Tradition meets Tech<u>noh</u>logy:

Integrating Japanese Noh & New Technology in Shakespeare's *Macbeth*

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ABSTRACT

This paper addresses technical and aesthetic problems encountered in adapting Shakespeare's *Macbeth* to the noh stage, used for the six hundred year-old dance-drama form. In July, 2009 the Noho Theatre Group created a dancing Witch and Ghost for *Sleep no More, Lady Macbeth's Nightmare* by integrating motion-capture technology to create 3D computer graphic animations set to automatic choreography, which were then projected on a screen. *Sleep no More*, performed bilingually in English and Japanese, by noh and kyogen actors with modern actors and dancers, was given a public rehearsal July 17th at the Oe Noh Theatre, Kyoto. This paper examines the problems in screen placement, interaction of performers with technology, as well as performer's reflections and audience reception.

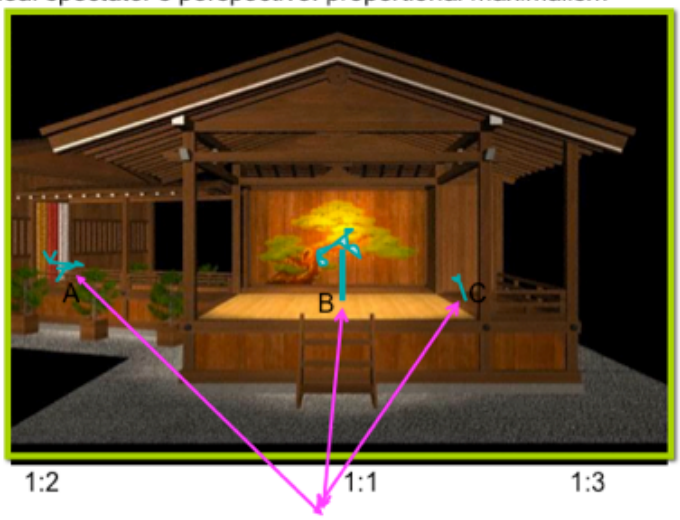
MINIMALIST MAXIMALISM

At first glance, the medieval Japanese masked dance-theatre noh theatre remains a famous example of bare-stage minimalist theatre, hand-hewn and time-stained. Texts and masks used today were created centuries ago. The stages took their present dimensions and form around 400 years ago, at adapted temples or shrines, purpose-built outdoor platform performances on riverbanks, or within castle courtyards (Amano 2007). They are highly utilitarian as well as aesthetically pleasing: an angled bridgeway, leading from the dressing room and `mirror room` standby space, has become an effective playing area. The main stage, which retains the temple's inverted-V roof and pillars, is a raised open cube that both frames and elevates the characters' portrayed. Sets are minimal, made from

Figure 1 Nishi Honganji Noh Stage, Kyoto

cloth-wrapped bamboo frames; elegant fans and lacquer stools are commonly the only properties.
Yet despite its apparent minimalism, noh contains complex elements of high technical achievement used for delicate and powerful expressivity. The masks are elegant art-works, delicately painted faces that some believe to be originally death-masks, yet that shift expression according to slight nuances of tilts and movements of the dancing performer. They are carved with great care in the eyes and mouth, while behind them are rivulets to channel sweat, and a hollowed out chin for the actor's jaw to enter. This keeps the mask close to the face for realism and stability, yet does not cut off breathing or move when he speaks. Their vision confined to a narrow tunnel seen through the eyeholes, actors use the smooth floorboards and pillars as landmarks to navigate their way around the open stage. They manipulate their position along the bridge and main stage in a naturally cinematic way, effectively framing establishing shots, zooms, and pans.

Ideal spectator's perspective: proportional maximalism



Without electrical amplification, noh actors could perform before thousands of spectators with the use of `high technology` tools developed over the centuries. The hollowed masks and special singing style create a resonant funnel of the mask, supplemented by a powerful, seated chorus who sing for the lead actor during much of the dancing. Earth-filled urns carefully tuned and placed below the stage resonate with the stamps and drums above. Flat stones in the temple garden are employed as acoustical tools, bouncing sound from stage to distant audiences. The roofs reflect song; the slanted back-roof of the musician's area and back wall erected even for outdoor performances similarly provides an acoustical backboard (Komparu 1987).

