URBAN UTOPICS: THE POLITICS OF THE DIGITAL CITY VIEW

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INTRODUCTION

The proliferation of images in the contemporary information economy poses a unique problem for civic authorities whose job it is to control the image of the city. The politics underwriting both representational democracy and capitalism make it tactically difficult and economically inefficient to police image production. This means Foucault's model of a "vigilant architecture" has less traction than Georges Bataille's "convex, frontal, extrovert" architecture (Hollier, 1989, pp. 3-13). As such, any control of the city image requires a persuasive manipulation of digital imaging technologies. In this respect, the promotional Internet Protocol (IP) webcam image is one significant example of how the digital technologies of image production and dissemination mediate power and influence.

The institutional use of the promotional IP webcam instigates a distinctive urban condition. While Washington's 'L'Enfant Plan' (1791) is one of the most complete examples of an extroverted axial urbanism, its potency is based on the corporeal presence of the architecture and not its 'imageability'. Any subsequent image is subservient to this logic: the image is a formal after-effect. By contrast, the webcam functions through a disembodied aerial viewpoint. The digital technologies underpinning this view establish an image-based formal logic that sits outside established urban theories. The unique questions raised by the webcam are as much a representational issue as they are formal, meaning that their politics are best understood by interrogating how these images say what they say. Louis Marin's (1984) deconstruction of city maps is particularly relevant because their form and content tacitly expose the identity of the privileged subject sitting behind these 'portraits'. Methodologically, Marin's comparison of El Greco's 1609 'Painting of Toledo' with Merian's (1615) and Gomboust's (1647) Paris city maps demonstrates how the distinction between narrative and descriptive images can help identify the idealised subject of the 'utopic' IP webcam view. Moreover, an important extension of Marin's work suggests that any disruption in the transmission of the image can potentially alter the political operation of these emblematic, descriptive images. Therefore, the identification of the subject of the IP webcam image cannot be divorced from an understanding of the technological basis by which these digital images mediates form.

THE LIE OF THE TRUTHFUL IMAGE

For a discipline heavily reliant on images, architecture is both deeply suspicious of the semiotic reading of form and generally disdainful of the commercialization of its objects. The architectural image is given authenticity by the belief that even if the plan, paraline, diagram and perspective seduce the viewer, they nonetheless provide a true index of form. The reasons for this mistrust of the image is lost somewhere in the murky discursive ruptures separating Brunelleschi's 'invention' of perspective, Adolf Loo's criminalization of ornament, Debord's critique of the 'society of the spectacle', and the semiotic excessiveness of almost every postmodern architect. What can be said with some confidence is that in the contemporary context this murky history has resulted in pathologizing any form that has been figured according "…to a *prior* imaging" (Corner, 1999, p. 8).

The disciplinary rejection of the image as both procedurally and intellectually bankrupt comes at a price. This price is that the belief in the drawing as an index ignores the politics of the image, which in many ways is now the base currency of the information economy (Lyon, 2002). The believed authenticity of architecture's established representational modes effectively denies the propagandizing potential of all images. The net result of this denial of the image is that the discipline fails to adequately question the images it rejects or supports.

Of the handful of architects and urbanists willing to challenge the functioning of the image in the information economy, there are few willing to challenge the economic system driving its production. For example, prominent Australian architect Carey Lyon (2002) sees the marketed image as a formal template, while for Anna Klingmann, branding is an undeniable condition "in which architecture can play a critical role as a catalyst to generate an authentic identity for people and places" (2007). Both Lyon and Klingmann see the problem of the marketed image as a failure to offer communities palatable brands and images that ultimately accord with an externally constructed self-image. To the politics of the information economy, these types of solutions focus only on making built form deliver on the promises made by the image. The notion of a successful design becomes linked to being able to impart formal truth to the marketed image. It is here that the issue of authenticity returns, only to be resolved, yet again, by attaining some sort of formal fidelity between image and object. It is of some significance then that Klingmann and Lyon have no ambition to modify architecture's established representational forms or contest the economic basis of the information economy. Any capacity of the marketed image or branded architecture to form 'an interactive consumer experience' does not convincingly address Klingmann's own critique of contemporary architecture and urbanism that it "simultaneously represent[s] and support[s] the ideology of capitalism" (2007, p. 4). The larger political problem posed by such an acceptance of the marketed image is well summarized by James Corner when writing that imaged-based scenography "retard[s]…authentic public life" by not "confronting the problems of contemporary life" (1999, p. 158).

