Two-day Interdisciplinary Conference, Thursday 9th – Friday 10th July 2009
King's College London, Strand, Room K2.31

ABSTRACTS
(in alphabetical order by the speaker's name)

Carlota Bérard-Knitlová, Artist
Masks and Mysteries in Modernist and Postmodern Performance

This paper will draw on my research and practice as a visual artist, in creation (*poiēsis*), creative expression (*expression créatrice*) and expressive art therapy (*art thérapie expressive*). My previous research on the multi-disciplinary performance, of Sergei Diaghilev's ballet, *Petrushka* that represents one example of the Russian *commedia dell'arte* masked tradition, awoke in me an interest in creating a form of performance art that aimed to mystify the audience by diverse forms of concealment or masking during the performance. I will argue how it is precisely that ambiguous quality that might be achieved by masking, the one that seems to be relevant in a mystification. I will analyse and take as an inspiration or point of departure Mary Wigman's masked expressionist solo-performances from the period of modernity, where she uses the mask as dance, the mask as costume, and the mask as facial expression. My research is concerned with the audience experience of interpreting my own mystifying performance art situated in post-modernity. I approach it by applying a Gadamerian practical philosophy of Hermeneutics i.e. interpretation through a dialogue or conversation, which involves question and answer, in order to achieve an understanding of what is masked or concealed. I argue that a masked performance could be understood, i.e. interpreted, considering the three concepts of Hans-Georg Gadamer, e.g. play, symbol and festival, and to explain how, I will use an analogy. I have considered helpful to position Gadamer's concepts in analogy to the three notes of a perfume since what constitutes the body of a perfume could explain better Gadamer's concepts in relation to a masked performance art, and because the use of perfume and that of mask appear numerously in different kinds of ritualistic performance throughout history within different cultures, which I aim to give specific examples in my discussion. I will conclude with the idea that understanding what is masked, in hermeneutical terms and as a result of an interpretation, seems to appear not definitive. The implication of this idea questions if there is such thing as understanding a mystifying performance art?

Martin Blazeby, King's Visualisation Lab, King's College London
Digital Modelling and Rapid Prototyping

This presentation will cover in brief the technologies used to capture mask miniature artifacts into 3D digital formats and will focus on the methodology used to transform a scanned mask artifact into a hypothetical painted virtual mask ready for 3d printing and online archiving.

Miniature mask artefacts are captured into 3D using either photogrammetry or laser-scanning technologies; they are then subjected to a clean-up operation using 3D editing software to fill any missing polygons and corrupt data that may have been caused during the scanning and output processes. The 3D masks are then scaled accordingly to coincide with "real life" size proportions and at this stage a version is sent off to be 3D printed at full size by a process of rapid prototyping. Texture maps containing hypothetical colour information and enhanced facial and hair characteristics are then created in graphical editing software based on comparanda and applied to the virtual masks. The completed rapid prototype and finalised colour renderings derived from the virtual mask are then sent to the mask maker who constructs a wearable version.

The digital masks will be archived online as viewable "real-time" models including original source materials and paradata documenting and making transparent the research and decision making process (as well as any modifications made to the form of the ancient artefact and their rationale) from original state to hypothetical decorated mask.

Martin Blazeby, King's Visualisation Lab, King's College London
Digitally Modelling Performance Spaces

This presentation will illustrate the research process used in creating 3D theatre spaces based on ancient sites of performance and will focus on the Odeion at Pompeii as a case study. It will also show how the resultant 3D model is prepared for contextualising a "real life" recorded masked performance.

The 3D model of the Odeon at Pompeii has been created using archaeological plans, textural documentation, old photographs, on site measurements and precision surveying technologies. Unknown elements relating to the Odeon's architecture and decoration have been hypothetically created based on previous scholarly research and new concepts. The completed 3D theatre is carefully calibrated for masked performance workshop recordings in both chromakey video and motion capture technologies. Camera viewpoints are carefully positioned within the 3D model and chromakey recording studio designed to simulate "realistic" fixed viewing positions within the theatre. Motion capture data is used to generate virtual actors providing a 'pseudo-realistic' experience viewed from any location within the 3D theatre.