In the past, performing before spectators on three sides and occasionally three levels, actors took full advantage of daytime lighting. The shadow beneath the roof protected performers from the elements, while the garden stones reflected light to the luminous masks or bare faces. Actors facing frontally provided both audio and visual clarity on the raised stage. The bridge, originally a passage from backstage to onstage, became a vital acting area, enabling the actor to adjust his

position along it and on the main stage to control the perception of proportions. Three pine-trees of decreasing size in front of the bridgeway fosters this illusion of depth, while some stages further this distancing/proximalizing effect with a slight `rolling drum-stick` slant from mainstage to curtain, and upstage to downstage.

CONTEMPORARY INDOOR/OUTDOOR THEATRES

Theatres moved from make-shift riverbank or courtyard stages to indoor theatres during the Meiji Restoration (1867-1911), reflecting changes of patronage and influence from European opera-houses. Yet the noh stage underwent remarkably little change in dimensions, remaining much the same today as their 1600 counterparts. Most theatres attempt to simulate general, outdoor daytime lighting with somewhat obtrusive fluorescent bulbs and spotlights. Yet even inside concrete or glass buildings, the noh theatre retains its connection to nature: a stone garden separates spectators from the stage; planted or painted pine and bamboo trees recall the natural original outdoor settings, while the painted pine-tree on the back wall is a reminder of noh's shamanistic origins conveniently serving as centering scenery.

Yet recently noh theatres have adapted modern stage and front-of-house equipment to satisfy contemporary audiences. As the majority of spectators are now middle-aged or older, most theatres have replaced tatami-mat floor cushions with comfortably padded theatre seats. Some have installed second floor balconies for less expensive student seats. In addition to overhead fluorescent lighting, many theatres feature spotlights along the bridgeway, and from the pillars and walls. As in many modern theatres, wall-affixed video-cameras provide lobby patrons and actors in backstage dressing rooms a view of the stage, while microphones and speakers are available for announcements.

A few theatres have gone beyond these basic accessions to attract younger and international audiences. The Nagoya theatre projects English subtitles on screens during some performances; the National Noh Theatre began subtitles on the back of seats, in Japanese, Chinese, and English, during their sponsored performances. The Kongo Noh Theatre features a modern lighting system, with color filters used to create various effects. However these are the exceptions, and it is not clear whether these innovations of the past decade will really become the rule in the majority of conservative family-run theatres.

By far the biggest experiments in modern noh have occurred with the outdoor noh performances, known as `*takigi*` (torchlit) noh. Temporary noh stages are constructed in front of romantically lit castles or temples, applying the concept of `borrowed scenery` from garden design, reviving an ancient Nara rite. At twilight, priests perform an ersatz `lighting ritual` of the logs, whose flames play mysteriously on the ancient masks. Modern lighting, sometimes hidden in the bamboo used as `pillars` in the four corners of the stage, supplements the torchlight. To appeal to first-time spectators of up to 5000, even laser projections

on giant stadium-screens are used. Inevitably, another throwback has been attempted, `candlelit noh,`where flaring candles are the only light on the luminous masks and gorgeous costumes (although these are supplemented by dim rear spotlights, sometimes including blue or orange filters). Despite these outdoor spectacles' recent popularity, connoisseurs still prize the bare-stage day-lit minimalism of the traditional stage, which has served this art well for so many centuries.

THE NOHO THEATRE GROUP'S *Sleep no More* Project

Noho's *Sleep no More* was the first attempt to integrate projected video and animated images on the noh stage.[i] The Noho Theatre Group was founded by kyogen master Shigeyama Akira and myself in 1981 to employ the structure and techniques of noh and kyogen theatre to interpret Western texts. Noho has interpreted texts of Shakespeare, Yeats, and Beckett at studio theatres and noh stages in Japan, and internationally at the Avignon Festival, Edinburgh Fringe, Beckett Centennial celebrations in Paris, and numerous tours throughout the U.S. A core group of performers is supplemented for particular productions of short, bilingual works.