Corner's essay, *Eidetic Operations and New Landscapes*, attempts to resolve the politics of image production without resorting to the fabrication of truthful images. Obviously, the primary aim of his broad survey of alternative drawing practices is to move landscape design practice beyond the representational and formal limits of scenography. In this sense Corner agrees with the commonly held criticism that postmodern signification limits built form "to simply expressing or commenting on…[the human] condition" (1999, p. 158). What underscores his determination to differentiate between the picture and the image is the fact that it locates the drawing as the method by which to exceed the representational politics of the indexical picture. This advocacy of open drawing practices makes a great deal of sense in light of Robin Evans' canonical essay *Translations from Drawing to Architecture* (1997). In fact, Corner's thesis, that for the limits of drawing images to be exceeded one must actively embrace the mediating effects of the drawing on form, is completely aligned with that of Evans. Yet what Corner misses is Evans' observation that the act of translation inevitably privileges things of interest to the author. Corner's faith in an eidetic imagining does not necessarily enable a strategic engagement with the politics behind the image. This is not simply a problem wherein every drawing involves a selective and reductive extraction of information. The capacity of a drawing to be instrumental and representational does not alone mean that it is devoid of ideological projection. True agency is not guaranteed simply "by framing the issues differently" (1999). In the end, Corner wants drawings that are interpretively open and yet instrumentally authored. The belief that the eidetic drawing has a positive outcome also, in the end, idealizes the drawing space as a site of authentic action. Irrespective of Corner's advocacy for new drawing techniques, he too is unable to avoid the postmodern problem where the drawing inscribes a projected meaning of things into the world.

Corner's advocacy of the drawing is problematic for two important reasons. First, the valorization of the drawing aims to use techniques that are instrumentally disconnected from the explicit design task. The aim of the drawing is to produce creative slippages that circumvent authorship. Secondly, he does not ever question the belief in the anthropomorphic control over the technologies of production. The technique might create productive slippages, but ultimately the designer brings the drawing back under control. Nevertheless, architecture's societal agency always exceeds the intent behind the authored construction of mediated images. This point is inferred by Friedrich Kittler and Matthew Griffin when

they write in *The City is a Medium* that "no system...is self-governing" (1996). If Heidegger's (1977) anthropomorphism believes in the capacity of humanity to control the 'enframing' aspect of modern technology, then Kittler argues that it is technology that disciplines humanity. Moreover, technology's disciplining capacity actually operates without any immediate interest in humanity. If the city itself is outside its own control then any capacity for anthropomorphic control must be absolutely discarded. Herein lies the fundamental problem in Lyon's, Klingmann's and Corner's approach to the production of meaningful images. If Lyon and Klingmann overinvest in the message and not the medium, Corner overinvests in a medium divorced from addressing how the type of technologies and their operation shape the city. In a direct counter to Marshall McLuhan's (1995) oft-repeated mantra "the medium is the message", Kittler's radical post-humanism ensures that our relationship to technology is, at best, opportunistic and, at worst, parasitic. In this radical reframing of McLuhan's work Kittler actually suggests that the technologies constructing the city image create a city that is neither an assemblage of meaningful objects nor a product of authentic disciplinary drawings and techniques. Instead, agency involves an opportunistic manipulation of the mediating technologies that effectively construct the city portrait. Here, action involves intervening in the material and immaterial systems operating across the "complex knot of networks...[that] surpass the planning ability of the engineers" (Kittler, 1996). This ensures that the exploitation of the system is less a question of controlled effect but more a consequence of a range of somewhat indirect and unknowable affects.

In the chapter 'The City's Portrait in its Utopics', Louis Marin (1984) argues that the descriptive image "must totally reveal its object" (1984, p. 202). Developed "against the grain of narrative", description must conceal "its successive nature and present it as a redundant repetition, as if *all* were present at the same time" (1984, p. 202). According to this definition, the promotional city image fashioned through IP webcam systems results in a purely emblematic type of descriptive image. The obvious parallel between the IP webcam view and Merian (Figure 1) and Gomboust's (Figure 2) Paris maps being that they are all aerial images whose viewpoint is situated in what Marin (1984) terms as a 'utopic', nowhere space. Like the two Paris maps, the focus on iconic urban elements creates a visual hierarchy that is orchestrated to present an image that 'stands in for' the total experience of the whole city. So while the webcam can zoom and scan the selected view, this operability does not alter the visual staging of the city's image or the political function of that image.