Matt Delbridge, Department of Drama of Queen Mary, University of London
The Ghost in the Shell

How do we train and prepare actors for the increasing demands of motion and performance capture techniques employed by the animation and games industries?

The Ghost in the Shell, one of the *Digital Re_Actor* training modules - is a Comparative Study of the potential located within the established mask making techniques of the Balinese tradition, the practical training techniques of Lecoqs Neutral Mask and how these methodologies may inform the development of one module of a training regime for a performance practice to be employed as part of the current workflow in the gaming and animation industries. To date there is no practical performance based training system and/or methodology available for students or professionals to undertake that is particularly focussed on the video game and animation industries. The gaming industry is currently worth $18 billion a year and will be worth an estimated $44b in 2011 with production expected to only increase beyond this time. The *Digital Re_Actor* system is designed as a training methodology for performers working in these 3D spaces (specifically motion and performance capture environments) and concentrates on exploring software as practical and physical spaces that need to be learned and understood by the performers who will be expected to inhabit, activate and enliven them.

We can train animation students to use software and we can also impart the study of human movement to these students, we can train performers to embody emotion and relay physical movement upon direction but where do these two ideas intersect and how can these be developed into a training method that can prepare professionals for the requirements of industry (both now and into the future)? While we train performers in the methods of neutral mask how can we train performers to drive the neutral avatar in software programs like Motion Builder (and beyond this train our performers to use neutral avatars to drive and animate characters within motion film and video game environments)? For the purposes of this discussion; which remains a small part of a much larger project, the concentration will be on the making techniques of the Balinese mask tradition, paying particular attention to Peter Brooks initial revelations about Balinese mask work (in particular the subconscious influence of the dreams of the mask maker) as well as looking at Lecoq training methods for approaching neutral mask. *The Ghost in the Shell* draws a line between these traditions comparing the maker of the traditional *mask* to the maker of the avatar(both neutral and characterised) and through this connection explores an approach to training an actor to encounter, shoe and wear the *mask* of the neutral avatar in a motion captured environment, so that a level of neutrality remains within the actors exploration of the potential of the digital mask, before any notion of character or characteristics are introduced. The ongoing potential of this training then allows for the performers personal exploration of the neutral avatar to then exert a real and lasting impression (and influence) over the subsequent creation and development of the 3D character that their neutral avatar drives.

Barbara May and James Shippen, Coventry University
3D Motion Capture in Performance Analysis

Dance authorities have acknowledged that there is a need to comprehend in much greater depth the biomechanics of dance in order that dancers can enhance their performance whilst reducing the risk of injuries which affects approximately 70 per cent of all dancers and can bring careers to an untimely and painful end. However, comparatively little research has been undertaken into the effect of dance on the musculoskeletal system. Three-dimensional motion capture is a mature practice with proven benefits in clinical and sports environments and these techniques are currently being research within dance performance. Motion analysis and muscle modelling provides a 3D visualisation tool to demonstrate best practice dance techniques in order to improve performance and reduce the risk of injuries.

This paper describes research into the 3D motion analysis of Irish dancers using an optical tracking system and floor mounted forceplates. It describes data collection problems unique to Irish dance, for example high foot speed and large impact loadings, and their solution. Whilst the injury rates in Irish Dance are high there has been little research into the kinematics, kinetics and internal muscle loadings in this dance form.

Performance anxiety can make the body tense, tightening muscles and joints. This can lead to a decrease in focus, may detract from optimal performance and may also ultimately cause injury to the dancer. Mental rehearsal of dance movements primes the musculoskeletal system and the use of imagery by the dancer can assist in the recall of performing the ideal movement prior to the actual movement. Three-dimensional kinematic data in association with ground reaction force data provides an objective tool to visualise and demonstrate best practice dance techniques in order to improve performance and reduce the risk of injuries. The data includes a comprehensive analysis of positions of the segments of the body, joint angles, joint angular and linear velocity, joint angular and linear accelerations and the position of centre of mass which is not possible with descriptive kinematics.