SLEEP NO MORE was adapted by Salz from Shakespeare's *Macbeth*, framed as a psycho-drama by the Doctor and Gentlewoman trying to cure the Lady Macbeth's troubled sleepwalking.[ii] Noh stories are often structured as memory-plays, with spirits in the present re-visiting and re-enacting scenes of dramatic conflict in the past. Often a villager or priest happens upon a mysterious dwelling or person, stimulating the protagonist to reveal him or herself in a danced climax. In Noho's version, the re-enactment of the scenes leading to the murder of King Duncan brings Lady Macbeth to the realization of her guilt, and expiation through suicide. The hour-long play was performed by British and Japanese performers, as well as a noh actor as Lady Macbeth, and a kyogen traditional comedian as the Porter; a noh shoulder-drum and Western flute provided accompaniment.

VIRTUAL VS. ACTUAL

Projecting video and animated images on a screen during a live performance may be rather passé in the world of contemporary theatre, ballet, and opera. For the orthodox noh world, *Sleep no More* project represented an extraordinary effort to extend the traditional stage into virtual space.[iii] On a stage where traditional musicians still use charcoal braziers to stretch drumheads before performances, and stage assistants use traditional tools for up to twenty minutes to methodically thread a bell-cord through a rooftop pulley for a particular property, such electronic gadgetry is truly unprecedented.

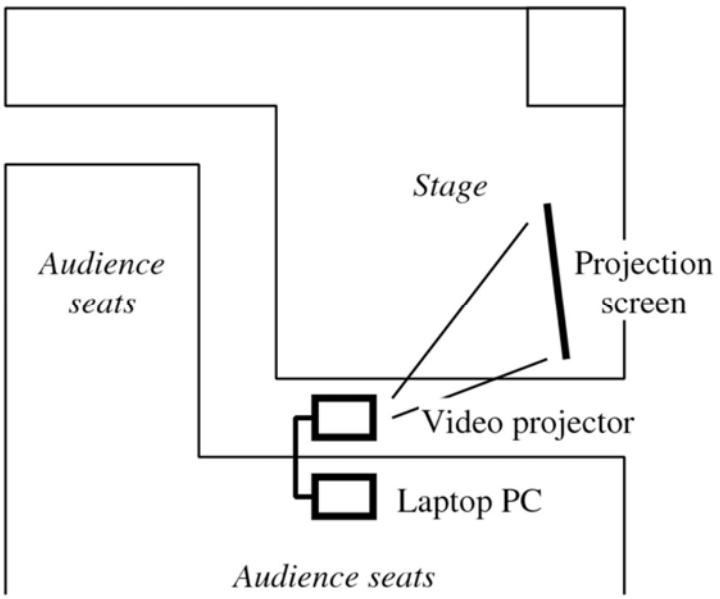
Key to the integrity and flexibility of *Sleep no More* was Kita school actor Matsui Akira. Starring in Noho's *At the Hawk's Well* (1986), *Ophelia* (1987), *Rockabye* (1992), and *Agave* (2006), he has also worked in English noh plays of Richard Emmert, and productions with foreign dancers and directors abroad for decades.

In the last few years, Matsui has struck out boldly into the virtual vanguard, participating in research and artistic projects that utilize his special knowledge and skills. At the King's College/Durham University's The Body and the Mask in Ancient Theatre Space in 2006, his movements were captured by both motion-capture and green-screen chromoscopy for research into the use of the Greek and Roman masks on reconstructed stages. Matsui performed in 2007 at Noh Encounter, part of the Leipzig Ohayo Japan project, with a butoh dancer to video projections created by Yoann Trellu (http://www.keyframed.org/dance-pages/akira_matsui.html). Moving images were created from deconstructed clips of Matsui himself dancing, and abstract images. These were projected onto numerous screens on stage, a transparent curtain in front of stage, and even actors' sleeves and on-stage scenery. Yet *Sleep no More* was Matsui's first experience with animated 3D projections, and the first such time playing alongside projections in Japan.

Screen placement

Our first and in many ways pivotal decision was how and where to put the projection screen. It needed to be large enough to project human-size images that would be compelling along-side onstage actors, yet light enough to be supported by stands that would not damage the wood floor. We decided on boards cut to form a 1.6m by 2.2m rectangle, taped onto room-dividers on cushioned stands.

