Undoing the Utopic Urban Project

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Introduction

In his book Non-Places, Marc Augé (1995, p. 68) makes the observation that the freeway bypass excises the regional centre from the experience of travel. This excision results from capital’s relentless ambition to increase the speed and quantity of bodies and objects moving between global urban centres. (Nijenhuis 1994, p. 13)

Sharing Paul Virilio’s (1986, p. 134) concern with the way speed collapses distance and leads “to the negation of space”, Augé (1995, pp. 67-8) argues that all too often regional centres use the hieroglyphics of the road sign in the attempt to entice the passing motorist off the freeway. However, this tactic constructs a singular notion of regional identity around an assemblage of institutionally contrived iconographic symbols. The bypass leads to the ultimate endgame of the Las Vegas Strip precisely because it calls into question the belief that architectural form constructs its own authentic images. The road sign tips the balance towards the image such that they begin to construct the built environment. Iconography either reduces form to a standardised set of symbols and emblems, or, as seen in Bilbao, manufactures real objects that are easily reducible to unambiguous hieroglyphs. In both cases, cartoonish representations of identity and place service fixed parochial and often chauvinistic notions of regional identity. Moreover, the icon tacitly legitimises the fluid transmission of images that so often typifies contemporary capitalism.

Paradoxically, the iconography of the bypass, being at the service of the image economy, deploys the media produced by capitalist exchange in order to address the very issues created by globalism in the first place.

Augé’s observations on the freeway bypass do more than identify a historical moment when images begin explicitly to reshape the built environment. They also anticipate a basis by which to understand how the burgeoning development of digital infrastructure mediates the appearance and form of future urban environments. An instructive contemporary corollary to the formal effects of the bypass can be found in the repurposing of CCTV surveillance camera technologies into promotional Internet Protocol (IP) webcam networks. The move from surveillance to promotion means the IP webcam networks positions the digital image as primary mechanism behind the production and dissemination of city images. The vital difference between these hard and soft infrastructures is that the bypass invokes reductive images based on predetermined and fixed iconographic system. In contrast the public-ness of digital image technologies makes it’s images far more susceptible to a larger array of passive and active actions.

New Optical Strategies

The relative ease of digital image production and dissemination afforded by the IP webcam would make it highly attractive to those regional civic authorities charged with promoting their urban centres. Yet the technological platform of this visioning system brings with it new modes of viewing agency. This agency results from the fact that the webcam’s production of a stable image is achieved by mechanical and computational procedures that aim to replicate the human visioning system (HVS). Digital imaging procedures attempt this replication by recognising and contextualising the environment through colour, brightness and shape. Typically, the desire of civic authorities to present ‘desirable’ urban views to the Internet viewer results in manipulating the procedural protocols to enhance the colour, brilliance and legibility of the objects framed by the camera. The preference for these types of accentuated views parallels the optical and perceptual evolution of these visioning technologies, which increasingly converge to a single, normalised, global mode of image making. Based on the highest achievable levels of saturation, clarity and legibility, the iconographic currency of the city’s viewed surfaces is ultimately trapped to the technical pathways believed to mimic HVS procedures. This act of mimicry institutes a new scopic regime where spatial representation institutes a
unique relationship between capture and management digital image data and the form and material of the
built environment. Conversely, it is also possible to modify the image by replicating, in built form, the geometric
patterns that organise digital imaging procedures and protocols. In this new visual paradigm the pixel
becomes the obvious primary representational agent that translates form and material as image data. As
such the basis for an intervention into the constructed image is derived from the indexical relationship
between the numerical values of the pixel and the viewed architectural surface. The architectural surface of
the city becomes a strategic site for the optical reorganisation of the visual prominence of ‘viewed content’.

Paradoxically, by redrawing the interrelationship between the logistics of the digital image and the tectonic
constitution of the architectural surface, the IP Webcam places a renewed importance on corporeality. At the
same time colour, brightness and shape, rather than a linear description of form, become central to the
reception of the image. In fact, tests conducted as part of the doctoral thesis of one of this paper’s authors
demonstrate that duplicating the patterns used to construct a digital image in an architectural surface can
modify the viewing hierarchy of the image and the camera’s ability to produce a smooth, legible
representation of the city. Moreover, these tests show how the standard camera procedures, which aim to
optimise the colour, brightness and shape of a surface, can hijack these perceptual frameworks and transform
the promotional intent sitting behind the use of the IP Webcam.