Having obtained the ground reaction forces as the dancer performs choreographic movements, it is possible to calculate the muscle loading within the body using inverse dynamics and muscle load optimisation. Software has been written within the Matlab programming environment to calculate the muscle loadings within the whole body and has been configured specifically for the use by dance teachers, dance students and their healthcare providers e.g. physiotherapists. It enables loads in the individual muscles of the dancers to be calculated from the motion data and forceplate data. The output is presented as colour coded graphics for visualisation of individual muscle activity and tabulated muscle loading data for easy interpretation of the results. A whole body muscle model has been developed to calculate the muscle loadings and muscle timings for dance movements which enables the forces within the muscles and the contact forces at the dancer's joints to be identified throughout the duration of the dance. The model consists of 666 muscle units, 31 anatomical segments and 35 joints and is animated using the dancers' movement data.

Boris Rankov, Royal Holloway, University of London
Pantomime Horses? Masked Performance by the Roman Cavalry

A form of masked performance not normally considered by scholars working on theatre are the *hippika gymnasia* ('cavalry exercises') known to have been carried by the horsemen of the auxiliary *alae* and mixed cohorts of the Roman army. A critique by the emperor Hadrian himself of one such performance at Lambaesis in North Africa in AD 128 has been preserved on an inscription found at the original venue, a Roman military parade ground. We also possess a detailed literary description of such exercises by Hadrian's governor of Cappadocia, L. Flavius Arrianus (Arrian), written only a few years later; indeed, Arrian may have accompanied Hadrian to North Africa and been inspired by precisely the same performances witnessed by the emperor.

Arrian describes the exercises as spectacles to be watched and admired, and notes both their choreographed nature and the use of costume by the riders, including attractive face-helmets in gilded iron or bronze, which covered the entire head. Such helmets are well known from military sites all over the Roman empire, and more than a hundred examples have survived. Scholars of the Roman army have long recognised (but not pursued in detail) their association with theatrical masks, but have been puzzled by the fact that a significant proportion of those which have survived are of androgynous or clearly female type. The explanations offered to date as to why Roman

soldiers should dress and be masked as women (the most common being that they were re-enacting battles between Greeks and Amazons) have not been convincing.

What has not been recognised, however, either by Roman army or theatre scholars, is that the helmets do not resemble tragic masks but have all the characteristics of, and in some cases are very similar indeed to, known representations of pantomime masks. This is despite the fact that the *hippika gymnasia* have been associated both with the Augustan *lusus Troiae* and with the Pyrrhic dance, while the Pyrrhic dance has itself been associated by Ceccarelli (1998) with pantomime. A direct association between these exercises and pantomime raises not only the possibility of a more plausible explanation of what the helmets were supposed to represent, but also interesting questions about the dissemination of classical high culture not just to the Roman masses (for which pantomime was recognised as a vehicle even in antiquity (Libanius *Orations* 64.112)) but to the supposedly least Romanised fringes of the empire. Moreover, if the helmet masks do indeed represent pantomime characters, as seems likely in at least some cases, then they potentially offer for study a much larger corpus of pantomime types – especially male types – than that offered by the currently recognised iconography. They would also add metals to the list of materials, such as linen and wood, which are more usually assumed for the manufacture of masks. In short, they should bring military exercises on horseback on the parade ground firmly into the purview of those interested in any aspect of ancient masked performance.

David Z. Saltz, Department of Theatre & Film Studies, University of Georgia, US
Virtual Vaudeville

Virtual Vaudeville simulates the experience of attending a New York vaudeville performance in 1895. A team of computer scientists, 3-D modellers, and theatre and music historians from across the US completed the first phase of the project -- a recreation of a comedy sketch by the ethnic humorist Frank Bush -- in 2007. The project uses motion capture to animate 3D models of historical performers in an effort to transfer the vitality of live performers into the virtual realm. Moreover, each of the 800 spectators are individually modelled and animated to allow users to observe how factors such gender, class and ethnicity might have influenced audience response. The user is able to switch perspectives to the stage, audience and theatre architecture from a variety of vantage points. The project was designed be experienced in two ways: through a downloadable, fully immersive 3D version (developed only in prototype) or through an online Shockwave version with streaming video (available at www.virtualvaudeville.com). Both versions provide the same extensive historical hypernotes and commentary. Virtual Vaudeville is conceived as a prototype of the 'Live Performance Simulation System', a system for simulating live performance events in general and from any historical period. 'Virtual Vaudeville' was funded by the US National Science Foundation as part of the Digital Libraries II initiative.