Although the Oe Noh Theatre family was considerably understanding, there were some restrictions: nothing hard should rest on the stage; electrical equipment should not be placed on the stage; nothing should block the back wall painted pine tree, since this is considered part of the theatre space itself rather than a scenic ornament. This prevented the easiest and most obvious set-up, projecting from a hidden device at stage center to the back wall of the theatre.



Set-up of Screen Manager in noh theatre

The balcony-like extended area where the chorus normally sits seemed the next appropriate place for the screen. Angling it towards the front of the stage allowed us to project from a stand set up in front of the stage. An elliptical correction was added so that the prepared images would not be distorted by the acute angle. The consequence of greater clarity of the image meant, however, a diminishment in projecting illumination.

VIDEO IMAGES

The initial plan was to project images only for the two dance scenes:

- a trio of Witches enticing Macbeth to the assassination of Duncan, revealed in flashback while Lady Macbeth reads his letter;
- her Ghost beckoning the anguished Lady Macbeth to suicide.

Yet when not in use for these two, six-minute scenes the large screen would have caused modern and synthetic disturbance to the tranquility of the worn, dark wood and painted greenery of the century-old stage. We considered projecting a photograph of the wall itself when the screen was not used for the two dance scenes, but then decided to take advantage of the challenge to create a third (virtual) space for related still and moving images.
Thus the third wall became an expression of the Lady Macbeth's mind.

The looping shots were meant to coincide, but not precisely with the onstage action. The effect of simultaneous images and live action were found at times effective, at times disruptive of the flow of the play:

- *A candle flickering in an old-fashioned holder.* This proved effective as a transition device and atmosphere creator, and could also be superimposed on other scenes.
- *Lady Macbeth, seen from the shoulders down, dressed in a white, later in a red, kimono walking slowly along a stone wall, next to a river, lost in thought.* This twilight walker created a daytime element to the otherwise somber night-time setting on stage.
- *Lady Macbeth, washing her hands in silhouette behind a paper screen, then in a silver basin of water that became a rusty bucket which then stained red with blood (wine), then finally milk.* These images were meant as vague suggestions of guilty remembrance and desire to repent, but the timing of their transition and shock of suddenly reddening hands proved distracting to the onstage action.

- *Lady Macbeth using a folded paper fan in a noh-like symbolic way to pour wine.* This was

shown as she explained the plot of getting the bodyguards drunk, while the Porter on the bridgeway took out his fan to receive then drink the wine. Some spectators remarked on the success of this single moment when the moving image matched the on-stage action, and wished there could be more like this.

• *A wine-goblet full to the brim, spinning on a shield.* This was meant to suggest banqueting at the castle, and royal blood, a tempting tease to Lady Macbeth's ambitions. Yet the inclusion of an image not found in the onstage action or dialogue was confusing for some.

• *Lady Macbeth prone, dead on the floor, the goblet fallen to the floor.* Seen at the very end of the play, this expressed the off-stage suicide, but appeared to some to be too violent and obvious compared to the symbolic properties and actions of the live performers.

These six scenes were organized and manipulated by `Screen Manager`, a software program developed by systems designer Shiba Masahito for the production, that allowed an operator to shift from text/still image/moving image/pre-set CG animations manipulated from the computer set at stage front, connected to the projector. The Screen Manager operator became less technical assistant than a fellow performer, responding as the actors and musicians did to physical and verbal cues form the actors.

COMPUTER

The normal give-
new dance
complicated by
Experienced with
and rhythmic
Asako Soga's
was to create and
computer-graphic
as Ghost. Soga's

Motionlab's mo-cap system and Web 3D Dance Composer

Motion Lab has many hundreds of hours of archived motion-capture data of ballet and contemporary dancers, used for comparative analysis and creative projects (Soga, Umino, Hirayama 2009). She employs an original Web 3D Dance Composer, an original software program that allows for

choreography of motion-capture data according to pre-set algorithms of floor pattern and body movements, pace, direction, and transitions. The exoskeleton is then modeled in skin, hair, and costume, a laborious and difficult process (the natural motions of sleeves and hair are especially problematic). The resulting 3D CG dance avatar can then be manipulated 360 degrees, shown from any size, speed, or angle.