Figure 1: Map of Paris by Matthäus Merian,1615.

Figure 2: Map of Paris Jacques Gomboust,1652.

The important differentiation between the IP webcam view and Merian and Gomboust's city portraits arises from the mode of production used to frame and disseminate the image. In fact the technical mediation of the digital image results in a fundamentally different type of 'utopic' subject. As implied in Marin's (1984) diagrammatic analysis of Merian's, Gomboust's and El Greco's city portraits, both the content and the drawing technique together establish different utopic subjects. The utopic subject in Marin's case studies alters through the unique way in which each combines narrative and descriptive forms of image and text. Using this approach, Marin concludes that Merian's framing of the central perspectival aerial view of Paris with pictorial images depicting daily life in city makes the city itself the utopic subject of the image. In contrast, Gomboust's framing of the city plan with a series of aerial views of the King's rural estates makes the King's Palace the utopic subject, (Marin 1984). El Greco's portrait of Toledo is different again. Using a range of painterly techniques and associated representational contrivances "El Greco points out the neutralizing work of the utopic practice within the representation of the city." (Marin 1984: 230) Clearly, all three city maps are intended for a limited audience. Like Giambattista Nolli's (1748) map of Rome, the expense of producing these maps guaranteed that these maps were produced for a limited audience. This limitation in the technologies behind image dissemination meant that the central mechanism in differentiating the utopic subject was more reliant on the selection and combination of available representational forms. By extension, it is reasonable to argue that the different representational techniques can be opportunistically co-opted to subvert or support the political agendas of those who sponsor the image. The beauty of El Greco's portrait is that he adapts the medium to expose how the map is always political.

The subject of the promotional webcam is different again because it is first and foremost a descriptive image whose success relies on it being widely distributed. By disposing with narrative, the emblematic quality of the IP webcam view clearly provides a city portrait that speaks directly to the image's civic sponsors. The utopic subject is not so much a place, but a branded representation of a valorized part of the city that speaks for the rest of the city beyond the camera frame. The virtual aspect of this viewpoint means that it also has a second viewpoint, that of the domestic environment of the virtual tourist. As soon as the utopic subject becomes a branded image, the civic authorities must permit the viewpoint to extend and bleed into multiple personal spaces. The extension of the view into these multiple spaces is risky, demonstrated by the facility to pan and zoom the camera. Unlike the Paris maps where the viewpoint is fixed, the viewpoint of the virtual tourist allows private individuals to

construct his or her own narrative journeys into the captured site. Thus, the camera's maneuverability relocates narrative within descriptive form. This important technological difference extends the webcam's 'utopic' subject to include both the idealized image of civic authorities *and* the adaptable view of the virtual tourist. By extension, the release of the webcam view into multiple domestic spaces institutes a new political agency whereby the virtual tourist can challenge the stability of the fixed 'utopic' subject through the capacity to disrupt the image's technical means of production.

The opportunities to disrupt the intended utopic subject of the IP Webcam image arise from the reality that the digital image is highly reproducible and easily disseminated. Unlike Merian's and Gomboust's maps of Paris, the potency of the webcam lies with the means of production. By contrast, the 'affordability' of the digital image foregrounds the pixel's capacity to layer and process highly specific qualitative data. The pixel, as the base unit of the contemporary image, ensures that color and contrast become the primary compositional elements of image making. The 'trick' of the pixel is that it appears to present the world according to the projective geometry of linear perspective. However, the discrete packaging of visual data in the pixel means that lines exist only when aligned pixels share the same color and contrast. As Klette and Rosenfeld (2004) illustrate, lines do not actually exist because, geometrically, there is no common connecting or intersecting pixel. In the digital image, spatial depth is determined through shifts in color and contrast adjacencies rather than by a set of lines receding to a shared vanishing point on the horizon. With qualitative urban conditions represented by an array of pixels distributed in a specific numerical relationship to each other, the demarcation of form through values associated with color and brightness rather than through the line opens up a new opportunity to influence the effect of the image through the construction of its 'viewed' material surfaces.

