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**SPACEMAKING -   
EXPERIENCES OF A VIRTUAL BODY \***

By Susan Kozel

(\*a longer version of this article appeared in *Dance Theatre* *Journal*, vol 11 no 3, autumn 1994)

**Virtual reality is a new materiality** -- For four weeks I performed in Paul Sermon's *Telematic Dreaming*. The installation was part of a large exhibition of contemporary art in central Amsterdam called *I + the Other: dignity for all, reflections on humanity*. Spending several hours a day over a period of weeks in virtual space allowed me to explore in greater depth the relation between my 'cyber-body' and my fleshly body, and gave me greater insight into some of the sexual and political implications of the technology.

In*Telematic Dreaming* Sermon created a space for interaction between a performer and members of the public using a technology called telepresence. Using video projectors and monitors people in two separate rooms were drawn together. There was a bed in each room. I was alone on a bed in a room well removed from the public visiting the exhibition. My image was projected onto the bed in the room which was open to visitors, where they had the option to join me. Then video cameras in the public room transmitted the actions of the person on the bed with my image back to me in my room upstairs. I was able to interact with the person on the bed downstairs by watching both of our images on the monitors placed around my bed. The bed became my performance space. Our movement occurred in real time, but in a space which was entirely created by technology. I was alone on my bed, moving my arms and legs in physical space as if in some sort of hypnotic ritual dance, yet in virtual space I carried on intense physical improvisation with other unknown bodies.

Virtual reality (VR) is the name of the new technology that creates the illusion of being immersed in an artificial world, or of being present in a remote location in the physical world. In many VR applications, such as architectural design, medical imaging and flight simulation, the virtual space is reached by placing a head-mounted display (HMD) on your head and donning a dataglove. The HMD looks like a large scuba mask and replaces your view of the world with a three-dimensional computer graphic depiction of a world provided by a computer, while the glove contains the digital controls which allow you to navigate in the computer generated space. This was not the space of Telematic Dreaming, for my body was not abandoned while my consciousness travelled in an all encompassing 3-D space. Yet my body did take on an electric state, for the only way I could move was by relying on the video images of both myself and the others.

**TRUST**

In *Telematic Dreaming* human interaction was reduced to its simplest essence: touch, trust, vulnerability. Movement usually began in a hesitant way with hand contact taking on excessive importance. The impact of slow and small movement became enormous. Great care and concentration was required to make intricate web patterns with the fingers of a stranger, or to cause one fleshly finger meet up with one video finger. When the movement progressed from these early stages to a sort of full body choreography the piece became an emotional investment which shocked and sometimes disturbed people. Some people simply froze, and fled the installation once they realised what it was about. When politicians or members of the Dutch royal family visited they did not even venture onto the bed for fear of being recorded in a compromising position.

The occasions when the movement worked well felt very much like good contact improvisation: a hypnotic feeling of not knowing what is coming next but letting the strong flow of movement carry you onward. When the movement moved through us in this way, based on openness and trust, the distinction between which bodies were real and which were virtual became irrelevant.

Performing the piece was emotionally taxing as well as enriching. For a time I worried that by being drawn into tender and intimate interchanges with dozens of strangers who got on the bed I would be desensitizing myself to the detriment of relations with my real loved ones, exhausting myself, rendering myself mechanical or cynical. This concern in itself is an indication of the strong physicality of the piece, of the powerful link between the body on the screen and the bundle of emotions, thoughts and movement which makes up my material body. The mechanisation or computerisation of human experience is generally thought to diminish the physical and emotional sides of life, yet the in the virtual world of *Telematic Dreaming* questions of privacy, intimacy and identity were central. This was not just my experience as a performer, many members of the public were overwhelmed by their experiences on the other bed. Some felt protective toward me, or stayed on the bed because they didn't want me to be alone in my virtual world. Others claimed to have been 'changed' by the experience. The installation was paradoxical for not only using technology to provide a forum for experiencing the basics of human intimacy, but for situating this private interaction within a public domain.

**PAIN**

My back and neck rebelled after two days of performance, forcing me to evaluate the relation between my physical self and my virtual body through that ultimately corporeal experience: *pain*. I couldn't turn my head to the right and the mobility in my right arm was reduced by more than half. My feet, knees, hips and spine cracked at the slightest turn. I felt as if I was disintegrating. Through pain I was able to see a link between the seemingly abstract image of myself and my flesh. My pain was discernible in my image, giving my movement a peculiar stiffness.

