# STUDY-UNIT Number 1

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| Code | |
| Title | **Mapping the Performer as Bodymind –<br>A Social Cognitive Neuroscience Perspective** |
| Type | Lectures, seminars, practicum, practical work, fieldwork, essays, long essay (research based) |
| ECTS credits | 16 |
| Pre-requisite study-unit | – |
| Method of assessment | Course work 20%, essays ("study papers") and long essay 80% |
| Lecturers | **Prof. Richard Muscat & Prof. John J. Schranz**, Prof. J. Lauri, Dr. C. Zammit, Prof. J. Friggieri |
| Description | **A. RATIONALE**<br><br>• Social Cognitive Neuroscience has been described as seeking "to understand phenomena in terms of interactions between three levels of analysis: **the social level**, which is concerned with the motivational factors and social factors that influence behaviour and experience; **the cognitive level**, which is concerned with the information-processing mechanisms that give rise to social-level phenomena; and **the neural level** which is concerned with the brain mechanisms that instantiate cognitive level processes" (Oschner and Lieberman 2001). In terms of the performer, performance is the only artistic activity where no material separation can be imputed between the artist creating his opus, the material components eventually constituting that opus, the locus where the creative act occurs, and the artist's opus per se. In ordinary terms one can say that artist, medium, creative act, locus and work of art are one: performer is artistic subject and *objet d'art*.<br>• In the face of this inseparability, it necessarily follows that beholders and artist need to share the time and space of eventhood, and that what is to be beheld is the act of creativity itself. Theory of Mind from a cognitive standpoint may in turn provide the conceptual framework through which such an example of social cognition may be manifested. The ability to mentalise – that is, to produce mental states that are not strictly speaking physical phenomena though they very much depend on the neuronal workings of the brain – is further endowed by our ability to attribute mental states of others, which in turn provides the means through which we are able to socialise with others. The underlying circuitry within the brain that gives rise to this ability has been studied using in the main modern imaging techniques in adults. It would appear that the neuronal network in question involves the Frontal cortex, namely the medial prefrontal cortex (MPFC) the anterior cingulated cortex (ACC) and the orbit frontal cortex (OFC) along with the amygdale and the superior temporal sulcus which is thought to result in our |

ability to attribute the mental state of others. In addition, it has been suggested that problems in TOM result as either a consequence of developmental problems as noted by autism or problems with application as noted in schizophrenia which appears later in life.

- The key element that arises from the circuitry outlined above is the ability to mindread, in particular the achievement "to explain and predict human actions by representing and attributing to human agents a whole battery of internal unobservable mental states such as goals, intentions, emotions, perceptions, desires, beliefs, many of which are far removed from any observable behaviour" (Jacob and Jeannerod 2005).
- The discovery of mirror neurons within the primate pre-motor cortex and following that in humans gave rise to the prospect that the very same system may be the basis through which social cognition or mindreading may be achieved. Mirror neurons within the pre-motor cortex are both active when the individual performs an action as well as when observing an action by another. By matching the other's action onto one's own motor system without actually performing the act, one resonates with the observed movements and this per se leads to an understanding of the perceived action. Moreover, such a system is only active if the said movement is executable and in addition, if the said system is able to discriminate between self and other. Such resonance may provide the route through which new technical skills are learnt. Such learning in turn may be modulated by the reward associated with attaining the desired goal, a new repertoire for example.
- Thus the decision making process that guides ongoing motor behaviour which is thought to involve the Lateral Infra Parietal Cortex enables value based decisions to be undertaken which in turn may lead to the desired outcome.
- By focusing on the very particular "laboratory" situation of Performance, this module brings these issues to the fore with the added aid of the experimental paradigms that involve cognitive tasks and functional imaging that in turn are used today to actualise such concepts as theory of mind.
- The Study-unit sets out to enable students to acquire new and constantly updated insights into strategies that, by focusing especially (though not exclusively) on motricity, potentiate learning processes and empower the generation of contexts where creativity may stand more chance of occurring.
- In this manner, students will be enabled to appreciate and envisage conceptual, theoretical and practical approaches which may make it possible for one to intervene on contexts which inhibit or stimulate learning and creativity.

