song) and the real one (form: the singer on the stage)". Frith states that "Pop stars must keep both their star personality and a song personality in play at once". But, more profoundly, perhaps the data presented in the current paper indicates that these multiple masks do not in fact produce "a tension" as Frith suggest. Rather, the singer conforms to the — for want of a better word — "diva behaviour" required in the presentational aspects of the performance, but is operating with genuine emotions and behaviours at every level, whether using the "diva code" or not.

CONCLUSIONS

The findings presented in this paper have offered some insights into how four classical singers practice, rehearse and perform and how they view these activities from their position as professional solo singers. We have seen that all aim for economy of effort, intensity of concentration, critical reflection and use of emotion. As we have moved from the process of practice through to performance, we have seen that these are individuals working constantly with their thoughts and actions —

minds and bodies — and emphasising the role of self-concept and identity. It is perhaps not surprising that Kemp (1996), writing about classical singers, referred to singers as being highly emotionally sensitive, with low self-esteem and much frustrated tension. We can see that if any of the psychodynamic elements of the process in preparing for and performing classical singing do go wrong, then emotions, sense of self and so self-esteem can plummet.

As for the communicative aspects, perhaps Katie offers a good final point for consideration when she noted of her performance:

“I think I am also moving and pushing my performing self out beyond the accompanist to the audience. I’m trying to communicate directly with them — touch them with my music and my body movement.”

This analysis provides only a glimpse of the many possibilities emerging from investigation of singers. But, it clearly illustrates the wide range of skills necessary to be a performer, and hints at which behaviours and psychodynamic factors might contribute to performer excellence. Above all, the function of the body clearly needs systematic understanding, with a theory to encapsulate complex physical and mental processes. Whilst the paper focuses on the cohort studied, it is recognised that many of the issues raised may be similar for performers of other musical traditions and instruments, and different sized musical ensembles.

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**• La actividad y el arte de la interpretación vocal solista :
perspicacias de observaciones investigadoras y entrevistas
con cantantes clásicos occidentales**

Este trabajo se basa en datos recogidos de cuatro cantantes solistas profesionales, sobre cómo prepararon e interpretaron la misma obra, trabajando cada uno de ellos con el mismo acompañante. Examina sus pensamientos y sentimientos –estados mentales internos– cuando los recordaron y expresaron en la entrevista, y la percepción de su estado externo cuando lo observaron a través su comportamiento corporal. Los datos se tomaron tanto de reflexiones expuestas a través de la charla sobre la práctica activa en ensayos y la interpretación, como sobre evaluaciones visuales de ensayos e interpretaciones de grabaciones en video. El objetivo de estas reflexiones era investigar : (1) la naturaleza de la acción-mental y corporal para la comunicación musical técnica y expresiva ; (2) la naturaleza de la interacción social en el contexto de los ensayos y las interpretaciones ; (3) y sobretodo, este trabajo trata de obtener un conocimiento más profundo de cómo prepara una interpretación, la lleva a cabo y la percibe un cantante profesional. Los resultados sugieren que es necesario una sutil intersección entre comunicación social y musical para conseguir una “buena interpretación”. Se discuten estas ideas en términos de una teoría social relacionada con cómo se muestran a través del cuerpo en la interpretación musical los estados mentales internos y externos.

**• L'attività e la qualità artistica dell'esecuzione vocale solistica :
idee tratte da osservazioni investigative e interviste
con cantanti classici occidentali**