The digital image initiates a scalar relationship between image data and real form and material that is
translated between a set of processing patterns. Existing both as processing algorithms and mechanical
components, the pixel-based grid and a set of electronic pathways are constantly translating visual data from
the macro scale at a micro scale. Embedded within the camera’s core procedural structure, these protocols
are pre-set to enhance proprietary defined interpretations of what constitutes a ‘natural’ image. These
aesthetic palettes can be disrupted by ‘mirroring’ in an interior and exterior built surface at a larger scale, any
of these virtual or mechanical patterns. The simple act of duplication frustrates the camera in its attempt to
interpret or ‘de-code’ an exact replication of its own internal architecture. Importantly, these effects are
made possible only when the camera is moving between the macro to micro scales. The net result is the
production of a set of unpredictable and uncontrollable visual outcomes. Because the mirrored ‘hyper-pixel’
surfaces interfere with the camera’s ability to capture and process image content, a surface’s colour,
brightness or shape can be designed and sited to modify the reception and formal hierarchy of the image.
Moreover, the great value of the mirroring process is that it eludes any prescriptive image reception.

The type of visual disruptions caused by duplicating the geometric patterns found in digital camera hardware
can be seen when duplicating one of the standard camera’s colour filter array (CFA) patterns. These patterns
are essential for cameras to process colour proximities and intensities.\(^1\) The resulting surface produces highly
incongruent colour effects to those intended by the camera manufacturer.\(^2\) (Figure 1) In the illustrated
scenario, the architectural duplication of this pattern shifts the visual hierarchy in the image where the facade
sits in stark contrast to its immediate urban context. The macro version of this CFA pattern not only intensifies

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\(^1\) Interpolation is a key technological procedure that analogously mimics how the human eye receives colour. This is a problematic analogy
because the pixel receives proportionately less visual information than the human fovea. This means that a ‘perfect’ recovery of the original
signal is impossible. (Deering 2005) A further problem is that a speculative ‘stop-gap’ algorithm is used to bridge this data deficit. Any missing
colour information is drawn from neighbouring pixels. The ordering of pixels in various colour filter array (CFA) patterns uses interpolation to
approximate of the original colour data falling within that pixel. This interpolative moment allows proprietary interests to introduce their own
representational agendas into image content.

\(^2\) Despite that there exist a multiple of alternative array assembly patterns the Bayer filter is the most common used CFA. (Savard 2009) The
pattern distribution of the Bayer Filter, being 50% green, 25% red and 25% blue, is highly compatible with the numerous commercial software
applications used further down the image-processing pipeline. Tests by one of the authors show that a scaled-up version of an alternative
colour filter array that is more aligned to the retina produces greater colour intensity than other array patterns. This increased intensity is
consistent to different camera apertures across the camera’s full zoom trajectory.
the effect of the pattern distribution through a strategic use the building’s fenestration pattern, but the facade’s proximity to an adjacent, less powerful, non-CFA based patterns would further enhance the colour intensity differentiation. (Figure 2) Moreover, if this approach to facade design uses colour to disrupt the image’s compositional hierarchy, it also stands that the design of a larger urban context might also consider strategies that subvert the desire by civic authorities to render smooth and highly legible city images.