The import of the IP webcam view is that it establishes new modes of possible urban engagement. The ability to subvert the ambition of civic site ownership and sponsorship of the city through the view is demonstrated in websites such as the New York–based Institute for Applied Autonomy. (This site can be accessed at: http://www.appliedautonomy.com/). Using 'guerilla' tactics to map the location of CCTV surveillance cameras, this group has developed a web-based application, (available at: http://www.appliedautonomy.com/isee.html), that allows the Internet user to construct a surveillance-free passage through Manhattan. The accessibility to tools like Google Street View is another example whereby further supplementary information can be used to construct alternative narratives about the city. The imposition of the Internet user's personal narrative upon the sanctioned city view extends the emblematic webcam image beyond the enactment of a singular 'utopic' image of the city. The ability of individuals to develop their own unorthodox routes across the urban landscape subverts any desire to construct and preserve an emblematic, stable urban image.

THE HIDDEN POLITICS OF THE DIGITAL VIEW

The digital re-presentation of color and contrast involves numerous interpretative steps spanning both hardware and software platforms. The primary aim of these procedures is to deliver a smooth, moving image with a visual hierarchy that enhances the status of proprietary systems and protocols (Cantoni et al., 2011). The performance of these representational systems is governed by the technological imitation of the key procedures associated with human vision (HVS): color, brightness and shape recognition. Aligning the IP webcam 'pipeline' to these procedures not only facilitates a curation of color composition but also removes visual anomalies and develops the formation of orderly image hierarchies.

The first technology in the image production pipeline requires a piece of hardware known as a Color Filter Array (CFA). Located directly above the pixel sensors, the CFA identifies the color in each pixel accords to the additive RGB model of color mixing. The derivation of color is achieved through a mapping function operating between the color model and a color space. This mapping process is constructed to the specifications of the software producer and, as such, is always exclusively product-driven (Barneva and Brimkov, 2009, p. 79). The proprietorial aspect governing these systems means that the sub-pixel sensor patterns of the CFA always constrain the re-presentation of color to the RGB spectrum.

The second procedure is a software-based algorithmic process that attempts to remove all visual anomalies that arise in the hardware, with diffraction being the most persistent anomaly that camera manufacturers wish to avoid. The most significant of these visual anomalies are the countless permutations found in the Fraünhofer diffraction pattern. While digital camera lenses are explicitly designed to minimize luminance overload, certain aspects of the camera function, acting in conjunction with the performance of light, remain outside the control of hardware. Interestingly, McCann and Rizzi (2007) assert that the glare produced when light exceeds the range of luminance that can be accurately measured by a camera, cannot be rigorously removed by calculation. This means that, despite attempts to the contrary, manufacturers are unable either to completely eliminate this 'problem' or to control the full extent of the effects of these patterns on the image-making process. Contemporary image-making technologies continue to develop scanpath trajectories that attempt to mimic the HVS as a way of maximizing image saliency and to reduce the discrepancy between robotic and human vision.

The third procedure involves another algorithm that interprets the data applied to the webcam's image sensor. The role of the various image sensor architectures is to convert the analogue electrical light charge into a digital value. The algorithms associated with this hardware encode, decompress and subdivide this data into sequences of 'scan lines' or raster scans (Foley et al., 1997; Kreugle, 2007). The procedure of ordering and reading pixels is highly strategic. The algorithm controls and varies the direction and vertical retrace action in a way that prioritizes the production of a smooth moving image and isolates and highlights regions of specific interest within the image (Cantoni et al., 2011). The webcam's sensitivity patterns are extrapolations of the HVS saliency factors that relate directly to the coarse or low-resolution peripheral vision where anomalous motion patterns are detected through the selective application of a scan pattern that yields maximum information. The ambitions behind the application of these patterns do not always reflect a neutral agenda. It is worth remembering that "...[webcam] viewers must be wary that maps, photographs, and webcams, particularly in combination, can present a purposefully selective, highly rhetorical landscape narrative" (Monmonier, 2000, p. 57).