At the same time I became obsessed with the invisible side of my body: digestion, intestines, breathing. When to eat, what to eat, how it affected my moods and the way my body felt. It was as if my involuntary organs could not be counted upon to perform their usual roles unassisted by my conscious self. They called attention to themselves through pain and cramps. My real body asserted its presence as a response to the virtual image which had come to dominate my movement while performing. The invisible elements of my body began to take on a new, demanding significance, as if needing to assert themselves to balance the scale. Digestion does not appear on the screen. Admittedly it does not appear through flesh, but it is even less present in a context where the body has lost its three-dimensionality. The more I ventured into the visual, virtual world the more my non-virtual body called attention to itself like an anchor, like ballast. I seemed to be pulled between the two extremes of an imaginary spectrum: the abjection of flesh and the sanitization of technology.

**SEX & VIOLENCE**

Someone took out a knife. Not in a threatening way, yet I felt the predictable shiver and set of alarm bells in my mind. The most he could do was slash the duvet, but I still felt uncomfortable. The knife is a loaded item, it entered the virtual space of *Telematic Dreaming* as a heavily inscribed object, meaning that it could not be separated from a code of behaviours and a set of emotional and physical responses, particularly since the knife wielder was a man and I was a woman on a bed.

Someone elbowed me hard in the stomach and I doubled over, wondering why since I didn't actually feel it. But I felt something. I was shaken for a while; it was a betrayal of trust. The famous claim associated with virtual technology is that the body is futile, replaced by an infinitely enhanced electronic construct. If this is so, then why did nastiness or violence enacted upon my image hurt? How could the body be futile yet still exert a basic visceral control over my movement?

The potential for violent as well as highly pleasurable interchanges was inherent to *Telematic Dreaming*. Frequently I allowed myself to play, and at times I luxuriated in the physical intimacy and sheer decadence of it all. After a tender and intimate quarter of an hour of improvised movement, a man returned with a rose. He presented it to me in virtual space so there was no way I could take hold of it, beyond tracing its outline or passing my hand through it. It became a metaphor, and fundamentally immaterial. It occurred to me that what preserves the distinction between materiality and immateriality in the technology is movement: as moving beings people take on an alternative materiality, while objects become immaterial in their inertia.

An unlikely character dressed in blue and green, wearing philosopher's glasses calmly stroked my thigh, brushed delicately over my hips and up my torso. He remained partly detached, or at least quizzical, and his movements were languid but not overtly sexual. I felt little electric shocks pass through my body as I accepted the caresses. Not five minutes after this, I experienced the worst cyber-sexual violence of the entire time. Two men in leather jackets jumped my image on the bed. One attacked my head and the other my pelvic area. After three or four body twisting blows they fled. It was a back alley scenario. What did I feel? Very little. This amazed me, after my body had felt so much in the subtly erotic context and through earlier acts of aggression. I believe that the extreme violence of the attack caused me to separate my physical self from my virtual self. A split-second after they began to hit me I found myself watching my image in the video monitor, paralysed with horror at what they were doing to the woman's body - no longer *my* body. This was the only moment in the entire four weeks when I divorced my two selves, and it was the result of an involuntary act of self preservation - a primordial reaction in a sophisticated technological context.

The virtual sex I experienced was based on the energy, intimacy and rhythm of lovemaking: a tender beginning, playfully building up, making shapes with our bodies, improvised rolling through one another - a different sort of interiority at play - followed by a slow and intimate denouement. I was so involved in the flow of improvised movement that it was only once the cycle drew to a close that I recognised it. It was not a substitute for sex, it was a mimetic version with strong physical and emotional qualities. It was a variation or extension rather than a technological replica. Moreover, it was undeniably real, not a compromise. As with the question concerning the reality of theatre, that of the reality of virtual experience becomes spurious, with no adequate grounds upon which to test it. In some respects, the advancement of virtual technology will help to render the claim that theatre is an artificial reproduction of reality even more non-sensical. The designations between the virtual and the real in our media-soaked world become blurred. It becomes more and more difficult to sustain a clear distinction between truth and falsity when the phenomenology, or direct experience, of technology is taken into account; when, according to Marshall McLuhan, the contours of our own extended bodies are found in our technologies.**2**

My virtual lover visited me several times. The times we met in person were wooden, stilted, since our preferred mode of interaction was virtual intimacy, not chatting over a cup of coffee in a crowded gallery. Although both contexts were real, our virtual relationship seemed to be more meaningful. The difference between our ages and cultures lost significance, but *not* because our bodies were digitalised and abandoned. It was just the opposite. Our virtual rapport had a greater physicality and intimacy than our real engagement.

