

Finding agency in the Imagined Body through Unreal Engine's Live Link Performance Capture

Dr. Darren Daly

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This essay reflects on a series of workshops I delivered with a group comprising of undergraduate and postgraduate performance students at the University of Salford, predominantly of MA Screen Acting students. The workshops ~~focused on exploring~~explored Michael Chekhov's Imaginary Body technique ~~within using~~ a Motion Capture system streamed into the 3D Virtual Production software Unreal Engine ~~created by Epic Games~~. Unreal Engine's Livelink function can provide ~~real-time~~real-time visual feedback of ~~data captured from~~ actors' bodies ~~and motion capture data~~ mapped onto ~~industry standard~~industry-standard computer game avatars. When introducing the technique to students, ~~it was important to stress~~the notion of creative individuality ~~was stressed as~~ a central component of Chekhov's work. From an agency perspective, the creative individuality of the actor, linked to and informed by their own social, cultural and educational background is paramount. Whilst ~~we they~~would be exploring ~~the same~~characters, often through a shared image, the individual interpretation and expression of each student would be present and (hopefully) visible. Questions of visibility and invisibility of the actor within character ~~became formed~~part of our reflective discussions and are central to the wider debate around acting for ~~the~~ motion and performance capture industry. The intention was both to explore how we can develop our technique for character physicalisation, ~~hopefully, which could be suitable for use within the computer gaming industry, and~~industry and retain some sense ~~and development~~of creative individuality through the process. Each workshop practically explored the Chekhov technique, through real-time visualisation of digital characters and involved reflexive discussions.

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'As soon as you saw it, you imagined how it might move'.

(Chiamaka Ezeibe – MA Screen Acting student, 2023)

The technique of the imaginary body relies on image. The actor visualises their character's body in their mind - a body outside of their own with a different physicality, then imagines transforming their own inner, energetic body into that image. The energetic body is able to transcend the physical body. Chamberlain describes it as wearing the body 'as if it were a different costume' (2004, p. 77)(Chamberlain, 2004, p. 77). In motion capture, this corresponds to what Delbridge (2015, p. 27) refers to as the costume space - the space around the actor's body which is present only in the digital realmspace. In our workshops, the images of the character body were already drawn, ~~provided~~made freely available by the games designers in Unreal Engine and visible on screen as referents. The image creation in this instance was removed from the actor and provided by someone else. This replicates some of the issues around actor agency in the computer game industry in terms of character authorship and creation. From a training viewpoint, ~~it this~~ shortcuts an important but also difficult part of the Chekhovian process of visualising detailed images through the

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imagination. For some actors who struggle with visualisation (those who have aphantasia, for example), which often forms a key part of so many acting techniques, having an image present can help to spur the imagination and allow them to bring the creations more easily to life in their minds. Many of the actors in the workshop welcomed the pre-formed visual representation of the character at the outset, although the relationship became more complicated as the weeks progressed as I will outline. Within our workshop space we were working with three sets of bodies, the actor's physical body, the imaginary body (in the mind of the actor) and the imagined body (created by the designer and present on screen).

We began by exploring some of the most widely available and detailed free avatar 'skins' from the Unreal Engine marketplace taken from Epic Games's *Paragon* game series. The skins are very detailed, and each character has a short biography from the game storyline that we could use as prompts to develop further imaginative material. They ranged from robots to reptilian creatures to humanoid humanoids as seen in the figures below. As consistent with industry norms, the visual representation of some of these bodies (particularly the females) often raised difficult and challenging questions around sexualisation, gender and culture and how they were represented. The sexualised representation of the female characters formed part of reflexive discussions and was acknowledged as problematic although the general feeling from the (largely female) group seemed surprisingly uncritical as the actors engaged with the transformation internally. As Maria Kapsali notes,

whereas the decoupling of the movement from an image may lead to the body's disappearance, with all the implications that this may have for issues of representation, this can also work in reverse: it opens up the movement to those bodies that may have felt excluded by idealised images of the body.

(2021, p. 166)

The distance between the physical and the imagined body and the actor's body clothed in the motion capture suit seemed to act as a protective barrier.

'You know I actually felt very empowered – I don't know if I should but that's how I did'.

(Elizabeth Stefanec – MA Screen Acting student, 2023)

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Figure 14- Lt. Bellicea Paragon Characters – Grux, Yin, Lt. Bellicea, Morigesh, Crunch.



Figure 2 - Yin and Grux (controlled by student performers in LiveLink mocap)



Figure 2 - Yin

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Figure 3 - Morigesh



'As a lady you don't often get to kill things, it doesn't matter that you're doing it in a bathing suit. I'm in the mocap suit.'

(Sophie Stewart - BA (Hons) Theatre & Performance Practice student, 2023)

Figure 4 - Gideon



Figure 5 - Grux



Figure 6 - Crunch



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We might consider the imaginary body to have a life of its own - a *suggestion* of agency. Whilst Chekhov advises us to create characters in our imagination, he also suggests that there they are freed in the subconscious of our imagination to interact and live. As it is so in the incorporation of image exercise, we might observe them walk, talk, or perform actions, ask them questions (Chekhov, 2002, p.29). They make suggestions to us as actors that we can use in creating our art. When describing his own characterisation process for the role of Muromsky in Sukhovo-Kobylin's *The Case* he speaks of imitating this imaginary character 'which *itself* acted for me in my imagination' (Chekhov, Kirillov, & Merlin, 2005, p. 110). In, *To the Actor*, Chekhov instructs us to impose our will on our creative images, suggesting that they often become 'obstinate' (Chekhov, 2002, p.30), telling us to order them, making them subject to our own conscious demands.