The architectural surface can just as easily disrupt the camera’s ability to process a surface’s brightness by duplicating the patterns governing the algorithms that exclude inconsistencies in the image data. Like the duplication of the CFA patterns, a deliberate inclusion of visual anomalies can also subvert the clean representation of the desirable urban image promoted by camera manufacturers and image producers. Tests using a Fraunhofer pattern extrapolated from a digital raster pattern creates extremely strong brightness and diffraction differentiations that become more exaggerated as the zoom factor increases. (Figure 3) The speculative application of this pattern to a building facade on the western edge of Times Square effectively disrupts the viewer’s attention, overriding the visual dominance of existing advertising media at the building’s street level. The visual effects of the ‘enforced’ inclusion of this diffraction pattern, is increased in combination with other algorithmic patterns. For instance camera’s ‘read’ a context by processing visual data through different preset scanning patterns. These scanning patterns are integral to the camera’s internal shape-identification procedures. Thus combining the Fraunhofer pattern with the recursive “z” scanning pattern amplifies the overall effects of this material strategy. (Figure 4)

The objective of the algorithmic scan ordering pattern is to ensure the highest possible degrees of image legibility. In fact they are often pre-programmed to privilege selective areas within the viewing frame. The duplication two different types of camera scan patterns, placed on adjacent facades sets up unique visual effects. Scaled tests indicate that placing a digital based raster-scan pattern becomes extremely blurred, while simultaneously increasing the surface’s brightness as the camera aperture and zoom factor increase. (Figure 5) In contrast, the recursive “z” pattern remains highly legible throughout the full extent of the camera’s aperture settings and zoom range. This discrepancy is most evident when these patterns are placed next to each other (Figure 6) This imbalance in visual clarity not only disrupts the visual order of the image but also competes with nearby media façades. The juxtaposition of the fluctuating focal effect of the horizontal slit
(raster-scan) pattern and the horizontal form of the existing media façade only exacerbates the disruptive effect of this intervention upon the viewer.

**Utopic Subjects**

Collectively, the scaled tests intimate that there is an incredible range of possible visual effects by simply duplicating and rescaling the geometric patterns at work behind the mechanisms and algorithms operating in IP Webcam. The ability to alter the received image sets up a very different politic to that observed in the closed language of the freeway signage. The important question raised by the promotional IP webcam is how might civic authorities can best approach this new technical mediation the city image as they attempt to represent their regional jurisdiction? More so, How can the issues of identity politics be addressed without reverting to cartoonish images of the local?

Louis Marin post-structuralist dissection on the politics of the image offers a crucial intellectual framework to address such questions. Of particular interest is his book *Utopics: Spatial Play*, where he links the fabrication of an idealised, ‘utopic’ subject to the image’s representational form and, by extension, the viewpoints from which they are constructed. It is noteworthy that Marin’s (1984, p. xiii) use of the term utopic addresses an image that “stages...an imaginary (or fictional) solution to the contradiction [or]...the simulacrum of the
In this sense the freeway sign and the IP webcam may use different representational systems, but both intend to construct an idealised, comprehensive image of the regional centre.

The chapter ‘The City’s Portrait in its Utopics’ is of particular relevance because in re-conceptualising the map as a ‘city portrait’, Marin dissects how the formation of the image’s utopic subject results from a complex layering of narrative, pictorial and descriptive, emblematic images. The differentiation between narrative and descriptive image form is discussed at length in Marin and Franko’s (1980) ‘The Inscription on the King’s Memory’. The essay argues that the advantage of the emblematic is its ability to valorise its subject through a singular image rather than the protracted narrative re-telling of the subject’s complete history. The event is emblematic of every previous and subsequent action. The power of the emblematic image comes from being demonstrative. Like the commemorative medallions issued by the sovereign, the conversion of the built environment into a promotional image aims to valorises the city as an idealised subject through its emblematic re-presentation. The added value of in ‘The City’s Portrait in its Utopics’ is that Marin takes this analysis a step further. The three 17th century city ‘portraits’ under scrutiny are important because the image of the city combines both narrative and descriptive images. However, Marin differentiates the two Paris maps, authored by Merian and Gomboust, from el Greco’s painting of Toledo on the basis that their utopic is a ‘totalizing’ discourse’ on the city. All three address the desire to ‘propagandise’ the city with a central emblematic aerial city view, but Merian and Gomboust’s combination of narrative and descriptive images attempt to identify an idealised subject. In fact their city portraits are doubly utopic. The central emblematic image is constructed literally from an indeterminate viewpoint located in a nowhere space above the city, while the complete portrait ideologically attempts to present an authentic and holistic account of the city.

