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Citation for published version

Wood, Aylish (2004) The Metaphysical Fabric that Binds Us': Proprioceptive Coherence and Performative Space in Minority Report. New Review of Film and Television Studies, 2 (1). pp. 1-18. ISSN 1740-0309.

DOI

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Document Version

UNSPECIFIED

New Review of Film and Television Studies

'THE METAPHYSICAL FABRIC THAT BINDS US'

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Published online: 12 Oct 2011.

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Aylish Wood

'THE METAPHYSICAL FABRIC THAT BINDS US'

Proprioceptive coherence and performative space in *Minority Report*

Minority Report *is in many ways a typical detective thriller wrapped up in a science-fiction setting. The science-fiction elements are evident in the futuristic architecture mixed with the more recognisable town houses and apartment blocks, as well as the technologies of travel, entertainment and crime detection. The detective thriller elements reside in the figure of John Anderton who discovers corruption at the heart of the force he has made his life. The two genres merge most effectively, and visibly, in the depiction of detection technologies whose powerful effect is displayed in the opening minutes of the film. By the year 2054 it has become possible to predict murders, and a Pre-Crime Unit exists with the sole purpose of preventing murder. The display of futuristic technology is interesting not only because of how the filmmakers behind* Minority Report *foresee an extension of surveillance culture, but also because the depiction of these technologies suggests innovative interactions between performance, actors and space. In order to address this I develop an argument introducing the ideas of performative space and proprioception, as these allow a means of articulating the distinct spatial arrangements of* Minority Report.

In this paper I examine the spaces constructed either by set design and/or special effects, and consider how these establish elements that contribute to an understanding of a film's story. In the first section I work with space as an element that depicts aspects of the narrative more obviously associated with the actions of characters. For instance, operations of power, and their breakdown, while primarily played out through the characters of *Minority Report*—John Anderton, Agatha, Danny Witwer and Lamar Burgess—are also visible in the film's spatial constructions. These spatial organisations, created

through set design and effects, establish locations and networks of power. Richard Maltby's (2003) formulation of space as both representing and expressive is useful here. The architecture, based on both building spaces and the technological interfaces of the Pre-Crime Unit, represents the futuristic world of *Minority Report*; at the same time, it also expresses the otherwise hidden dimensions of the Pre-Crime System.

The two hidden organisational structures that interest me are the relationship between the rudimentary elements of any criminal investigation—information and its material base—and the separation of subjective and objective experiences of the precognitive images on which the process of detection relies. That is, the precognitive beings or 'pattern recognition filters', are able to act only as receivers of the images; perception is left to the detectives. The distance associated with the act of perception is inscribed in the architecture of the Pre-Crime building and its technological interfaces. In discussing interactions between architecture and digital design, Peter Lunenfeld (2000) uses the terms 'hardscape' and 'imagescape'. I use a derivation of these terms: the physical and technological devices form an architectural hardware, while the images create another construction, the imageware: mutable images overlaid on stable structures. While the hardware of the Pre-Crime Unit creates one spatial structure, the imageware extends beyond the physical locations and technological interfaces, into a relationship between the pre-cog images. The breakdown of this relationship is the essential secret of *Minority Report*, as the pre-visions are only credible because they support each other as pieces of information: each one is reinforced by two others establishing a topographical stability on which the illusion of the authority of the Pre-Crime System rests.

In the latter part of this paper I move on to discuss a more innovative use of space within *Minority Report*. Strictly speaking, space is not quite the right word here, as the innovation emerges in the interplay between actor, space and digital effects. In the absence of any other alternative I will use performative space or performative unit to designate what I mean (I provide a full explanation later in the paper). Digital effects in many ways pervade the visual and aural dimensions of *Minority Report*, from the creation of a futuristic area of Washington, DC, the mag-lev highway, and police transports, to the more intimate moments of family album holographic playback. Mostly, such digital effects do not create a different kind of space, as they are digital versions of the possibilities long offered by optical effects—set extension, additions of backgrounds and straightforward composting of human and model elements. By contrast, the detection wall at which the detectives manipulate the image, though again created through compositing, establishes a distinct kind of space: a space where an actor appears to interact with a responsive spatial construction. This kind of interactive space approximates the already familiar entities of virtual environments that are emerging in

several different forms. Currently, text-based multi-user locations (MUDS and MOOS), online games, and immersive environments are the sites of extensive research and development. The detecting wall of *Minority Report* comes close to being an interactive environment as the detective, using digital gloves, interacts with the images as they scroll across the curved wall of the screen. With all their attention directed towards the images, they manipulate and expose the details of violent actions, taking control and unlocking the secret of the time and place of the crime. As a demonstration of the process of detection, the interaction between detective and detection wall is a powerful visual motif, representing and expressing the illusion of control. In addition to being representative and expressive, however, the interaction is a *performative* one. That is, the interplay between actor and effects creates a distinctive element within the visual language of *Minority Report*.