James Shippen, Coventry University, see: Barbara May

Tiffany Strawson, Theatre Artist
Naming the Invisible

This talk will be inspired by the Balinese concept of *Taksu.* I will investigate the manifestation of spirituality within the performance paradigms and specific cultural contexts of both Bali and England, and ask whether *Taksu* is achievable within Western mask work. A further question is whether it has a place in contemporary performance traditions. I wish to comment and analyse the difficulties of engaging with the role of spirituality as a valid part of intercultural exchange or as a way of knowing or 'doing' performance or culture, and making cultural comparisons. Interculturalism, as well as spiritual themes and questions, will inevitably surface and feature. So too will notions of 'transformation' of the actor.

A short film and slide show, made in Bali about Taksu, will introduce the concept as defined by leading practitioners in the field, principally Rucina Ballinger and Theodore Rendra. It will also demonstrate how Taksu manifests in performance. I will then explore ongoing processes of performance in relation to definitions of the embodied, corporeal experience of the performer.

The talk will address the anatomical demands of the dance form, the dynamic relationship between performer and mask and the consequent effect beyond the physiological or psycho-physiological, as experienced by the performer. The focus will be on the experience of the Balinese *Topeng* performer and the potential for Westerners, or any non-Balinese, to access something akin to *Taksu*.

I will make claims that the link between multiple experiences works in unison to accelerate physical, emotional or spiritual energy channels for 'some' individuals. I will endeavour to address issues pertaining to re-opening, developing and exploring channels of perception and energy, through dedicated bodywork training and ultimately through performance itself.

Certain knowledge of Balinese theatre is assumed, and although I will reiterate key points in relation to my enquiry, these are in no way comprehensive. I will need to make necessary detours to consider those performers and practitioners, both from Bali and the West, whose work and experience is useful in unwrapping the embodied and corporeal experience of performance, which may generate *Taksu.* In order to seek out phenomena that may be translated, I will refer to Csikszentmihaly's notion of 'flow' and define notions of 'spirituality'. I will also show how certain intercultural and post-modern theories regarding performance have influenced my research.

James Sutherland, **East 15 Acting School at the University of Essex**
Masque Neutre: *Embodied emptiness and the creation of Space*

> "The Neutral Mask is the basic mask that drives our understating of all other masks. It is through the Neutral Mask that we are able to wear other masks…It helps us discover the space around us, and the rhythm and gravity of things."
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> – Jacques Lecoq, *Theatre of Movement and Gesture*

Aristotle claims: "Imitation is natural to man from childhood; he differs from other animals in that he is most imitative. Then too all men take pleasure in imitative representations…The reason is that learning things is most enjoyable. Thus for Aristotle, miming is part of the learning process."[1] The neutral mask affirms Aristotle's claims, namely an affirmation of knowledge accrued through movement. This is both self knowledge and knowledge of the world in all its material, ideological and conceptual complexity. The practice of Neutral Mask operates at two reinforcing levels: as metaphor to facilitate a different way of seeing and being in the world, and as pragmatic teaching instruction to help students open themselves up corporeally and psychologically to a range of possibilities which will help them as actors and theatre makers. [2] It is the discovery of the self but not through the self. For Lecoq, the mask facilitates a discovery of the central point, the essence of a relationship, or a conflict.[3]

"'Neutral" Lecoq explains, "does not mean absent. It means without a past, open, ready. One cannot act psychologically because the eye doesn't travel. The eye is replaced by the head." These constraints, along with others develop a sense of space for the actor improvising. "To be an author of space we must build an awareness of space…it is a fundamental element of acting"[4]