Marin (1984, pp. 226-32) argues that if Merian and Gomboust’s synthetic account of the city erases complexity through a universalising subject, then El Greco’s painting of Toledo is fixed on disrupting such a conceit. As argued by Marin, El Greco’s city portrait differs from the other maps because the main image is a perspective whose viewpoint is located on the ground plane and looking back towards the city from over the ravine. El Greco further resists a totalising account of the city by presenting the city plan as an artefact that is totally integrated into this central perspectival view. Marin (1984, p. 227 & 9) Held up to the viewer by a human figure, this emblematic image becomes supplementary. At the same time the naturalness of the perspectival view is itself disrupted by presenting the iconic Don Juan Tavera Hospital on a cloud hovering above the city. Marin (1984, pp. 230-1) notes that this decision is both practical and subversive. Practical, because the low viewpoint of the central city image obscures the view of this building. Subversive, because it problematises the notion that images offer a faithful indexical account of the city. Merian’s and Gomboust’s maps want the viewer to see past the medium of production and the coded representational modes being deployed. In contrast Marin argues that El Greco’s reveals the representational conceit of the image; reminding the viewer that they are not looking at the city, but a constructed artifice. The image is not capable of furnishing a true likeness of the city, leaving Marin to claim that the utopic drive itself is the utopic subject of El Greco’s city portrait.

The supplementary pictorial images surrounding the main emblematic city view in Merian and Gomboust portraits are significant because they establishes two different utopic subjects. The representational tactic is the same; pictorial images act as an lead in figures that allow the viewer to inhabit the descriptive images that present the city’s built fabric. However, Merian’s vignettes illustrate day-to-day life in the city, while Gomboust’s pictures present a further set of emblematic images of the King’s estates. For Marin this difference is important inasmuch as Merian posits the city as the utopic subject matter, whereas for Gomboust the King’s Palace is the portrait’s utopic subject.
The IP Webcam viewpoint

The viewpoints of all three plan images examined by Marin occupy different positions above the ground plane. Gomboust’s singular plan, being perpendicular to the ground, is detailed enough to allow the viewer to trace a range of possible itineraries through the city. While missing the interiority of Nolli’s plan of Rome the loss of any figured elevation elements is compensated by this ability to wander, virtually, through the city’s streets. In contrast to this plan view, Merian’s emblematic image is oblique to the ground plan. Functioning much like a paraline drawing, the combination of plan and elevation provides detailed spatial and formal information. The capacity to assess space via figured formal elements enhances a preemptive spatial experience of the city. Merian’s oblique perspective view reasserts the suggestive experiential power of the aerial perspective; in a single emblematic image the eye is allowed to wander across the figured streetscapes to create an assortment of imaginary itineraries. In this sense the added degree of figuration operates like the supplementary pictorial images.

Of the three different central images only El Greco’s has a similar position to that found in the IP webcam. However, in offering a facsimile of a real embodied city view, El Greco collapses the view’s depth. Experientially, Merian’s and Gomboust’s views are superior because altitude presents far more spatial detail. Merian and Gomboust understood the power of the aerial to carry a vision of completeness; encouraging the viewer to enter the frame and construct their own itineraries. The great paradox is that El Greco’s ‘realistic’ portrait offers the viewer less capacity to construct a meaningful anticipatory itinerary. The viewer has difficulty in constructing an itinerary without supplementing this view with a previous embodied experience of the city. El Greco’s painting reinforces this distancing; the resolution of the painted orthographic plan is too low to easily construct itineraries through the city. El Greco furnishes the viewer with an opaque portrait, thus suggesting that images alone cannot provide experiential access to the city.