The actors allowed the imagined bodies to mobilise in their minds, starting the process of transforming their inner selves. Whilst moving through the space, many began to encounter a perceived resistance from the bodies as viewed on the screen. They felt a loss of agency, dominated by the structures inherent in the imagined body and the translation of the data into it. An 'obstinacy' from the image resisted their efforts, no matter how much they ordered it. This represented an erosion of agency that is consistent with the industry whereby the actors' efforts and bodies can be dominated by the systems, software and designers. It also highlighted a predisposition to become focussed on the external physicalisation of what should be an internal process in the imaginary body technique. They were reminded of the need to focus on the internal rather than the outward physical expression. It demonstrates how easily we lose sight of our own creative processes to conform to what appears 'correct' or 'appropriate' in our training. As students responded to the visual feedback, they adapted their movement and began to explore and collaborate within the defined bodies of their avatars - 'Thus, you will learn to collaborate with your creative image while working on your part' (Chekhov, 2002, p.30).

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Figure 3 - Imagining the character body while in the MoCap suits



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“I am stuck in this body and now I have to learn how to use it”

(Ewa Wojciechowska– MA Screen Acting student, 2023)

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The actors allowed the imagined bodies to mobilise in their minds, starting the process of transforming their inner selves and moving through the space and began to encounter a perceived resistance from the bodies as viewed on the screen. They felt a loss of agency, dominated by the structures inherent in the imagined body and the translation of the data into it. An ‘obstinacy’ from the image resisted their efforts, no matter how much they ordered it. This allowed the group to experience a number of things. It represented an erosion of agency that is consistent with the industry whereby the actors’ efforts and bodies can be dominated by the systems and software. It also highlighted a predisposition to become focussed on the external physicalisation of what should be an internal process in the imaginary body technique. We were reminded of the need NOT not to focus on the physical outward expression but the internal. It demonstrates how easily we lose sight of our own creative processes in order to conform to what appears ‘correct’ or ‘appropriate’. As they responded to the visual feedback, they adapted their movement and began to explore and collaborate within the defined bodies of their avatars - ‘Thus, you will learn to collaborate with your creative image while working on your part’ (Chekhov, 2002, p.30).

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Figure 4 - students physically exploring the body of the avatar Grux.



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'I think that how I interpreted the avatar would be VERY-very different to how other people interpreted the avatar.'

(Dominic Lane – MA Screen Acting student, 2023)

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As the workshops progressed and students were encouraged to remove their focus from ideas of the 'appropriate' or 'correct' manifestation of the external, they began to find more control and authority over their character bodies. We explored other aspects of Chekov's technique, added imaginary centres, worked with the image of stick, ball, veil and attuned our attention much more to the psychological and emotional impulses arising through the physical state. We discovered that each of the characters comes with a pre-defined set of animated gestures which can be activated and viewed in the engine. In the industry these are known as emotes and idles. For example, the avatar Yin has an emote where she squashes a bug with the toe of her boot, Grux has a battle roar with fully extended arms and an arched back. Using the industry language and the pre-loaded animations as stimuli, we began to imagine and create our own emotive gestures for each of the characters, visualised first in our minds engaged through our energetic and then physical bodies and realised in collaboration with the bodies on screen. The expert skills of our technician allowed us to discover how simple it was to remove default elements of the avatar body such as the weapons or change certain clothing elements in Unreal Engine. Whilst the

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main physiognomy of the characters remained the same, it was possible to tweak the images and, to an extent, impose our [own](#) will on them.

'I can't describe this in words I can only really do it in actions.'

(Freya Davis – MA Dance Performance & Professional Practices student, 2023)

The digital bodies on screen thus moved beyond their gaming context, at times in humorous contrast to the [game play](#)~~gameplay~~, at others quite dramatically gripping. The hulking reptilian Grux, for example, appeared ~~as~~ a very sensitive soul once bereft of his battle axes and running, ~~light footed~~[light-footed](#) through a cityscape. Our explorations reversed the usual workflow of actors' bodies and data being presented to post-production teams for 'fixing'. They began to find their own agency inside the industry structures, through exploration of the characterisation technique. The moments of incongruity became a central part of the learning process and actors began to play and imagine with the bodies in ways that revealed their creative individuality, often at odds with the initial expectations arising from the image of the character. David Zinder (2007) writes about Chekhov's technique as imagining with the body. Here, ~~they~~[students](#) were imagining with the imagined body.

~~In the final sessions we moved away from working with the Paragon avatars to begin exploring with Epic's 'Metahumans'. The Metahuman software allows users to create their own avatar bodies in a fairly simple way with incredibly detailed precision. There is a vast range of options available to suggest a variety of cultural mixes and heritage and these can be easily exported into the Unreal Engine environment. Socio-culturally, the avatars we were using were significantly problematic and the Metahuman software offered more representative potential for our characters. As this becomes more widely available, the scope for wider individual representation in the medium increases enormously.~~

Mark Evans (2019) notes that training the 'digital actor' for Motion Capture presents ~~a~~[number of several](#) issues in relation to agency. Actors invariably have their images captured, recorded, stored and manipulated [in](#) post-production by a team of animators, ~~vfx~~[VFX](#) artists and other creatives. Maria Kapsali (2021) distinguishes between training for and training with Mocap whereby the training *with* focuses on utilising the system to explore technique outside of the industry as opposed to *for* the industry. The workshops described above were designed to combine elements of both *for* and *with* by training *inside* Mocap. We worked with the systems to explore and develop technique, but also utilised game assets designed for the industry, becoming familiar with them and the systems through our explorations. As we consider the challenges of agency in training the fragmented digital actor, the ~~ability~~[freedom](#) to imagine ~~and play~~[inside](#) of industry structures offers [the](#) potential to adapt existing technique to influence as well as respond to a rapidly changing landscape.

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