**THE BODY ELECTRIC**

As a dancer, hearing anyone claim that virtual technology demonstrates the futility of the body makes me want to dig my heels in, theoretically and practically. Yet this is a commonly held belief, based on the recognition that in much of the technology consciousness is drawn out of the body and into an electronic construct. Yet for me the experience was one of extending my body, not losing or substituting it. My intuitive conviction that the virtual body is entwined with the fleshly body was reinforced by my experiences of intimacy and violence in *Telematic Dreaming*. I discovered a theoretical basis for this intuition in the debate between *intelligence amplification and* artificial intelligence.

Frederick Brooks, one of the most prominent virtual reality researchers in America makes this distinction, insisting that intelligence amplification (IA) is more interesting than artificial intelligence (AI). AI refers to a field of research which seeks to replace the human mind by machines. IA is different since it aims to build systems which amplify the human mind by providing it with computer-based auxiliaries to do the things that it has trouble doing (like enormous sums), thereby freeing it to scale new heights at more creative tasks.**3** Translated into the debate concerning virtual technology and the body, an AI approach substitutes the body with a digitalised one, or sees it as a hindrance and tries to lose it entirely. IA, on the other hand sees technology as an extension of the body's existing abilities, a building upon what exists, rather than a digital replacement.

In *Telematic Dreaming* my body was always the ultimate ground for the image, it was the final reference point and the source of meaning. Like the difference between three-dimensionality and four-dimensionality, the image provided my body with another dimension rather than rendering it obsolete. Initially I was disoriented in virtual space: left became right, up became down and right left. Someone would touch one hand and I would move the other in response. My disorientation was a symptom of how moving was entirely mediated by my sense of sight. The way I overcame this was by drawing my attention back to the pattern of my body in physical space. Instead of moving my arm according to the logic of our images in the monitor, I would look at my body and move the hand on the side of the bent knee, or I would move my arm up towards my head. Once I directed myself according to my body pattern I was able to overcome disorientation and avoid shattering an intense sequence of improvisation by moving the wrong limb. In this sense my electric body was an extension of my physical body, it could do things which the latter could not, such as map itself onto another or disappear, yet it could not exist independently.

Still, the virtual space of *Telematic Dreaming* was not an unqualified amplification of physical space, for in it movement was entirely mediated by sight. Under normal circumstances, dancing engages the senses in a non-hierarchical and kaleidoscopic way. Sight, hearing and touch play obvious roles, taste and smell, although less obviously defined, are still active participants in the whole experience. *Removing one of these senses does not bring the movement to a grinding halt.* However, if I lost sight of the monitors (as happened occasionally since there were only three, leaving one side of the bed blind), I lost myself as well as the other person: interaction became impossible. When interaction is dependent upon one sense, it becomes inherently fragile.

And the gaze *is* fragile, like chrystalline channels between people conveying emotions or information. There were times when I would become only gaze and movement, making shapes with my body on the bed while taking no notice of anything except the figures in the monitors. Then without warning the flesh of my body would reassert its presence, recalling my focus from its temporary engagement four feet from my natural frontier within space. On one occasion, while thoroughly absorbed in interaction with another body I passed my hand over someone's leg, he placed his hand on my leg, when I followed his hand I touched my own leg - and was taken aback by its bulk. For an instant I didn't know what obstacle my hand had encountered after moving so freely in visual space. With vague feelings of guilt I realised that this foreign body was in fact my own! When I momentarily experienced my own body through my sense of touch it did not coincide with my body according to my sense of sight. The disorientation made me reassess what I took to be the frontier of my own body. Could it still be called a frontier if it was no longer fixed, but highly flexible and constantly changing?

The ability to disappear is central to the experience of the body electric. According to media philosopher Mark Taylor, the "power of erasure" reaches near perfection with computers, and the way the presence of a person or a text can be transformed into seamless absence is fundamentally unsettling.**4** I could disappear by wrapping myself in the chroma-key sheet which covered the bed or by sliding off the bed and out of the line of the video camera. I could also make a part of my body disappear in order to leave another bit, like a foot, floating in digitalised space. This now-you-see-me-now-you-don't quality is central to the physicality of *Telematic Dreaming* since it implies a departure from and a return to the body as a whole. The unsettling quality is not merely, as Taylor suggests, the erasure of substance, but its reappearance.