If Marin is correct in believing El Greco understood the ramifications of adopting a lower viewpoint, then the same awareness cannot be so easily claimed with the promotional webcam. The webcam is already less sophisticated than the three city portraits examined by Marin. The tightly framed interactive viewpoint may allow the tourist to move across the image as if they were constructing an equivalent of physical movement in the city, however the politics are constructed around a singular, fixed viewpoint. The IP webcam attempts to overcome this flatness in two distinctive ways. It can be networked to provide a multiplicity of vantage points and the viewer can manoeuvre the camera. Positioned just above the city’s roof scape, the autonomy of action relies on the conceit that these multiple portals to the city are in some way inhabitable. The reality, of course, is far different. What the virtual, remote tourist is offered the appearance of moving through the city unimpeded. Clearly this interactivity is co-opted precisely because it activates the viewer to create an impression of control. The indexical nature of the webcam image is vital in reinforcing this conceit; it makes the view believable enough to convince the virtual tourist that the view could be duplicated when visiting the city. In effect the webcam presents a view that purports both to be physically accessible and realistic enough to construct a spatial knowledge of the city. While the camera’s manoeuvrability can be seen as an attempt to overcome a lack of representational sophistication, the orientation and singularity of the view means the viewer is forever trapped into scanning across the surface of images. The IP webcam image is idyllic city image that only has the appearance of experiential completeness. Trapped forever within the frame and stripped of El Greco’s representational tactics, the webcam experience of the city is only marginally better than the postcard. The trick of IP webcam is that it substitutes a virtual mode of movement for a real embodied experience of the city. By extension, passive compliance with the content of the IP webcam is to
tacitly agree to consumptive relationship the civic authorities want between image and viewer. The IP webcam remains a site for contrived projective fantasies.

The twin conceits of interactivity and autonomy belie the degree of control civic authorities have over the content presented to the viewer. It is civic authorities that ultimately curate the view, choosing what is revealed and what is worthy of showing. In orientating the viewer, these images conceptually operate as portraits. It is somewhat naive to imagine that the proliferation of viewpoints or the interactive aspect of the camera offers greater experiential transparency. However, the camera’s interactivity is exploited to give the impression that the virtual tourist within the day-to-day lived experience of the city. This temporal engagement with the IP webcam view does allow the type of pictorial narrative provided by the different scenes of being in the city found in Merian’s supplementary images. The representational facility Marin observes in the three different ‘portraits’ is retrieved through accessibility; the virtual tourist can wander across the city at any time of the day. The passive reception of the IP webcam image as a framed view only increases this pictorial aspect. A degree of representational sophistication is returned to the IP Webcam image by the way in which this temporal aspect of interactivity collapses narrative into the emblematic image. And, ultimately, like Merian’s the idealised, totalising image, the utopic subject of the image is the city itself.

Received Systems of Image Production

The central problem regional centres face with the freeway sign is that it enforces semiotic fidelity. The commercial imperatives of the sign demands simplistic solutions to the complex issues of identity politics. The freeway sign exacerbates this fact by constructing identity through a closed and literally cartoonish representational ecosystem. If the communicative mechanisms and the means of production are fixed, then any capacity for autonomy is further limited by the fact the ‘language’ and ‘technical means of dissemination cannot be ‘hacked’. because to do so would initiate a complete failure of the system to serve its purpose. Any agency with the system ensures the mode of communication is explicit. The only option is to produce the type of authentic images of the sort espoused in Barbara Klingsman’s (2007, p. 6 & 8) Brandscapes. Klingsman’s optimistic approach to authentic image making partakes of a fixed representational ecosystem whose semiotics function through semantic exactitude. In this political environment diversity stops at the scale of regional centre. Plurality exists, but it does so between geographically definable subjects, erasing the diversity that exists with subjects. Instead of diversity, civic authorities become reluctant or an unwitting authors of a hackneyed sense of regional identity. This is ultimately the purpose of marketing, to strip away and replace representational instability with semiotic certainty.