Control and command

Like many detective thrillers before it, *Minority Report* relies on establishing a relationship between information and materiality, where clues are information and a crime its materiality. In the story-world of *Minority Report* the additional factor of 'pre-cognitive beings, or pre-cogs' is thrown into the mix. These beings are humans with a mutation allowing them to see images of murders from the future; they are the material source of all the information about murder. The architectures of the building and the technology of the Pre-Crime System make the connection between information and materiality a major site of anxiety and power within the narrative of *Minority Report*. Indeed, solving the puzzle of the multiple topologies of the Pre-Crime System in the end yields the solution to the crime of which the hero of the film will be accused.

In a discussion of virtuality N. Katherine Hayles (1999) comments that the materiality of information is increasingly set aside. Referring to information technologies developed since the Second World War she argues:

> The efficacy of information depends on a highly articulated material base. Without such a base, from rapid transportation systems to fiber-optics cables, information becomes much more marginal in its ability to affect outcomes in the material world. Ironically, once this base is in place, the perceived primacy of information over materiality obscures the importance of the very infrastructure that makes information valuable.
>
> (Hayles 1999, p. 72)

While Hayles is drawing on debates specific to information technologies, her comments are relevant to the technologies of *Minority Report*. The information required to prevent the crimes of murder are relayed from the mutant

humans, the precognitives, whose brains act as receivers for the images. Once transmitted to the Pre-Crime detectives, the information is interpreted, reconfiguring it from fragments of partial actions to something of value. The process of interpretation, whose technological interface deflects attention away from the material infrastructure on which the validity of the information relies, privileges instead the actions of the detective as the primary site of power.

The opening of *Minority Report* depicts the reconfiguration of fragmented chaotic clues to valuable information by the detectives, with the revelation of the material basis only emerging later in the film once its integrity begins to crumble. Following an abbreviated credit sequence, viewers are confronted with a blurry image that resolves into a kissing heterosexual couple, and subsequent images depict the murder of that couple.[1] Each image is a fragment, chronologically and spatially discontinuous, sometimes moving in reverse.[2] These excerpts of a murder give way to images of the Pre-Crime Department. Here the a-chronological progression of the fragments is displaced as the detectives approach their task of sorting through the images. To add to the splitting of time and space, a third set of images merges with those of the murder and the Pre-Crime Unit. These establish a doubled time of present and future by splitting the single location of a family home into two separate space-times. The two space-times are clear from their distinct expressive visual and aural composition. One set, those of a future murder, consist of chronologically disordered flashes of partial actions, disorganised through angular framing and rapid cuts, as well as the violent acts depicted within them. Like much of the imagery in the film as a whole, the colour is desaturated. The images of the space-time of the present are distinct from those of the future, organised with conventional linearity and framing. Despite the superficial calmness of getting a child his breakfast, these scenes are also full of tension. The parents circle each other, the husband suspicious and the wife evasive; the tonal quality adds to the dissonance since it is unnaturally bright, as though there were too much light for an otherwise overcast day.

Though the spatio-temporal relationship between the two sets of images may initially be unclear, once the detective, Anderton, steps up to the wall of images, controlling the flow of information, and contextualising it through discussions with his colleagues, the ambiguity is edited out. This orchestration of the images is embodied in an exaggerated mode of performance. When Anderton steps up to the images on the rising notes of Franz Schubert's *Unfinished Symphony* (No. 8), he stands looking at the images with legs apart, hands behind back, before slowly reaching his arms shoulder height to interrupt the flow with his interactive data gloves. By pulling together the fragments of the images, and excavating details of the time and place of the murder, the detective reconfigures them into meaningful information, and

the value of this process is reinforced by the Pre-Crime Unit's subsequent actions in preventing the crime. Though this sequence of events solidifies the relationship between the information about the crime and the materiality of the actual 'crime'—the still living potential victims and the assumed murderer—it glosses over the material base on which the information is secured, allowing a circularity to take over. Given the assumption of an unassailable truth claim for the process, the apparently successful actions of the detectives confirm its reliability.[3]

The circularity of the process of detection depicted in the opening minutes of *Minority Report* not only reveals how Pre-Crime's detectives are able to control and manipulate the image as they reconfigure fragments into information, but also the architecture of the Pre-Crime Unit. The architectural organisation in turn reveals a separation entwined around the opposition of subjective vs. objective experiences of the images. The pre-cogs, unable to surface beyond the flow of images, take up an extreme subjective position, while the detectives, distanced through the spatial organisation of architecture and technology, take a more objective, and therefore empowered, position. Exposing the illusion of this separation lies at the heart of *Minority Report*.