## B. STRUCTURE

**1st Component – Performing the Self and the Self Performing: A Social/Cognitive Perspective**

This component looks into the complexity of fabricating the Self. A biological phenomenon on the one hand and a linguistic phenomenon

on the other hand, the "Self" (which Bateson calls "the most central and salient of all available metaphors"[1]) is an act of naming or identifying. Any performance necessarily navigates these territories. These two aspects of this fundamental phenomenon of the Self are at the core of Goffman's *The Presentation of Self in Everyday Life*, where the negotiation of the Self is shown as being at the foundations of all relational structures of human society, with the Self's efforts at affecting the other (efforts which concomitantly affect the Self) appearing to be at the core of what it means to be human.

Keywords: Performance, Social, Cognition, Relating, Alterity, the Other, Complexity, Outside/Inside, Language, Grammar, Showing/Manifesting

**2nd Component – Models for Change and How We Construct Them**

The human being continually constructs models in all fields, with the purpose of evolving survival strategies so as to be able to improvise when the unpredictable strikes. This approach provides humans with the opportunity to innovate, learn and grow. Man's engagement in art can be seen as the construction of such models at increasingly complex levels – artists provide platforms for other to navigate difficult territories, each in his own way. This reflects the way we are made – genes provide building blocks, but how one gets to a goal is different for each. If models do not reflect this, man risks de-humanising himself, "robotising" himself: models may be simplistic, a simplification conceivably grave enough as to entail the "cultivation" of "simpletons". Models may also be mystified… with equally disastrous consequences. These two aberrations of models can be seen as pathologies – pathologies which, however, humans seem amazingly equipped to overcome, as our evolving species showed time and again, en route towards becoming what one means by the word "human".

Keywords: Models, Survival, Unpredictable, Improvising, Innovation, Growth, Art, Structure/Process, Process/Product, Pathology

**3rd Component – Learning in Action … Putting Models into Action**

Many species can copy a role model's choice of object, or location. Only humans, however, can observe another's action and strive to reproduce it as a model. Only the human being (including the infant) can form a mental representation of a visually perceived action and then try to act similarly, to "produce an action conforming to the representation" In the light of the discourse developing from the discovery of the Mirror Neuron System, what new light may be shed on growth, on change, on art, on mimesis and catharsis (these latter two as developed by Aristotle in his *Poetics*), on all that seems to be at the core of what it means to be human – the uniquely human process of learning? "Epistemology is a matter of Relationships" (Bateson & Bateson, op. cit.). The Alterity encounter is, in itself, an exercise in creativity and innovation – there where, at the same time, the two parties to the encounter are reinforcing that which they already are. The work on performance provides an ideal locus for studying this, as the several parties to the performative act – at once subjects and objects to

[1] "Of all available metaphors, the most central and salient, available to all human beings, is the self. Here I mean not only the psychological construct of the self, but the entire being, psyche and soma, for each of us the meeting place of Creatura and Pleroma. Central to the net of metaphor through which we recognise and respond to the world is the experience of the self and the possibility of reference to it." Bateson, G. & Bateson, M.C., *Angels fear – Towards an Epistemology of the Sacred*, Macmillan (NY) 1987, p. 194.