Collectively, the operation of hardware and software aims to deliver the best possible likeness of reality. This is a sentiment amply demonstrated by Rastislav Lukac et al (2005) in their evaluation of the different CFA arrangements. Importantly, the organization and distribution of the pixel within the CFA aims to provide the highest level of image color optimization for camera hardware producers. The underlying desire for image synthesis results in the use of interpolation algorithms that fill in or estimate absent or incongruent data (Poynton 2012: 347). At the same time, camera manufacturers rely on a small number of third party proprietors to develop the performative standards that set out how these systems re-present reality. As with the dictates of the RGB spectrum, these industry standards establish a set of hidden aesthetic assumptions about what constitutes a good image. In noting the thinness of research into the industry standards governing different CFA patterns, Lukac et al argue that the selections governing color curation advance particular proprietary interests (2005: 1260). A case in point is the sRGB (standard RGB) color space, which is a variation of the RGB color space model that was created cooperatively by the Hewlett-Packard and Microsoft to standardize the use of color for the Internet. The Adobe RGB color space is yet another variant, but irrespective of the proprietary model, each sub-sampling filtering procedure erases the very presence of the technology itself. The problem the image-processing 'pipeline' poses for the production and dissemination of the city image is that each system produces images that simultaneously embed and conceal a set of deeper proprietary interests. These are highly orchestrated visual experiences of the city, where the politics of the view encourage the digital manipulation of the primary compositional and structural elements as a way to 'cleanse' the view of disruptive visual effects. The desire to maintain the integrity of the promotional city image ensures that disruptive phenomena are minimized across the webcam network, despite the fact that they register both the presence of a mediating technology and the activity of the city. If the pixel marks the divergence between traditional and contemporary image-making procedures, then the digital mediation of architectural form in the urban context reveals these proprietorial authors as a third, hidden, 'utopic' subject of the IP webcam view.

DISRUPTIVE TECHNIQUES FOR SMOOTH-RUNNING TECHNOLOGIES

A series of tests undertaken by one of the authors reveals that the duplication of CFA, scan-order and diffraction patterns within a material façade arrangement directly interferes with the internal processing functions of the camera. Importantly, this disruption of the image requires an up-scaled mirroring of the micro patterns within the camera to an urban scale. In such scenarios, the architect can draw upon the geometry of a diverse range of proprietary designed pixel arrangements on the viewed surface to predict, override and control the reception of the urban context over the Internet. In the same way as El Greco used representational form and technique against itself, the duplication of these micro-geometric patterns disrupts the politics of the privileged 'utopic' subject. The disruption of the politics of the view occurs in one of two ways. The built surface can either shift the viewing hierarchy of the image by reorganizing the visual prominence of its content, or it can disrupt the camera's production of a smooth, legible representation of the city. Depending on the technical protocols, these surfaces can initiate effects, either by repeating or varying these patterns, or through the effect of their respective adjacency. Notably, the success of these formal interventions is intrinsically linked to the webcam's pan and zoom function. In an odd inversion of time-motion studies, knowledge is gained through the movement of a recording tool rather than through the body.

The application of the CFA pattern to an architectural surface shifts the image's visual hierarchy to a point where the architect can recalibrate the color rendering of an entire site. Variations to the 'tried-and-tested' proprietary patterns, such as the Bayer Filter Array, allow the architect to modify the color and luminosity of the image. Such variations can be achieved by applying non-traditional red, blue and green patterns to a building façade (Figure 3). In this type of deliberately contrived scenario, the patterning establishes new design hierarchies according to a building's physical surface. The capacity to play with levels of brightness institutes a way of informing the evolution of the building's program through color and texture. For example, a building might be required to stand in high contrast to its context, in which case the architect could design a façade with a pattern, color and brightness that works in opposition to that of its neighbors. By contrast, the requirement for low visibility would mean that the design of the façade complements the surrounding context.