Il presente articolo si basa su dati raccolti da quattro solisti professionali di canto classico durante la preparazione e l'esecuzione dello stesso brano con il medesimo accompagnatore. Esso esamina i loro pensieri e le loro sensazioni – stati mentali interiori – quali vengono rievocati ed espressi nelle interviste, nonché i loro stati esteriori, percepibili tramite l'osservazione dei loro comportamenti fisici. I dati sono stati raccolti sia da riflessioni a voce alta sulle attività di studio, prova ed esecuzione, sia da valutazioni di un osservatore sulle prove e sull'esecuzione, esaminate tramite registrazioni video. Lo scopo di queste riflessioni era di indagare : (i) la natura dell'azione mentale e corporea ai fini della comunicazione musicale tecnica ed espressiva ; (ii) la natura dell'interazione sociale entro i contesti delle prove e dell'esecuzione ; (iii) nel complesso, il presente lavoro è stato intrapreso per ampliare la conoscenza e la comprensione di come venga preparata, compiuta e percepita un'esecuzione vocale professionale. I risultati indicano che per realizzare una 'buona esecuzione' è necessaria una sottile interazione fra comunicazione sociale e musicale. Queste idee vengono discusse nei termini di una teoria sociale legata al modo in cui stati mentali interiori ed esteriori vengono manifestati attraverso il corpo durante l'esecuzione musicale.

- **L'activité et l'art des chanteurs solistes : propositions fondées sur des interviews et des observations de chanteurs occidentaux**

Nous présentons ici des données concernant quatre chanteurs classiques professionnels, observés pendant leur préparation et leur interprétation de la même pièce ; chacun travaillait avec le même accompagnateur. Nous examinons leurs pensées et leurs sentiments – leur état mental intérieur – exprimés au cours d'interviews ainsi que leur état extérieur perçu à travers leur comportement. Nous avons recueilli des données au cours de discussions libres sur leur travail, leurs répétitions et leurs exécutions ; nous avons aussi collecté des évaluations d'observateurs qui ont regardé des vidéos de leurs répétitions et exécutions. Notre but était de : i) étudier la nature de l'action corporelle et mentale permettant la communication technique et expressive de la musique ; ii) étudier la nature de l'interaction sociale pendant les répétitions et les exécutions ; iii) d'une façon générale, ce travail visait à élargir la connaissance et la compréhension de la manière dont un professionnel prépare et interprète une exécution vocale et la façon dont celle-ci est perçue. Les résultats montrent qu'il faut une interaction subtile entre communication sociale et musicale pour donner une « bonne exécution ». Ces idées sont considérées dans le cadre d'une théorie sociale concernant la manière dont l'état mental intérieur et extérieur est exprimé par le corps dans l'interprétation de la musique.

- **Die Aktivität und Kunst des Sologesangs- :
Einblicke durch investigative Beobachtungen
und Interviews mit westlich-klassischen Sängern**

Dieser Artikel stellt Daten aus Untersuchungen mit vier professionellen klassischen Solosängern vor, die jeweils das gleiche Stück probten und aufführten und dabei mit demselben Begleiter arbeiteten. Untersucht wurden ihre Gedanken und Gefühle (innere mentale Zustände), wie sie im Interview erinnert und ausgedrückt wurden, sowie ihre wahrnehmbaren äußeren Zustände, wie sie im physischen Verhalten zu beobachten waren. Die Daten stammten sowohl von retrospektiven verbalen Äußerungen über ihre Übe- und Darbietungsaktivitäten als auch aus Beurteilungen von Videoaufnahmen durch Beobachter. Die Ziele dieser Reflexionen waren i) Untersuchungen der Art von mentalen und körperlichen Handlungen hinsichtlich der technischen und expressiven musikalischen Kommunikation, ii) Untersuchungen der Beschaffenheit von sozialen Interaktionen innerhalb des Übungs- und Aufführungsrahmens, iii) insgesamt ein größeres Verständnis darüber zu erhalten, wie professionelle Gesangsdarbietungen vorbereitet, vermittelt und wahrgenommen werden. Die Ergebnisse verweisen auf ein subtiles Zusammenspiel von sozialen und musikalischen Kommunikationsvorgängen, die zum Erreichen „guter Aufführungen“ erforderlich sind. Diese Ideen werden hinsichtlich einer Sozialtheorie diskutiert, wie innere und äußere mentale Zustände in Musikdarbietungen durch den Körper dargestellt werden.