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| | each other – negotiate collaboration.<br>Keywords: Mirror Neuron System, Imitation, Emulation, Resonance, Shared Manifold, Action, TOM, Representation, Change, Learning, Memory, Identity, Alterity and Flux.<br><br>**4th Component – Performance and "the Art of Man"**<br>The Individual and the Collective, micro culture and macro culture, culture as mind. The performer as ideal locus for studying the organisation of the self in its efforts at transcending itself. The visions opened to us by Meyerhold's intuition of Theatre as being "the Art of Man". The predictable unpredictable.<br><br>**Laboratory work and workshops**<br>Research work and observations will be carried out in laboratories linked with the programme, both cognitive science laboratories as well as performance laboratories. |
| Reading List | **Compulsory Readings**<br>Gazzaniga, M.S., Ivry, R.B. & Mangun, G.R. Cognitive Neursoscience, *The Biology of the Mind*, second edition, Norton, 2002.<br><br>Barba, E. & Savarese, N., *The Secret Art of the Performer, A Dictionary of Theatre Anthropology*, Routledge (London) 1991. (Specific sections)<br><br>Schechner, R. & Wolford, L., ed., *The Grotowski Sourcebook*, Routledge (London) 1997 (Specific sections)<br><br>Benedetti, J.N., *Stanislavski, an introduction – The System*, Methuen, London, 1982.<br><br>Schranz, J. J., *The Performer as Act of Faith*, GHE (Malta) 2004<br><br>Schranz, J.J., *Never on a Sunday – The Sacred of Performer's Space*, GHE (Malta) 2001 (Specific sections will be indicated)<br><br>Aristotle, *Poetics*<br><br>Bateson, G. & Bateson, M.C., *Angels Fear, Towards an Epistemology of the Sacred*, Macmillan (NY), 1987<br><br>Flusser, V., *Towards a Philosophy of Photography*, European Photography (Göttingen), 1984<br><br>**Recommended Readings - Cognitive Sciences**<br>Gazzaniga, M.S. (edit), *The New Cognitive Neurosciences*, MIT Press, 2000.<br><br>Kandel, E.R., Schwarz, J.H. & Jessell, T.M. *Principles of Neural Science*, fourth edition, McGraw-Hill, 2000.<br><br>Purves, D., Augustine, G.J., Fitzpatrick, D., Hall, W.C., |

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Frith, C. & Wolpert, D. *The Neuroscience of social interaction: decoding, imitating and influencing the action of others*. Oxford University Press, 2004.

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Ochsner, K.N. (2004). Current directions in social cognitive neuroscience. *Current Opinion in Neurobiology*, 14, 254-258.

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Stuss, D.T., Gallup, G.G., Jr. & Alexander, M.P. (2001). The frontal lobes are necessary for 'theory of mind'. *Brain*, 124, 279-286.

**Recommended Readings - Performer Studies, Cultural Studies, Philosophy**

Stanislavski, K., *My Life in Art*, Translated by G. Ivanov-Mumijev (from the 1925 Russian edition), published by Foreign Languages Publishing House, Moscow, with no date of publication.

Braun, E., *Meyerhold, a Revolution in Theatre*, Methuen, London, 1998.

Toporkov, V.O., *Stanislavski in Rehearsal, the Final Years*, Taylor and Francis, 1998

Richards, T., *At work with Grotowski on Physical Actions*,

Routledge, 1995

Barba, E., *The Dilated Body*, Zeami Libri (Rome), 1985

Barba, E., *The Paper Canoe, A Guide to Theatre Anthropology*, Routledge (London) 1995

Schranz, J.J. & Camilleri, F., *ID-Descartes – Identity of a Dramaturgy*, GHE (Malta) 1996

Schranz, J.J., *Theatre – A Leap Beyond*, Foundation for International Studies (Malta), 1990

Schranz, J., *Corporal Improvisation (Visible… Verbal…) and Brain Lateralisation*

Barthes, R., *Mythologies*, Hill and Wang, 1972

Sonntag, S. (ed.), *Barthes – Selected Writings*, Harper Collins, 1989

Levinas, E., *Totality and Infinity* – Section 1 The Same and the Other; Duquesne University Press, 1969

Vernant, J.P., *Myth and Tragedy in Ancient Greece*, Zone Books, 1990

Gonda, J. *Reflections on the Indo European Medium*, in Lingua, Vol. 10 (4), 1960, p.30

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Llewelyn, J. *Heidegger's Kant and the Middle Voice*, in Time & Metphysics, Wood, D. and Bernasconi, R., Perusia Press 1982

Heidegger, M., *Being and Time*, Harper, (revised) 1962

Derrida, J., *Dissemination*, Athlone Press, 1997

**Recommended Readings - Fractals and Stochastic Processes**

Mario Martelli, Mai Dang & Tanya Seph, Defining chaos. *Mathematics Magazine*, **71**(2) 112-122 (1998).

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| | Levitt and M.W. Lewis (Eds.), Annals of the New York Academy of Sciences, 775 (1996).<br><br>Falconer, K., *Fractals – the New Geometry*, Video produced by *math* Media for The London Mathematical Society, 2000. |