Dance construction: Witch trio

The Witch trio featured a virtual Witch with two dancers experienced in adapting to various styles of performers in collaborations: Korean contemporary dancer/choreographer Shin Eun-Ju (http://www.shineunju.net/) and Japanese-Swiss modern/Japanese dancer/choreographer Heidi S. Durning (http://www.lucbouvrette.com/heididurning/heididurning2.html). Data of leading contemporary dancer and choreographer Hirayama Motoko (http://www.motokohirayama.com/en/profile.html) contained over two hundred discrete movements, organized into `arms,` `upper body,` `leg,` `floor` positions, etc... Soga chose forty she thought most appropriate. Then the two contemporary dancers in rehearsal chose from the laptop screen the movements that were both witch-like and replicable on human bodies trained in traditional Asian and modern forms. Floor movements were discarded, as noh stages shouldn't be touched by hands or faces. High leg-extensions were also abandoned as too balletic.
Soga then fashioned the selected patterns into a dance of one minute of unison

dancing, created automatically through algorithms of pacing and flow on the virtual dancer, then copied by the two living dancers in rehearsals. Durning and Shin then followed this virtual/actual trio with solos and duets in various combinations. The common denominator of movement patterns established within the constraints of unison dancing in the first section gave way to individual interpretations of direction, pace, feeling, and tension. The pre-recorded virtual choreography was created to match the CD recording of Bartok. While this allowed the dancers and virtual-choreographer to practice independently, it also meant that no changes in the projected images were possible during the performance. Please see a short video clip showing scenes of the Witches Trio and Ghost dances, including music by Virtual Witch, Hirayama Motoko shoulder drum Hisada Shunichiro and flautist Edo Seiichiro. VIDEO

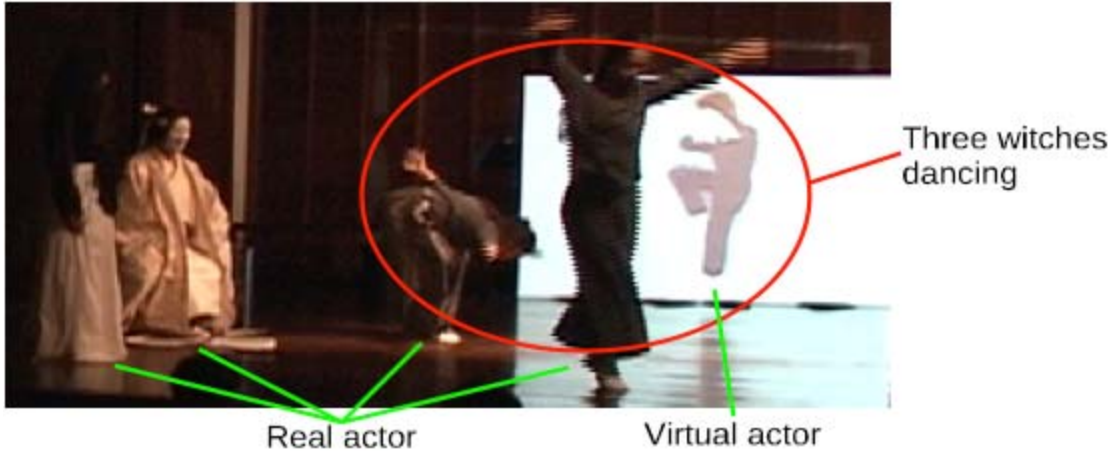
Soga's automatic dance choreography until then had mainly been employed for educational purposes (http://www.motionlab.jp/). Therefore the ease of the movements, repeated variations, and ability of students to memorize their combinations were important aims. In *Sleep no More*, however, she realized that for the virtual dancer solo, a variety of different movements would be interesting, ones that need not be memorized or made easy for others to follow. And unlike the live dancers, who must always stay grounded by gravity to the floor, the

virtual dancer was free to make leaps, turns and rolls without regard to the rectangular frame of stage `floor` upon which the screen rested.