Space and the architectures of Pre-Crime

At first sight the Pre-Crime Department appears to be an open and transparent space. The designer of the Pre-Crime office, Alex McDowell, created a spiral set built with glass and glossy black surfaces, in which the lighting gives the impression of bright sunlight streaming in through the windows, catching on chrome fittings and remaining unimpeded by the clear dividing walls and units of the office space. This brightness is exaggerated by the high contrast of the images, and the desaturated tonal range merely extends towards the sober greys and blacks of the costumes. According to cinematographer Janusz Kaminski, the desaturation of the images was achieved using Technicolor's bleach bypass, a process that:

> pulled about 40 percent of the colour out of the image, but we worked to get that back in by adding more colour to the lights. Overall, the image has a bleached out quality with deep shadows and blown highlights.
> (Kaminski quoted in Holben 2002, p. 35)

Bleach bypass is a laboratory stage manipulation of exposed film involving missing out the bleaching step to which colour negatives are normally subjected. Following exposure colour film is initially processed to produce black and white images on each of the three colour layers, with areas of darkness formed by clusters of silver. Colour developers are added which

then link dyes in the areas containing a silver image, and this image is subsequently bleached out. In bleach bypass, the step of bleaching out the image is omitted so that the final product combines colour and black and white.

Cinematographer Kaminski had used Technicolor ENR silver retention techniques on his previous films, which include *Amistad*, *Saving Private Ryan* and *A.I. Artificial Intelligence*, but opted for bleach bypass in *Minority Report*. Though the latter process allows for a less fine control over the extent of silver retention and hence the manipulation of the images, the process suited the look required by Kaminski and director Steven Spielberg. The effects achieved using bleach bypass were augmented by the camera and film stock. The Primo lenses on the Panavision Super 35 cameras produced an image in which the 'highlights got slightly brighter, the shadows got slightly harder and colours got slightly more pastel-ish' (Kaminski quoted in Holben 2002, p. 35). Furthermore, Fuji Super-F 500T 8572 film stock, one of several kinds used to shoot the film, contains a higher density of silver that works especially well with bleach bypass. The combined effect of camera lens, film stock and laboratory manipulation reduces colour saturation, achieves a heightening of contrast, and makes skin tones colder. The overall effect of these techniques in shooting the Pre-Crime offices was to create images in which the only hint of colour is in the brown and pink flesh tones of the actors, as well as the blue green of the pool inhabited by the pre-cogs. The contrasts created between these desaturated colours and the harder shadows of the office space create an impression of clearness that fits the openness of the Pre-Crime spaces. Their apparent transparency is emphasised further through the architectural and technological intersections between the pre-cogs and the detectives establishing both the hardware and the imageware of their appearances.

The architectural and technological hardware of the Pre-Crime Unit creates the frame through which the process of detection takes on its appearance of objectivity. Taking objectivity to be understood as the means by which an observer impartially accesses what is before them, architecture and technology impart the Pre-Crime detectives with a literal objectivity. In doing so they further dislocate the connection between information and its materiality, an effect most apparent in the imageware of the wall of moving images. The architecture of the Pre-Crime Unit relies on a physical interface separating the environment of the pre-cogs from the world of more ordinary humans. The interface distinguishes between immersion and interactivity: the literal immersion of the pre-cogs, and the technological interactivity of the detectives. Like the slash apparently dividing an opposing pair of terms, the interface establishes distinct locations for objective and subjective ways of being. And just as the slash has come to be understood as holding apart

mutually informing terms, rather than ones of absolute difference, the interface will eventually collapse to reveal the permeability of the locations.

The subjective construction of the space initially inhabited by the pre-cogs relies on their status as receivers of images rather than perceivers of their meaning. The images appearing in this immersive environment, unlike those of virtual environments constructed through programming, are not technologically constructed. Instead, they are 'transmitted' via a strange mutation in children born to women addicted to the designer drug of the era. These images are of things to come, intercepted on the antennae of the pre-cognitive minds. As *pre*-cognitives, the three inhabitants of the place—Art, Dash and Agatha—are apparently unable to make sense of the images invading their brains. Instead, they remain reactive receivers, sensitive to the violence of the murders, but merely conduits for the information. Without the ability to reach towards a perception of their visions, these individuals remain trapped in an extreme state of subjectivity.