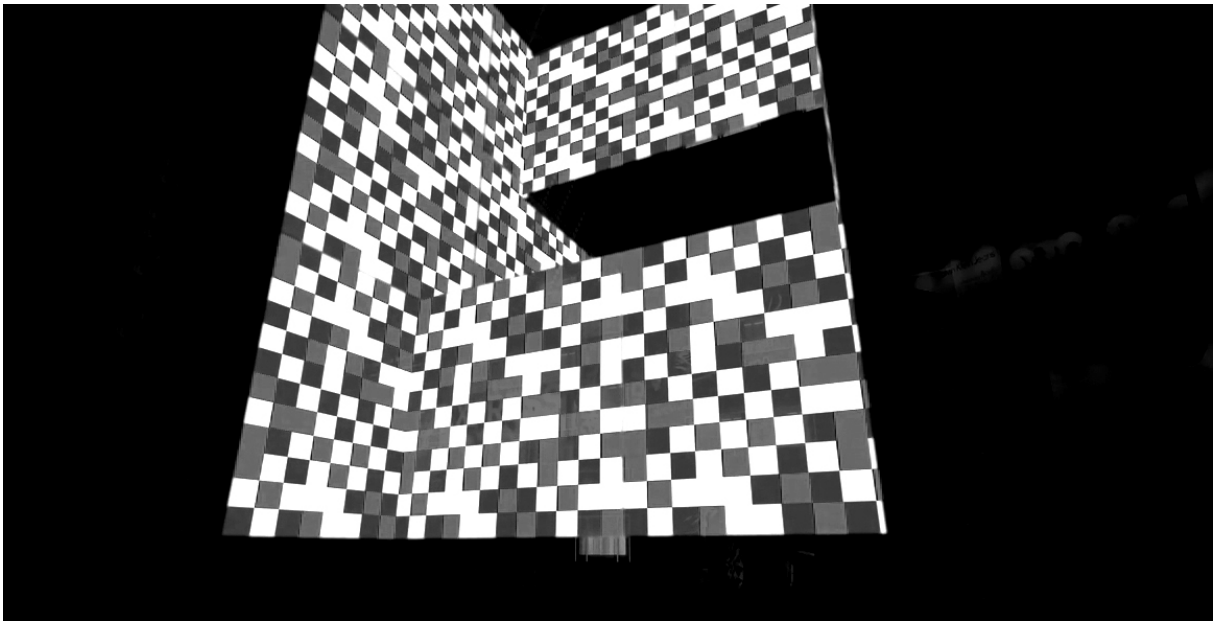

Figure 3. HVS-based CFA pattern used as a building façade in Times Square, New York, showing high level of brightness emission competing with context.

The second category of visual disruptions that enable one to contest the politics of the image involves interrupting the camera's capacity to produce a smooth, legible representation of the city. This act of interruption operates by subverting an algorithmic process. The algorithm is charged with removing various visual anomalies from the image as the camera mechanism moves in and out. Diffraction patterns are just one set of visual anomalies that are algorithmically removed from the image. By

extension, simply duplicating the Fraünhofer, or far-field, diffraction pattern onto a façade reverses the camera's capacity to read the surface when the operating in its non-diffraction mode. The behavior of certain Fraünhofer patterns produces two notable visual effects. First, they provide much brighter visual effects than their non-diffracted counterparts. Second, as the camera lens zooms in towards the façade, the initial clear and distinct pattern transforms into glary and blurred image (Figure 4). Significantly, the degree of visual disruption caused by the mirroring of the diffraction pattern is absolutely predictable. This predictability is understandable given that the derivation of the digital image is innately computational and therefore data based. The benefit of this degree of predictability in the behavior of the tool provides a metric by which to control the nature degree of visual disruption caused to the image.

Figure 4. . Fraünhofer diffraction pattern derived from the traditional raster-scan pattern used as a building façade skin in Times Square, New York. The left-hand image shows the pattern's clarity from a distance while the right-hand image shows its disruptive visual effect as the camera zooms in.

Further disruptive visual effects can be obtained when transposing rescaled scan-order sequence patterns onto façades. It is important to note that the purpose of the scan-order pattern enables the webcam's zoom function to interact with HVS perception to maximize the replication of reality. During the scanning process of the HVS, where additional attentional scanpaths are being continually generated, the visual saliency of the viewed object needs to be somehow disabled before the viewer's attention, and thus the scanpath, can shift (Itti & Koch, 2001). In a viewer-operated camera system such as a webcam, the generative potential of HVS perceptual pathways must be mediated through the maneuverability of the zoom lens. The webcam's pan-tilt-zoom mechanism (PTZ) actively contributes to image continuity by mimicking the observed 'planned perceptual actions' found in the saccadic movement of the human eye, (2006, p. 400). The replication of saccadic eye movement requires a solution, found in this case in the flexibility of the camera mechanism, which disables the most recent salient location in favor of the next. The multiplication of viewing trajectories fostered by the movement of the camera is therefore akin to a series of movie cuts, which collectively combine to increase image continuity and thus reinforce the narrative structure of the image (Hochberg, 2006). In effect, this system reinforces smooth visual narratives, which are ultimately based on pre-established internal cognitive models derived from observing the viewer's coarse visual pathway.