CONCEPTION, DECEPTION, RECEPTION

Making one virtual and two actual dancers appear as a unified trio of witches proved difficult. The virtual face was created by digitally combining photographs of the Korean and Japanese dancers. A two-piece relatively tight costume was selected as being easiest to model on the skeleton of the virtual actor. Since loose or swinging hair is especially problematic to create virtually, it was tied into a tight bun at the back of the dancers' necks. This lack of long, unkempt hair and raggedy clothes, which would have been problematic for digital imagining, betrayed audience expectations for conventional witches, confusing and disappointing some.

Since we were fostering a new set of conventions through the projected image and live dancers, entrances were vital to establish the fact that actual and virtual images were sharing a similar otherworldly space. The screen projections featured three small figures walking `closer`, growing larger. We then attempted a sort of `sleight of hand`: when the two virtual Witches `left` the bottom corners of the screen, the two actual dancers entered individually from stage right (bridgeway curtain) and stage-left side-door. Yet so spread out spatially were the Witches, and so physically different were the actual and flat virtual images, it seems that few spectators were able to grasp the intended effect of spirits emerging miraculously from screen to stage.



Once the two actual dancers reached the main stage alongside the virtual dancer on screen, we encountered the problem of proportional size and accessibility. Although the virtual dancer was human-sized, since it was set against the back wall, for most of the spectators it appeared 2/3 or less the size of the living dancers. During duets and especially trios, the live dancers were consciously playing off each others' movements and improvisations center stage, but often ignoring or abandoning the left side screen dance. During rehearsals I had to push them, `let her play with you! Don't ignore her!` However they were naturally reluctanr to interact because the image was to the side, out of their natural sightline, as well as non-responsive (a pre-recorded animation). Their hesitation also had a practical consideration: if they approached too close, they would cut between the projected image and the screen. Later Durning said she wished there had been more rehearsal time, so that she might learn to break strategically the projection space with her arm or leg, casting shadows on the screen that would provide further interaction.

Durning, trained in classical Japanese dance as well as modern technique, felt that her base in `fusion` expression, close to Shin's, was so different from the ballet/contemporary forms of Hirayama, that there was little room for collaboration on stage. With Western dance-wear rather than the long sleeves of Korean or Japanese traditional forms, the Witches' dance seemed merely modern and clean, as opposed to the more grounded, dynamic presence of Asian dancers. Since the three Witches were supposed to be `weird sisters`, this lack of harmony and consistency among them was disconcerting.

`Waiting` proved difficult to express virtually. The dynamic stillness of `movement within stillness/stillness within movement` is essential to many Japanese traditional arts, especially the noh theatre, where a masked dancer might sit still at stage center for nearly an hour while the character's tale is narrated. Yet during the solos and duets, while the living actors could kneel or squat, showing by their breathing or eye movements that they were alive and aware of others, it was difficult for the virtual dancer to maintain *presence* while merely kneeling.

Perhaps greater neck or eye movements for the avatar, or expanded ribcage simulating breathing, would be necessary to achieve parity with living dancers' dynamically still presence.

GHOST DUO REAL-TIME IMPROVISATIONS

In the Witch trio, the taped Bartok quartet and pre-recorded animated dance constrained the living dancers' improvisation by privileging the virtual choreography. As contrast, for a scene in which Lady Macbeth's Ghost beckons the living Lady Macbeth (played by the masked noh actor Matsui Akira), we used three strands of simultaneous improvisation: Lady Macbeth; the flute, playing Takemitsu Toru's short solo *Voice*; the Ghost, created in real-time by operator Soga, improvising both to the music and to noh dance. This was a more practical than aesthetic decision: for the masked noh actor, reacting to the image of the virtual dancer would have been impossible, given the narrow tunnel of vision available through the eyeholes of the female mask. Takemitsu's compositions include no fixed measure, and many notations for pauses, which allowed flautist Edo to easily adapt to Matsui's dance.[iv]

The first step was to create an appropriate Ghost character. Soga and her team at the Motionlab created a Ghost avatar by clothing the skeleton in a mask-like neutral face, with a long-sleeved kimono, holding a candle. The swirls and folds of the sleeve, as with the Witch's flouncing and swinging hair, proved particularly difficult to create. The Ghost wasn't meant to be an exact double of Lady Macbeth: whereas the living Lady Macbeth's feet slid along the stage-floor, the Ghost soared and swooped, turning, pointing, and seeming to observe, while actually reflecting the noh actor's movements.