As well as being caught in an extreme state of subjectivity, the pre-cogs are subjects embedded within the structure of the Pre-Crime Unit. The technological subjection endured by Art, Dash and Agatha is not only an indirect consequence of their mutation, but also through their wired state within the architecture of the Pre-Crime Unit. To avoid being 'contaminated' the pre-cogs are kept apart from all humans except their minder, and inhabit a low-level cave-like space immersed in a drug-induced stupor between sleep and wakefulness. The pale almost translucent body sheath costume adds to their vulnerable status. In a curious futuristic twist to the story of Plato's cave, as the three pre-cogs lie prone, their pre-visions appear on screens on the ceiling of their domain. But unlike the viewer's of Plato's cave whose perception of the images were merely of shadows of perfect forms, the pre-cogs themselves lead shadow existences. The images remain meaningless to the receivers since the power to make sense, to embed them in a narrative of actions and outcomes, lies outside of the cave. The ability to give meaning to the images is a pivotal site through which control is exerted in *Minority Report*, and it lies on the apparently objective side of the interface.

The hardware of the detecting wall interface ensures that the detectives literally have a distanced and objective experience of the visions. The control over the image associated with this architectural framing is intensified by the construction of the technological interface as an imageware wall through which the Pre-Crime officers interpret the recorded and transmitted images. Instead of being reactive to the ebb and flow of each violent action, the detective's interaction is limited to manipulating them to expose information already there. The detective plays the role of an image archaeologist who, reaching into the future instead of the past, is meant only to excavate what is present. The images respond to the detective only in so far as they react to operational commands such as zoom, reverse, rotate, etc. The distance of this

interaction is also evident in the holographic playback technologies. Anderton's holographic system projects images into the space of his home, his dead son running, his estranged wife playful before sex, but these figures are excised from the context of their location. As such they occupy a liminal space, neither within their originary locations, nor wholly transported into Anderton's space, and remain unable to interact with Anderton, who can only watch nostalgically as he rehearses his dialogues with the two figures.[4]

The architectural organisation of space and the technological interface create a mapping in which the depth of the relationship between the information of the pre-cog visions and their materiality is flattened once it is configured as readable and transparent. But contrary to this image of transparency are the hidden topologies of the Pre-Crime System. The architecture of the Pre-Crime System is not only determined by physical or technological spaces, it is also dependent on the topological relationship between the pre-cog pre-visions. Although the visual iconography of the manipulable wall of images, and the spatial separation of the objective and subjective experiences of the pre-visions suggests that the reliability of the images rests in the architectural and technological organisations of space, this is only an edifice. The material foundations of the Pre-Crime Unit instead depend absolutely on the exact triangulation of the pre-cogs' visions, as the ability of the detectives to give meaning would have no substance if the images themselves were not consistent. The ability to record and compare between the images is a cornerstone of the Pre-Crime facility, and only a triangulation of their images can act as the guarantor of the authenticity of the images. Without a matching third, the two other images become unstable, making it impossible to trust what you can see. Given *Minority Report*'s referencing of *film noir*, the need to look beyond the surface of things is not surprising, but it extends beyond conventional clues to the crime to the organisation of images, revealing the fragile integrity of the system. A consequence of this fragility is a reconfiguration of the openness and transparency of the system into one of obscurity. This requires an inversion of the apparent transparency initially established across the opening minutes of *Minority Report* in the transition from a series of loosely connected images to the prevention of a crime. Though to all intents and purposes invisible, the triangulated topology anchors both the actions and assumptions of the Pre-Crime Unit. The crimes are taken to be fact, even if they have not yet occurred, and the ability of the detectives to solve the puzzle is taken for granted. It is significant that the only site within the Pre-Crime System where the three separate images can be accessed and compared is deep inside the containment facility where few people go. This space, extended by digital effects into a vast array of bodies clipped into vertically sliding holders that rise out of the ground, not only houses the bodies of the pre-criminals, but

also the suppressed uncertainty that will destabilise the presumption of an absolute agreement of the triangulated topology of the pre-visions.