Interestingly, the design of a visually disruptive facade based on scan-order patterns requires a variation of the camera pattern and its orientation rather than simply duplication of it. As in the case of the Fraünhofer diffraction patterns, modified scan-order patterns can be applied at a vastly increased scale to a building façade, either as a fenestration pattern or as a second surface 'skin'. As demonstrated in the duplication of CFA and diffraction patterns, the image is disrupted when the camera zooms in and out (Figure 4). In the case of the traditional raster scan pattern, the pattern becomes not only glary and indistinct as the webcam lens moves, but at a close-up aperture, the visual effect is one of continual fluctuation because the camera is unable to resolve the pattern algorithmically and, by extension, mechanically. Again, the nature of the process ensures that the

production of disruptive visual effects occurs at different, predictive moments in the webcam's trajectory (Figure 5). The ability to orchestrate the point at which this disruption occurs allows the designer to interfere strategically with the viewer's presumption of a smooth self-directed image.

Figure 5. Traditional raster-scan pattern used as a building façade diffraction grating in Times Square, New York, showing the highly disruptive effect of the pattern as the camera zooms in.

CONCLUSION

As Marin shows, the visual conceit in the early cartographic representations of the city reveals deeper ideological certainties. For Marin (1984: 230), the beauty of El Greco's 'View of Toledo' (1600) is that its visual axis effectively "figures the deconstruction of the representation". The genius of El Greco lies with his capacity to compose an image that disrupts the smooth running of the conventions of narrative and descriptive image-forms. Marin sees this as an opening up of a representational discrepancy, exposing the difference between the real and the represented. In fact, El Greco's 'View of Toledo' "*shows* the shift and spacing between the map and the landscape…[and] *signifies* the substitution between the orders of painting and nature (1984, p. 243). Of course, the city portraits discussed by Marin are in a sense fixed images. Their political potency is limited to critique. The politics of the promotional IP webcam image is of another order. Their potency comes from being active images that, in order to achieve their goal, must be widely disseminated. The dilemma civic authorities face with the webcam image is that in order for them to truly function as persuasive representational vehicles, their content must to be released back into the world. The inherent openness of the webcam content means these images can be contested. In questioning the structure of the sanctioned city image, action now extends into the design of urban surfaces that 'hijack' the predetermined viewing hierarchies of the image.

The IP webcam view mediates the image of the city to open three possible utopic subjects. The first is the ideal city as seen and promoted by the civic authorities, the second is the desirable itinerary seen by the virtual tourist, and the third is the utopic of the city activated by a disruptive design practice. Without this third utopic subject the image is left uncontested, allowing the civic authorities and proprietors of image technology to remain as the true purveyors of the city image. The designerly

exploitation of the qualitative properties of pixel arrangement and connectivity rejects the politics of promotion and concealment. The inclusion of color and brightness as an addition to the canon of image artefacts and city views alters the political conditions by which urban space is understood. The capacity to disrupt the image ensures that the representation of the city is a heterogeneous and complex trace of multiple spaces. Positioning the pixel as the pivotal generative unit of the urban surface directly initiates a series of procedural strategies that subverts the politics of the branded city image from within the very visioning devices that are designed to normalize image reception and disable its affective properties. The technical disruption of the image tips the balance back towards the viewer without resorting to redemptive messages associated with the branded image or eidetic drawing. Rather, the disruptive image contests the stultifying effects of the urban spectacle, or what Marin refers to as, "the neutralizing work of utopic practice within the representation of the city" (1984, p. 102). The ensuing co-opting of the digital image opens up a new type of space between sign and signified that provides a mechanism for opportunistic intervention in the material and immaterial systems that mediate our experience of the city. To achieve this utopic urban condition, architecture and urbanism must not only redraw its own disciplinary boundaries but it must also reform its own formal, spatial and material expectations.

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Foreword

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