As all masks are a structure of movement, this mask, then, is a reference point, a basic mask, a fulcrum mask for all the other masks. Essentially the neutral mask opens up the actor to the space around him. It puts him in a state of discovery, of openness, of freedom to receive. Before wearing other masks, the questions then become: Is there a place somewhere, where we can go back to, where all departure is possible, where you can distance yourself from emotion, a place of calm, but not a place of sleep? Through being 'nothing' can we contain and all potentiality? What is the tool of the theatre? What is the material of the theatre? Transformation. If so, where do we do it? On stage? The whole notion of Peter Brook's idea was Space.

We not only transform ourselves but we transform space, we mask it. What is the importance of the breath in the transforming and masking of space? How can the actor create space? Where can they come from?

The presentation aims to take participants through a simple Neutral Mask exercise to aid in setting in motion what possible answers to these questions could be. Subsequently it aims to support practice that affirms transformation is not just a masking of ourselves, but also a masking of space and a creation and accessing of space.

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1. Felner, Mira, *Apostles of Silence,* London, 1985, p. 147.
2. Simon Murray and John Keefe, *Physical Theatres: A Critical introduction,* New York: Routledge,, 2007, p. 146.
3. Felner, M., *op.cit.,* p. 145.
4. Jacques Lecoq, *Theatre of Movement and Gesture,* Abingdon, UK and New York: Routledge, 2006*.*

Chris Vervain, Theatre Artist
The Pedagogic Power of the Masked Greek Chorus

The masks of fifth century Athenian tragedy were arguably fairly neutral in expression, distinguished by features denoting age and gender and were otherwise uncharacterised. The chorus, an important element in the drama, are to be seen as constituting a collective identity rather than representing a group composed of individuals.

In modern practice there are various approaches to mask performance and some, particularly those involving an exploration of character or individual traits, would seem to be inappropriate to the ancient plays as also is the idea of possession , advocated by practitioners such as Peter Hall or Keith Johnstone.

In my own work with actors, students and school groups I have developed a different way of introducing tragedy, starting with the masked Greek chorus. The need for focus, economy, commitment, energy and the idea of neutrality arise as in mask work more generally, added to this is the experience of the power of the collective when individual idiosyncrasies are put to one side; issues relating to leadership and followership also become apparent. These issues rendered palpable by physical enactment are all particularly relevant to the education of young people, a fact understood in ancient Greece as evidenced by references to the pedagogic role of choral singing and dancing. Today I continue this tradition, in my own way, in English schools with pupils from various cultural backgrounds.

Richard Williams, Department of Classics and Ancient History, University of Durham
Masks and Facial Perception

Masks have a special relevance for the study of facial perception and can in turn be illuminated by the methods appropriate to it. The paper will endeavour to document and quantify some of these issues, using in particular Principal Components Analysis of data collected from 3D scanning of masks during the Body and Mask Project.

Good theatrical masks are designed to give the illusion of a mobile face, while remaining fixed; their design may thus reveal empirical understanding of issues that are studied in the facial perception discipline from real world mobile faces (such as attractiveness and symmetry, gaze, the processing and extraction of shapes from 3D forms and 2D 'shape from shading'). The different basic emotional states that the masks exhibit bear on issues concerning how fundamental emotions are displayed and categorised in the real world. Comparison of the masks with research in the facial perception field will suggest that slave masks display impossible combinations of emotions, further caricatured and exaggerated for comic and unsettling effect. Questions of the taxonomy and classification of the masks will be considered in the light of research findings bearing on how a newly encountered face is compared by the human brain to a population of known faces, and the capacity to extract exemplars of typical but never-seen faces from such populations. The role of natural outdoor lighting of the masks in the ancient theatre will be examined with reference to the brain's expectations and abilities to process faces in different lighting conditions. PCA analysis (conducted in collaboration with the Psychology Department of the University of Glasgow) reveals multiple dimensions of structural difference within the dataset of masks, and the underlying principles of caricaturing and 'anti-caricaturing' inherent in the sculpted artefacts.