Representationally, the IP webcam is as problematic as the freeway sign as long as one willing receives the images constructed for consumption. There is an important caveat to this. The IP webcam is strictly limited to the technical means of its production and dissemination. The passive consumption of this content is independent of the technology; it is dictated by a defined set of representational imperatives and techniques. If the regional centre conforms to branded built form, it does so because it chooses to reinforce a well established cultural strategy that pre-dates the webcam. In this sense it could be argued that, unlike the freeway sign, this uncritical use of the technology places it at the service of meaning. The branding at operation in projects like the Guggenheim at Bilbao might partake in the longstanding politics of the spectacular but branded form exploits the IP webcam, rather than transforming itself to the technologies embedded in the IP webcam.
It is likely that the economic realities of globalism leave regional centres little choice but to use IP webcam technologies. However the disconnect branded architecture opens between built form and visual content also suggests that the distinguishing aspect of the IP webcam ecosystem is that there is freedom to determine content. In such a framework the regional centre can use the system without becoming a victim in an ever escalating image-based arms race. A more revolutionary use of IP webcam content would involve a set of formal strategies that deliberately exploit the disruptive visual anomalies of the type reviewed earlier in the paper. The strategic duplication, on the built surface, of the patterns within the camera software and hardware would, paradoxically, exploit the disconnection between content and technology by actually reestablishing a new relationship between architecture and its image. The use of these virtual protocols against itself are neither prohibitive nor limited. Unlike the freeway, the fidelity between content and technology inverts the relationship between the two, reestablishing content as the more important of the two. This inversion is significant because it allows one to control the image’s overall clarity and alter the viewing hierarchies within the image. The important lesson learnt from El Greco is that representational conventions can be turned against the medium. El Greco’s attack on the image through the image succeeds by making transparent the communicative mechanisms at work behind the image. Of course this attack is consistent with the disciplinary structures and mediums of image-based art practice. If branded architecture is an inevitable product of the global economy then this technological subversion is aimed squarely at disrupting the consumptive intentions that often determine what the view frames. Moreover, the creation of these visual anomalies bifurcates the attempt to use the interactive webcam as a way to equate the remote visual experience with an actual embodied experience. On one hand the actual and virtual viewer is presented with two disparate visual experiences. On the other, the disruptions to image makes the virtual tourist aware of the fact they are scanning a flat image of the city and not the city itself. The visual disruption of the view rejects the possibility of an iconographic representation of the city. Like El Greco’s portrait of Toledo, the viewer is made aware that they are being presented with the view as a constructed artifice. Only disruption changes the webcam’s subject from a totalising, utopian narrative of the city to the city as a site of utopic projections. Such an approach is a profoundly different way to address branding because it is without the compulsion to resolve the fraught issues of identity politics.

Conclusion: Shifting the Utopic Subject

The increasing popularity of the IP webcam as an affordable promotional tool for the city offers a timely reminder of the importance of Marin’s work on the utopic ambitions driving image creation. The fact that architecture is now a mechanism of branding is important because it increasingly asks for form to be derived according to its imagistic appearance. It is not enough to attack the imageability of architecture through images because there is a residual corporeality of the object that is being indexed in the image. While the desire for imageability attempts to supersede corporeality, the discipline has not yet conceded form making to purely representational ends. The desire to colonise interactively as a substitute for an actual embodied experience of the city only pacifies the viewer. In contrast, the interaction between the architectural surface and IP Webcam technologies offer a hitherto unseen repertoire of effects from an increasing array of anamorphic ally dispersed urban viewpoints. Together architecture and technology mediate the image to inhibit the contrived urban narratives of what are, in the first instance, predetermined views and viewpoints.

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At its simplest the webcam footage can transform qualitative, perceptual registers into quantifiable data. The process is relatively inexpensive; open-source software can map colour profiles specific to a selected context. This visual information can be used as a new type of design criteria to reinforce or modify the visual reception of the captured view.
The highly mutable effects of this newfound capacity to self-project, at high velocity, an image of the city through the innumerable oblique viewpoints of virtual space, provide the architect with a new set of disruptive strategies that challenge the politics of the view. The disciplinary insistence on corporeality gives architecture very different performative requirements and it is this aspect that makes the construction of disruptive surfaces so important. In impeding the absolute collapse of corporeality into representation and image, the architectural surface returns as the site of utopic contestation.

This paper has attempted both to outline the hidden structures and privileged audiences in the webcam image as well as explain how the technology can be turned against itself to corrupt the identity politics that drive this mode of image making. Only the corruption of the IP webcam provides images intention without meaning. In this sense the image becomes a placeholder, leaving ajar a space for identity formation. In this movement the technological mediation of the image is allowed to become synonymous with the the local culture and not the other way around.
Bibliography

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