Space and performance

The architectural and technological organisations of *Minority Report* reveal the control exerted in making information visible. They both represent and express the dimensions of power on which the Pre-Crime System subsists. The role of digital effects in generating these spaces varies between the different sets: the detecting wall relies on digitally manipulated image sequences; the Department of Containment is extended via effects. In the latter case, the effects work to give the impression of the expansiveness of the containment facility. In the former, the effects create the location of the detection wall, but through their apparent interactivity push these spatial components from being representative and expressive into also being performative. That is, a part of their role within *Minority Report* is to 'enact' both the stability and subsequently the collapse of the topological structure of the Pre-Crime System. This role is evident in two scenes, the opening sequence and the revelation that Anderton will apparently murder someone.

The instability and lack of certainty central to the narrative's progression in *Minority Report* is not only established through human actions, but also through the intersection of the human figures and the digital interface. As I have already argued, the detective–image interface is central to Pre-Crime detection, not only in establishing the transparency of the unsorted images, but also in establishing the objective control central to both the figure of the detective and the technology of the system. The images of a murder replayed and orchestrated by the detective serves the function of demonstrating the abilities of a detective to 'scrub the image', but the mobility of the images as snatches of actions, the movement of their manipulation on the Perspex 'wall' of the interface, also shifts them out of being simply images looked at by a detective. Instead, the mobility of the images and the movements of the detective combine into a single 'performative unit'.

By performative unit I mean that the moving images of the detecting wall and the gestural actions of the detective *together* establish a site of performance. I am not suggesting that the detective's gestures or the movement of the images has no meaning on its own, but that the performative unit is more than the sum of its parts. The combination of the two is a synthesis. To explain this fully: through the opening sequence of *Minority Report* viewers first encounter the technology of 2054. The plastic boxes of computers and plasma or tube-screens familiar from the late twentieth and early twenty-first century have given way to clear Perspex curves and flat screens on which the image is visible from either side. Within

the dimensional or static space of the detection chamber, camera movements and editing frequently place a screen between camera and actor, or the actor between screen and camera. Whichever way, the final effect is of three layers of image: parts of the room, the detective manipulating the image, and the images themselves; on occasion this expands further into five layers to include two human figures and two sets of images. The layering in part relies on a depth of focus that allows even the grain of the background panelling to be visible, but also in the demarcation provided by the physical presence of the Perspex screens across which the flow of images scroll. As the camera moves, or there are cuts within the space of action, the different perspectives give the images substance as multiple layers, which emphasises further the extensiveness of the detective's control. Layered space is not the only visual effect produced in the pre-vision sequences, as equally important is the degree of their mobility. The flat fragments of images scroll horizontally across the curved screen as multiple foci of action, and they are rewound, fast-forwarded, separated, zoomed in on, rotated, enlarged, and so on, until they give up their information about the location and time of the crime yet to occur. Under the orchestration of the detective, who takes his place in front of the screen to dimmed lights and music, surface and depth are revealed with equal effect. As a description each element of the set can be taken alone: the static base and the structures inside it; the addition of the digital scrolling images; the presence of the actor; the movement of the camera and the editing. But as a performative unit the individual components are inseparable.

The question remains: why call this performative? Why not a representative or expressive unit? As a generality, units are formed by any combination of actor, set design, effects (including lighting and sound), costume, camera movements and editing. How they function, however, depends on the way each element is used. In limiting this discussion to questions of space, I again draw on Maltby's doubled articulation of space as represented and expressive, and like any film *Minority Report* includes this doubled usage. The architecture discussed earlier is such an example, as is the alley-scene, which includes the represented space of an alley (the upper storeys of which are digital additions to the built set), plus the expressivity of a narrow, trash strewn darkened space where he might be captured. It is probably true to say that, within a film, space always represents, but also that it is expressive to lesser or greater degrees. Across different cinemas there are many films that have especially heightened expressive functions of space: from set designs and framing devices, to lighting effects, especially in *noir* and horror films. Equally, locations can be represented with little in the way of blandishments, only there as a minor detail in the background. Represented and expressive units, whether or not heightened for an affect, are not the same as the performative units of *Minority Report*.