Telepresence has been called an out-of-body experience, yet what intrigues me is the return to the body which is implied by any voyage beyond it. Once plunged back into flesh, what has changed? Theorists and artists such as Randall Walser and Myron Krueger who claim that virtual technology changes what it means to be human, that it radically alters human perception, are not simply referring to the voyage out, but the inevitable return and the lasting effect that the outward motion leaves on the reunited body. It is here that the political dimension of VR resides.

**SEXUAL INSCRIPTION**

There is much hype in intellectual circles over the cyber-feminist claim that virtual technology is ultimately liberating because in cyberspace you can leave your age, sex and race behind and interact in a disembodied space, or in a space where you select another body as a persona. This was not my experience. There were times when I was dismayed by how strong cultural influences seemed to be, by how my actions as well as those of the people who moved with me were so shaped by codes of sexual and social interaction. I felt that this was the great limitation of the piece - the fact that it took place on a bed meant that much of the engagement was predefined. Yet, I came to realise that this was also its great strength.

Banal sexual responses, such as grabbing and poking, were not open to a new vocabulary of movement since they fell into a sort of automatic code of behaviour. And they were basically very boring. Sometimes I wanted to get rid of the bed, to see how the technology would work in a physical context which was not immediately recognisable so that a new social and movement vocabulary could be created. I had visions of a strange sculptural set in which bodies could be suspended, inverted and layered. But I realise that in order to create a new space, and a new movement and cultural vocabulary, the old one needs to be fully identified and understood, not simply sidestepped. By confining the interaction to the bed, Sermon challenged visitors (and myself) to identify their cultural formation and to overcome it.

Virtual space is not a blissfully undetermined area, an easy answer to sexual and racial inequality, an effortless digital utopia. By recognising that gender roles can filter through to cyberspace, we are put on our guard against expecting any simplistic technological solutions to entrenched chauvinism. Yet it is undeniably an opening of potential: a space for us to recognise the tendency for our prejudices and conditioning to be carried forward, and to work at creating a new way to interrelate. In this sense *Telematic Dreaming* created a social and cultural space as well as a virtual one, and as we decided through our movement how to chart it, we became spacemakers.

**WHERE AESTHETICS AND POLITICS COINCIDE**

*Thus the spacemaker can never hope to communicate a particular reality, but only to set up opportunities for certain kinds of realities to emerge. The filmmaker says, "Look, I'll show you." The spacemaker says, "Here, I'll help you discover."*     Randall Walser

The aesthetic concern which animated my movement was the creation of shapes with bodies, where the bodies had varying degrees of physicality depending on the perspective adopted. For the people in their room I was an image and they were flesh; the monitors which showed the action in both rooms transformed them into images and me into the image of a projection; from my perspective if I decided to ignore the monitors I was flesh and my dance partners simply did not exist. These varying physical states swirled and danced while we did the same. From a formal, choreographic perspective the piece was a delight, as unexpected shapes made by our bodies appeared on the screen, challenging existing ideas of what it was possible for two bodies to do. We could pass through one another, I could be projected onto the other, or even disappear by placing my body within the frontier of another body. If the other wore dark clothing my pale, spectral image would be swallowed up until I let an arm or a sliver of my profile slide off their shape. It was easy to become a goddess of many arms, or to use the frame of the projection to act as a guillotine and slice away sections of our bodies. Standing on the bed brought us closer to the fixed overhead cameras, making our heads huge balloons above tiny feet. Our bodies seemed to be infinitely mutable, while they never ceased to be *our* bodies.

The collaboration between dance and technology is a new art form, or at least a hybrid made by uniting different ways of spacemaking. If dance is able to play a role in the future development of VR technology we could end up with radical new directions for materiality within virtuality, as well as the basis for a poetics of virtuality that centers on the dancing body.

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**NOTES**

1. Howard Rheingold, *Virtual Reality* (1991), p.347.

2. Marshall McLuhan. *Understanding Media* (1964), pp.6-7.

3. Rheingold, p.37.

4. Mark Taylor & Esa Saarinen. *Imagologies* (1994), telewriting:11.

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