Virtual choreographer/operator Soga watched Matsui's rehearsal dance and selected patterns of relatively slow dance forms already archived from motion-capture of contemporary dancers She chose nine movements from her data archive that used a stable torso with limited arm movements, in order to be apt for the kimono. These nine patterns had three fixed poses of starting and ending, allowing for natural transitions between segments. During rehearsals and then in performance, Soga attempted to time the choice of and shifts in patterns to the noh actor's movements. In practice this often meant following the lead of the musician, to which the noh actor was also responding. The result of this trio of improvising artists was an occasional coalescence that may occur in any live collaboration, when all performers are listening and responding to each other as an organic unit.

The noh actor, as will be discussed in more detail below, found the scene challenging to perform, given the constraints on the stage space and necessity to create a tension with a virtual actor. When facing forward, he could not see the screen at all; only when actually facing it could he see what the Ghost was `leading him` to do. Therefore it was up to choreogapher/operator Soga to anticipate Lady Macbeth's movements and react/lead from the Ghost's movements. In practice, this meant that both reacted to the musicians' crescendos, breathy screeches, and shouts (the flute score [http://g.sheetmusicplus.com/Look-Inside/large/3176084_01.jpg]calls for actual words to be spoken, in French, English, and Japanese): "Qui va la? Qui que tu sois, parle, transparence! ... Who goes there? Speak, transparence, whoever you are!"). While spectators were supposed to see a flute accompanying Lady Macbeth led by the beckoning Ghost, in fact it was the flute leading Lady Macbeth, whose anticipated movements were then transmitted by the operator to the Ghost.

MIXED audience/Reactions

The cumulative effect of the virtual and live stimulation of language and music proved difficult for many spectators. The normal multi-media of noh acting and dance was multiplied in various ways in this production: the use of recorded and live music, actual and virtual actors, Shakespeare and noh staging, contemporary and traditional noh dance. And in a strategic error of producing, we distributed programmes including the bilingual script as well as précis of the scenes, creating yet another area for distraction (we followed noh custom in leaving houselights dimly on). Those lacking a fundamental tolerance for temporary confusion were certainly discomfited, burying their heads in the script or summaries.

An evaluation was distributed, and reports written by many of the 150 spectators. Audience response seemed to bear out the mixed success of this interaction: those who found that they could imagine the virtual actor as real as the living one, many noted this Ghost dance as particularly effective. Yet the normal diversity of opinion of any artwork was made explicitly more diverse by the intercultural fusion, and practical considerations . Opinions of any two spectators may be even more divided in a production whose reception depends so much on where one is sitting, so reliant on specific prior knowledge (of Shakespeare, multi-media performance, live theatre, noh).

In terms of the project's goals, I felt that we were successful in bridging the live/virtual gap. According to the statistical outcome, over 60% of the audience found it possible at least at times to treat virtual and actual actors on the same level. The Ghost dance was found far more successful than the Witches' dance, partially because the movements were slower and easier to follower, partially because the virtual Ghost was more recognizable within the story. Individual comments noted the difficulty of following both screen and stage simultaneously. A few were too confused by the fragmented story to enjoy the performance: one

opined that as long as we had screens, why not project subtitles or explanatory notes! In terms of a balance of actual/virtual, another complaint, ironically, was that the video and 3D CG images appeared more real than the otherworldly dance of the living masked noh actor. One of the most haunting images for me was the video of the washing of hands behind the paper screen, appropriately real but distanced as shadows. Perhaps balance, consistency, and harmony are not proper goals for such a multi-media experiment; rather we should aim for an expressive, disequilibrium of conflicting dynamic parts.

An Actor REFLECTS

The range of audience responses was not surprising to noh master Matsui, interviewed two months after the performance (Wakayama, Sept 23 2009):

> `Those familiar with TV and videogames will naturally pay more attention to the screen images, while traditional theatre regulars will find the projected images disruptive. Given spectators' natural proclivities and tastes, this mixed-media style will find it difficult to please all audiences, at least at first.`

Still, Matsui felt that the future of noh would involve many more such experiments. With more rehearsal time and planning, an on-stage actor could disappear, only to reappear immediately inside the screen, creating a wealth of new possibilities. Although admitting that it might be difficult for a masked and heavily-costumed actor to actually control the images, Matsui hoped that, rather than allow projected images to become mere extensions of spectacular scenery, the sort of co-existence in stage space hinted at in *Sleep no More* should be continued.