The performative units created around the pre-vision sequences are more

than representative and expressive since there is a sense in which they perform a role within the narrative, if 'perform' is allowed to stand in a looser sense than is usual. By the word perform I do not mean a performance in same sense of the skills and interpretations an actor brings to a role. What I am attempting to address instead is how spatial elements take on a more 'active role' within the narrative through their intersection with an actor. To take this idea further, the detective and pre-visions intersect as a performative unit where the topological flattening from depth to surface, the exchange of mobility for stillness, operate as visual instances of control exerted over spatial dimensions. The idea of proprioception is useful here, as it introduces the self-awareness of bodies in three-dimensional space. In interacting with an environment individuals experience their location, both in the sense of their bodily orientation and their intersections with a place, through a combination of sensory inputs. In general terms these inputs arise from two kinds of receptors: exteroceptors and proprioceptors. Exteroceptors include eyes, ears, nose and touch, while proprioceptors include receptors in muscles, joints and the inner ear, all of which convey information about the movements of action, and so provide a sense of the position and orientation of an individual's body. The interaction between Anderton and the wall of images particularly exploits the latter. To make this clearer, I will compare *Minority Report* with an imagined, though very familiar and more conventional, scene of detectives going through crime scene photographs. There are several possibilities. The detectives may sift through the photos in their hands, or pin them on a board, moving them around, or adding physical markers of connections, such as drawn arrows. In manipulating the photographs the detectives perform their actions via perceptual activity focused on interpreting the content of the images, the process of touching and seeing the edges of photographs, as well as all the movements that both keep the body in position (seated, standing, slouching, etc.) and also create the purposive action of moving a particular image, or to drink some coffee. Proprioception is a part of this whole, ensuring the motor movements of the body perform the activities required.

In *Minority Report* the interaction of the detective with the images is distinct in that the haptic, or touch-based, dimension is absent. Therefore, controlling the movements of the body become allied to the sensory inputs of the eyes and proprioceptors, with sound an additional component. In manipulating the wall of images, the detective's body orientation, especially of the upper body and arms, extends to controlling the flow of the images, in the same way that someone using a tool extends the control of their body orientation to include its operation. Writing about this aspect of bodies interacting with their environment, James J. Gibson writes:

> The action sensitivity of the visual system *dominates* the action sensitivity of the muscular and articular systems, at least in manipulation and

locomotion. This is what happens when a tool is used in place of the hand itself of manipulating an object, as when grasping it with pliers instead of with the fingers, or striking it with a hammer instead of a fist. The felt action of muscles, joints and skin is then rather different, but the visible action is essentially the same and the visual system can easily control the motor output.

(Gibson 1968, p. 36)

The proprioceptive coherence of extending one's spatial sense of body into working with a tool described in the above quotation is also true for *Minority Report*. In interacting with the wall of images, the detective no longer touches the objects he/she manipulates, but the visual system dominates the positioning of and actions caused by the muscles and bones as they move in relation to the images, even though, unlike the example used in the citation above, the detective never actually touches the images. Though Gibson's writing is based on research carried out in the 1950s and 1960s, proprioception remains relevant in the context of virtual environments. For instance, researchers in virtual-environment interactions have attempted using proprioception to gain insights into the design of body-relative interactions (Mine *et al*. 1997). While this research aims to overcome the problems of operating in a virtual-visual space lacking haptic feedback, the idea of proprioception also addresses how an individual's sense of bodily boundary can extend into the spatial use of an object. Through the detectives' manipulations the purposive action not only sifts through the images, but also re-inscribes the boundaries of their objective power of authority from the domain of physical existence into the technologised virtual environment established by the pre-cog visions. Such an argument would be appropriate for any kind of interaction between a technology and humans. Driving a vehicle for example is another instance where a technology reconfigures the position and orientation of a human body, and requires the user to be certain of their extended boundaries. But what is distinctive about the proprioceptive coherence of the detecting wall is that it allies the conventional spatial extension of proprioception with a temporal one. Not only can the detective reach into the murky depths of the visions, but also into the future.

The addition of the temporal dimension establishes the interaction between actor and set as a performative one. Not because of its temporality per se, but because of how temporality functions in the film. In the performative unit the character and image elements coincide with, and act out, other elements of the narrative. Within the story-world of *Minority Report* the ability to carry out actions with effects on a predicted future is central. Most obviously this ability is performed when the Pre-Crime Unit acts to prevent a crime, or as the fragile predictability of the future is put into question when Anderton's or Burgess's actions are given alternative outcomes. The ability to reach into the future is also evident in the

