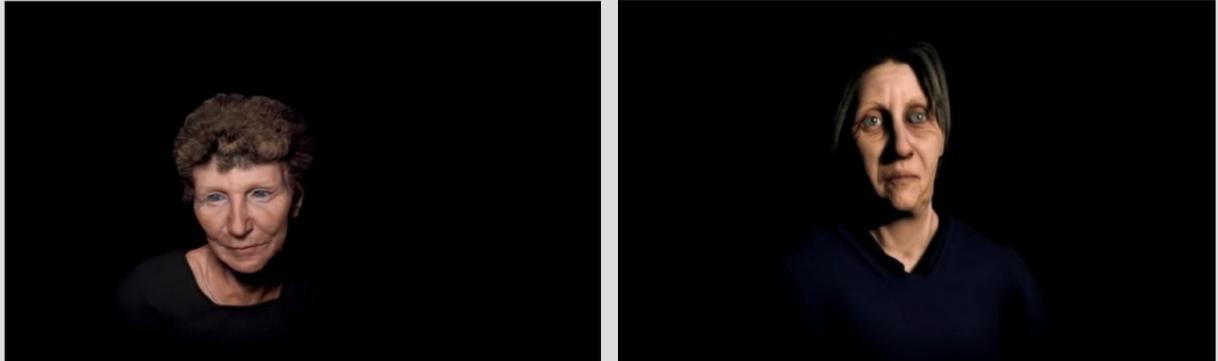


## CLEANING AND CHARACTER IN MOTION CAPTURE PORTRAITS

Susan Sloan

This recent series of work focuses on the portrait, explored through the medium of animation, using Motion Capture data as the core material. Analogous to traditional notions of portraiture, drawn, painted, filmed, photographed or sculpted, at the core of these animations is a representation of the sitter.



*Mary, Annie. Uncontainable: Broken Stillness, 2011.*

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Framed as a single shot and composed around the head and torso of the sitter, the works point to historical portraiture traditions, although in the animated form it is simple gestures and movements that give insight to the sitter and who they are.

Working with people I know or meet by chance, I am attempting to capture a sense of stillness and perhaps the ordinary. Using Motion Capture technology I record the subjects, essentially just sitting, being themselves, albeit under the gaze of 10 cameras. There is no performance as such and no narrative unfolds in these works but rather, I am fond of the idea that time slows down as the viewer spends time watching the sitter 'sitting'.

The use of Motion Capture has been developing in many areas such as entertainment, military, medical and engineering fields. It is a process that records motion data from a moving subject in 3 dimensions. There are many Mocap systems in use and they fall into 3 main areas, mechanical, optical and magnetic. In essence, they all track markers which are fixed to the body (animal/human) at key pivot and rotation points and produce a set of 3D co-ordinates and their rotations and trajectories over the period of the movement sequence. This tracking data is fed back to a software system and applied to a virtual skeleton. In the entertainment industry such as Games and Film and within the Performing Arts this is often called Performance Capture. The performer and the data recorded will drive the virtual skeleton. In these cases the virtual skeleton is often referred to as a puppet. In the Film and Games industry, the skeleton will, in turn drive a 3D character either in real time as in in-game animation or 'cut scenes' where the Mocap will be added to and polished off as a finished performance for screen.

In the field of gait analysis however, it is often not a performance that is being captured but normal and pathological function in the study of animal and human walk cycles for Orthopaedics and Physical-Therapy

Motion Capture portraiture lies somewhere in between these two areas of motion study. I am attempting to record a gestural stance, or an awkward tilt of the head and yet I am also drawing from traditions of painting and sculpture in the representation and interpretation of that data. Whilst the portrait is entirely constructed in 3D modelling software the motion of the subject is recorded from real life. The works become a record and an interpretation at the same time. The relationship between the recorded data and manually animated and sculpted forms becomes significant. The portraits are not just an interpretation of the external visible characteristics of the sitter but also a document of their spatial co-ordinates, their motion and very often their emotions.

I am interested in the notion that Mocap is a document of existence in the same way that a photograph or a piece of video footage is. It is not one moment or an event captured in time but a document of an individual's movement and identity removed from a specific time and place.

Within the Games industry individual characteristics in Mocap are often 'cleaned up' or removed from the motion capture data in the production of generic motion sequences such as run cycles, 'idles', 'sneak' cycles or 'punches'. This is done primarily to remove unwanted artifacts from the data such as glitches and ticks but it can be the 'personality' of the performer and their gesture that is removed or binned in favour of a more generic stance or 'readable' action pose.

Having studied my own motion capture I find idiosyncrasies that I have not been aware of in footage from other recording media (such as video). Motion capturing myself has allowed me to observe aspects of my gesture and motion that had otherwise been invisible to me (but perhaps not to others). I have a limp; I look at my feet when walking; I position the chair with my hands before I sit down; I make

sure the chair is still there (and hasn't wheeled away) as I sit down. I have a self-conscious way of moving through space. I rely on visual cues to navigate around objects. Whilst this all makes sense to me (I have proprioceptive deficit in the lower half of my body), seeing my own motion, face to face, with no other information about place, time and context has given me an insight into the way I am, that I have never been able to see before.

The moments when the performer stops performing, forgets about the cameras or drops their guard are, for me, the most compelling pieces of motion capture. More interesting still, is motion captured footage of non-performers, individuals who are not perhaps relaxed in front of the camera.

I am intrigued by the notion that Motion Capture is, like many other areas of animation production an 'asset', a component part of a very large and complex pipeline of a Film or Games production. Sequences of motion, mostly performed by unidentified performers will be kept in Motion Capture data bases to be reused in Games and their sequels. Efficiency is paramount within the pipeline and assets such as models, environments, and animation are designed to plug into this pipeline to keep production flowing. Furthermore, Mocap was once thought of as a labour saving method of producing animation sequences in bulk, quickly and relatively cheaply. However, it is no longer, viewed as the 'cheating' form of animation but rather as a method and a medium in its own right. Through studying Motion Capture as portraiture it is the identity of the sitter that is paramount to the project. The captured motion rather than being an asset becomes the fundamental building block.