I assumed that Matsui might feel somewhat threatened by the technological constraints and occasional virtual upstaging, being accustomed as he was to being the lead as well as implicit director for a production. Yet Matsui was untroubled by the new situation. Just as often noh musicians and chorus express the feelings of the noh actor, who sits quietly at stage center, Matsui found the screen to be less a rival for spectator attention than a more dynamic separate self. Unlike previous Noho productions, where he was the continuous center of attention, Matsui discovered here that he could sit and allow the screen images to convey his `split spirit.` He likened the bifurcation of

Lady Macbeth's personality to the noh play *Aoi no Ue*, in which the `living spirit` (*Ikiryou*) of the jealous Lady Komachi appears on stage as a character coming out from but not controlled by the living Lady Aoi. However, he warned that, without detailed cues and sufficient rehearsal time, the screen and living actor would create separate realities, since fine adjustments to cues would be necessary for the live/virtual duo to function as one.

For Matsui, this dynamic passivity is largely one of mind-set:

> `If I think about the screen as moving FOR me, somehow magically, that I am leading it, manipulating it, then I don't need to move in relation to it. I just change my thinking: I am controlling the image as part of my spirit. It makes it easy to sit and let it play.`

Yet since this meant his role was reduced, he felt more like an ingredient given to the director/chef to cook with, or a movie actor, who only has a partial awareness of the whole, which might take total shape only in the editing process. Thus for Matsui, this diminishment of his normal role from performer/director to accompanying player was in fact somewhat liberating.

FUTURE TECH<u>NOH</u>LOGY

Noh is dependent on spectator's imaginations for completion. Minimal set and properties, abstract dance and poetic language create a tone-poem of dramatic action that must be `read` by knowledgeable audiences. Noho adapted Shakespeare's *Macbeth* into a short, dense memory-play of related images of blood, birth, water, and hell. Embellishing these spoken words with animated and video images, accompanied by live and recorded classical and traditional noh music, providing competing parallel media tracks that some found disturbing. As far as tampering with the ancient dance-theatre noh, one might well heed the physician's imperative to `do no harm` summarized in the vernacular, `if it ain't broken, don't fix it.`

Yet I feel that *Sleep no More*'s mixed results resulted in some clear paths to improved performances as outlined above. Spectators accustomed in their daily lives and entertainment to multi-tasking multi-media games, video, and Avatar-like contemporary entertainment media will increasingly seek technological supplements to the slow, opaque, dynamic stillness of noh. Amplifying and layering the experience of live noh performance with virtual actors and atmospheres such as those supplied by *Sleep no More* may be dismissed by purists as distracting and even degrading the classic forms. Yet more detailed modeling of avatars, greater inter-activity of choreography controlled somehow directly by the dancer, projected on multiple screens of thoroughly integrated images may help usher new Noh audiences into the 21st century.

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[i] Sleep no More received funding from Ryukoku University's Joint Research Center for Science and Technology as part of a year-long project culminating in an adaptation of the heaven and hell parable of Akutagawa Ryunosuke's Spider's Web in Feb 2010. (http://www.rikou.ryukoku.ac.jp/~asako/tmp/spider_leaflet.pdf)

[ii] A YouTube narrated presentation of the SLEEP NO MORE project can be seen at http://www.youtube.com/watch?v=R8Z1HVfg1d8

[iii] The only other domestic motion-capture experiments I am aware of are by researchers who created a virtual rendering of the oldest noh stage in Japan, the Nishi Honganji Temple (1581). Through motion-capture technology using markers on the face of a noh master, they displayed virtually what the actor would see of the stage and surrounding buildings during a dance, intended as an "edutainment" project for future research and games use (Furukawa et. al., 2006). The project is now up on Second Life at Theatron 3.

[iv] These pauses mean the piece can last from 4 ½ to 6½ minutes, depending on the interpretation; a different flautist's version can be heard at http://www.youtube.com/watch?v=VYPGlj9vlLQ