performative unit of actor and detection wall, as it is in these images that the detective visibly works with elements of the future. Whereas an actor looking at an image or set of moving images would simply be an actor looking at images, in this instance the images' movements are part of the performative element of the scene. Within the confines of the individual fragments, the digitally manipulated blurry edges and ripples express the trauma of murder as an excision from the 'metaphysical fabric that binds us', but their orchestration by the detective performs the spatio-temporal extension of a proprioceptive pulling of the future into the present. The mutual movements of image and figure depict the process of accessing another space-time. The control of space and time is most compelling in the moment when the triple layers of rotational motion coalesce into one synchronised movement. Anderton, looking again at the opening images of the murder, uses the rotational control on the interface to impose his view on a scrolling set of images. The visual effect is a stacked layer of reinforcing action: the highlighted circle of the control key; the rotation embedded in the content of the original image; and the circular movement applied by Anderton (especially visible from the glowing tips of the data gloves). Taken together, Anderton's gestures and the movements of the images create a performative unit demonstrating the power of the Pre-Crime System. Another example emphasises the link between narrative and actions depicted within the performative unit. I have already briefly mentioned Anderton's holographic playback technology, which he uses to look at images from the past. But since the temporal twist of *Minority Report* only operates in one direction, to the future and not to the past, Anderton's inability to do anything more than stand staring confusedly at the image of his wife forms a marked contrast to his competence at the detection wall, and makes sense within the temporal conditions established by the narrative.

Impressive though it may be as a tool of detection, the apparently transparent spatio-temporal interplay between the detective and image establishes a view that will be rapidly destabilised within the story of the film. Like the drug that Anderton buys in the Sprawl, 'customary clarity' gives way to a 'new improved kind of clarity' when the illusion of control over the pre-visions shatters. As this occurs the images, instead of becoming clearer, are paradoxically more obscured once the existence of a minority report is revealed. As the loss of triangulation produces insecure and uncertain revelations, the images are reconfigured from flat and manipulable images, to ones that are themselves layered. The revelation that the flow is in fact a composite of *only* reinforcing data leads away from transparency towards obscurity, engendering questions of where to look, what is being seen, and how far back do these layers really go? Just as the 'third man' in the images of Anderton shooting Crow turns out to be a flat image suspended in mid-air at the moment of the event, and consequently in another depth layer of the

shot, accurately interpreting the images requires attention to depth as well as surface. In doing so, the fragile materiality of the information (the topology of the pre-cogs) is exposed, allowing the content of the pre-visions to be more sceptically examined, rather than taken to be true.

The sceptical examination begins with Agatha's shift from passive receiver of information to a figure attempting to communicate with Anderton. This occurs once the distance established by the architecture of the technology and the technological interface is breached when Danny Witwer demands access to the pre-cog domain. Confronted by Agatha's memory-vision Anderton begins the process that reveals the deceit at the heart of the topological integrity of the pre-visions. Once this process is underway the extent of the illusion of separation of the subjective and objective positions is also displayed. Burgess's attempts to ensure the system worked might have been for laudable reasons, but his murderous determination to make it happen has corrupted the system. The distance of the detective from the images of the crime contracts when Burgess's duplicity in murdering Agatha's mother is revealed. The system only stands on a hidden materiality, the erasure of mismatching pre-visions, which makes Pre-Crime information at best partial.

Though the revelation of Burgess's crime only happens in the ending of the film, the shifting delineation of spatial organisation it introduces occurs much earlier in *Minority Report* in another example of a performative unit. As before Anderton works the images, trying to find out information as on any other case, only to be shocked by the appearance of his own face on the screen. Visually and aurally this moment is distinct from others: the volume of the gunshot high and a marked splash of red amongst otherwise bleached imagery. Anderton's subsequent attempts to scrub the image are frantic, shoving aside the fragments leading up the murder, making for a chaos that he seems unable to control. As a performative unit, the interplay between actor and images accentuates the disintegrating poise of Anderton's orchestration. The music plays a part in this as well, as it reaches a crescendo when Anderton is confronted with a pre-vision of himself committing a murder.

The sequence is also distinctive in exaggerating a collapsing of image layers. Even in the opening sequence of *Minority Report*, when the camera is placed to give a medium frontal image of the detective behind the clear screen, there is a collapse of depth, but the images remain in lateral motion ensuring that detective and pre-visions remain separate. More particularly, the detective's distance and control over the images is clear. In the final part of the 'Anderton as murderer' sequence, the two images of Anderton coincide in a front view of both the screen and the actor. The coincidence of detective and pre-vision is established by a close framing on the shot and the partial overlap of both images of Anderton's face. The effect on space is a

performative one. In a deflated planar coincidence of actor and pre-vision, the visual effect seems to ask the question: to which plane does Anderton belong, that of detective or criminal? In addition, this deflation of space dissolves the interface that had held apart the objective and subjective positions. Not simply an example of the hunter becoming the hunted, Anderton is confronted with an image of himself that he does not know, and as such becomes the subject of his own search.

Although the answers to such questioning surface primarily in the character-based chase actions of *Minority Report*, performative units play a further part in depicting the gradual unravelling of Anderton's position of authority. In the world of 2054 surveillance technology has become pervasive with scanning technology fully incorporated into daily lives. Throughout the film, many shots include eyes being scanned as people move along corridors, enter buildings and transport systems. These eye-scans function as a tracking device, or eye-dents, for both the surveillance and commercial sectors. Anderton, as he attempts to run, is hailed by the advertisements, the breaking news on a digitally active newspaper and finally pinpointed in the metro by the police network. The literally speaking walls not only demonstrate the technological environment of 2054, they also create some of the tension in the beginning of the chase. Anderton is not followed by a law-enforcement officer, who at any moment might capture him, but his recognition by an electronic system exposes him in a crowd where we might otherwise expect him to hide. Again a distinction can be made between the representative and expressive spatial elements depicting the futuristic media and surveillance society and the performative ones. At a moment in *Minority Report* when Anderton is on the run, his tension mounting, the adverts are in one sense simply mobile segments of glamorous and glossy imagery, with pseudo-seductive and matey voices. The interplay between the spaces and the actor shifts them from representative and expressive modes toward one that is performative. As the adverts hail, or flash up his name, Anderton gets increasingly uneasy. The incongruity between Anderton's anxiety and the advert's automatic breeziness creates a space that is both slightly absurd yet also threatening.

Conclusion

Minority Report features the thrills of a chase story, combining science-fiction and thriller genre elements. While there are many things to be said about the manifestations of power through the characters, in this paper I have focused on how spatial organisations also function as indices of power. Deborah Thomas (2001) discusses how cinematic space generates meaning in American film, and mentions how architecture, in the sense of cityscapes or small town

environments adds layers to the interpretative possibilities of films, especially in *noir* films and Westerns. She also comments on how camera angles and lighting can frame actors within spaces in ways that emphasise their exclusion, entrapment, or freedom. In this sense, the disempowerment or empowerment of a character within a film can be read off the image. In *Minority Report* the architecture and the technological interfaces of the Pre-Crime System solidifies such ideas into physical construction. That is, they provide, in combination with the human elements, a distinct site for examining the connection between looking and seeing, the power to control meaning and how that power is embedded in the technological construction of the system. The hardware and imageware of the set and effects design extend such questions beyond only characters. While characters have formed an important focus in many approaches within cinema studies, especially around questions of identification, set and effects continue to produce an alternative point of engagement for film analysis.

In addition to these more familiar instances of spatial organisations, *Minority Report* includes spaces that are more active. Discussing such spaces, which are admittedly still relatively rare, allows a re-thinking of ideas about both space and performance. Throughout this paper I have worked with Maltby's doubled articulation of space as representative or expressive, extending this formulation to include a performative aspect. Norman Klein (2000) uses the term 'speaking space' to refer to animation, and it is tempting to mobilise this phrase for *Minority Report*, especially since numerous advertisements actively address an individual. Speaking space, however, places an emphasis on *only* space, and not on the individuals who provide another dimension through their interactions. In contrast, the idea of a performative unit relies on the combined role of space and actor, and the particular innovation of *Minority Report* is its use of digital technologies to create the imageware of the adverts and the mobile 'wall' of the detecting chamber. The digital work of compositing and manipulating the images is not in itself innovative, indeed generating the 'side' effects, or slices, on the holographic images was a far more complex process. Rather, the innovation emerges in how the digital images and actors were combined. While it would be presumptive to make statements about emerging effects in the cinema on the basis of a single film, it is at least possible to suggest that through the performative unit *Minority Report* introduces a distinct spatial construction.

Acknowledgement

Notes

1   The credit sequence first shows the 20th Century Fox and DreamWorks logos, then, in white lettering on a black background, the production company names of DreamWorks and Twentieth Century Fox, and finally the title, moving from this into the first image of the film. The film score begins with the production company names and continues through the title into the first set of images. Continuity is established across all of these by a ripple effect visible running through the white lettering and the logos. Just as the logo for Warner Brothers was tinged green for *The Matrix*, those for 20th Century Fox and DreamWorks are tinged grey for *Minority Report*.
2   The distortions of the pre-cog images were created at Imaginary Forces, a Los Angeles-based effects house.
3   Equally, the Pre-Crime Unit's capture of a man apparently in the act of committing a murder, confirms the reliability of the pre-cog visions.
4   Anderton's inability to produce a response from the holographs contrasts with the fully interactive virtual images briefly glimpsed during Rufus' discussion with a potential client at the CyberParlour. These more immersive experiences of technology are closer to that of the pre-cogs.

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