

LONDON 2012: DISTRIBUTED IMAG(IN)INGS AND EXPLOITING PROTOCOL

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Abstract: The Olympic Games in London in 2012 is being built online as well as off through official and unofficial photographs which serve to position '2012' within a discourse of legacy and participation. This paper looks at how network protocols can be addressed as what Bruno Latour would call 'actants', non-human actors that generate and discipline that visualisation within a particular network scopic regime (Jay, 1988). Following Galloway (2004), protocols such as JPEG/EXIF and XML can be seen as generating new scopic texts/practices around archive and openness which underpin 2012 ideologies of legacy and participation. The paper goes on to explore the potential of critical intervention in that regime using Benjamin's model of writing history developed in The Arcades Project (1999).

INTRODUCTION

We are living and photographing in new times. Photo-sharing site Flickr has more than four billion images in its database with the jump from three to four billion taking just five and a half months (Warren, 2009). Meanwhile Facebook claims its social photo album includes 15 billion photos with users adding 550,000 images a second (Ostrow, 2009). Many of these photos were taken with new photographic apparatuses such as the cameraphone. Analysts M:Metrics report that 78 percent of Europeans and 66 percent of Americans owned a cameraphone in 2008 (M:Metrics, 2008) and the iPhone is now the most popular 'camera' on Flickr (Flickr, 2010). While the ease and speed of digital photography has fueled this visual explosion, at a deeper level what drives these new imaging practices and determines these new network texts is code, the protocols that enable and structure the filing and sharing of these images and so the new imaging practices and businesses.

In this paper, I argue that protocols such as JPEG and XML 'determine' a new scopic regime characterised by network relations which is built around a discourse of 'the archive' and an ideology of visual democracy. These protocol objects can be seen, using Latour's term, as 'actants' that have become so familiar they have become transparent and taken for granted.

By looking at the photography surrounding the London 2012 Olympics, I will explore how that protocol-driven regime is implicated in the powerful ideologies of legacy and participation at work around a major media event. The paper concludes by arguing that addressing the regime in terms of protocol allows a form of critical engagement.

2012: THE LONDON OLYMPICS

2012 is being built physically in the East End of London, but discursively it is being built online¹. The physical and the discursive come together on small 30 seat buses that regularly tour the site.

Like tourists in *Jurassic Park*, the bus takes you slowly through the security gates on to the site and past the giant metal skeletons of half-built eco-architecture and the mounds of earth washed clean of toxins, industrial heritage and, arguably, history.

The tour guide points to Hackney Marshes, a collection of community football pitches renowned for their quality after years of Sunday use, waiting to be dug up for car parking so people can see the Olympic football on new turf. The idea of “legacy” that we will see as a key driver of the 2012 ideology is now made tangible in the Olympic Park Legacy Company (OPLC) which is set to deliver new football facilities when the carparks are removed. Legacy starts anew, a year zero for local football teams and communities.

The guide delivers a stream of statistics about how materials from businesses “relocated” from the site are being reused and recycled as literal foundations for the so-called “Big Build”; the East End’s history and present industry becoming part of a spectacular future.

The driver stops at photo-opportunities where we lean across each other to get, and keep, the view, our own spectacular souvenirs.

WAYS OF SEEING: THE NETWORK SCOPIC REGIME

For Martin Jay, visual practices and discourses emerge within “scopic regimes” (1988) particular historical, discursive fields (or in Foucault’s terms, “regimes of truth”) where statements about “the visual”, as well as practices and technologies are produced (1993, 1994). Jay maps the forms and power relations around shifting “ways of seeing”, arguing that this historical account enables us to “wean ourselves from the fiction of a “true” vision and revel instead in the possibilities opened up by the scopic regimes we have invented and the ones, now so hard to envision, that are doubtless to come” (1988, p. 20).

In a similar vein, accounts of technologies of vision (Crary, 1992, 2001; Friedberg, 2006; Kittler, 2010) seek to map the development of particular scopic technologies, whether optical apparatuses, user interfaces or, as we shall see, software protocols. From this perspective, both discursive and material objects (whether the camera obscura, Alberti’s “frame”, the phenakistoscope, the Windows desktop or the iPhone’s augmented reality view), are players (or, following Latour’s discussion of non-human actors, I shall argue ‘actants’) in a complex set of historical, material and discursive relations. Scopic regimes are not fixed periods that give way to each other in epistemic shifts, but can overlap and interconnect. It is not that we have “moved on” from the ways of seeing that these authors argue characterised particular

historical moments such as the Renaissance or the Baroque. Indeed, Timothy Murray has drawn interesting connections between the Baroque and the digital (Murray T., 2008). Rather, we need to see the current network scopic regime as one which exists in dynamic relations with other ways of seeing, optical technologies and practices.

The internet, and social networking practices in particular, as well as new scopic technologies such as camera phones and photo-management software have introduced new ways of taking and consuming images. These, I will argue, are characterised by the "object" and the "database" and set in motion image practices of the archive and ideologies of visual democracy.

Within this network scopic regime, photographs are objects; they are currency in social exchanges and markers of subjectivity whether they are understood as Heideggerian "things", Lukacsian commodities or Baudrillardian simulacra (Candlin & Guins, 2009). Facebook uses the language of "objects" to talk about online images. It talks of "over 160 million objects" or other "pieces of content" in its database (Facebook, 2010). This of course connects with the company's broader business of data mining, where "pieces of content" and the conversations that surround them can be analysed for data about users, their preferences and their likely susceptibility to ads. At a concrete level too, images on Facebook, Flickr and across the web are objects insofar as each occupies a particular space within a database. This allows a user (or a visitor or a datamining robot) to search, link, create collections and slideshows as well as copy and share the "file".

As the number of image-objects and the social spaces and relations in which they work increases, there is a change in the nature of the images taken, archived and shared. With plentiful cheap storage, there is no need to delete (Bell & Gemmell, 2009; Mayer-Schoenberger, 2009) and images do not need to be special to justify taking. My coffee cup, my dog, my friend and that piece of graffiti are all "worthy" of "imaging".

Susan Murray identifies "a shift in the engagement with the everyday image, as it has become less about the special or rarefied moments of domestic living and more about an immediate, rather fleeting, display and collection of one's discovery and framing of the small and mundane" (2008, p. 147). Because I can organise them via tags, dates or location these images can all exist as rags 'n refuse (as Walter Benjamin would call them (1999, p. 460)) in my personal database. What is more, the same image can appear in multiple databases. And of course because my stream is social and connected to other streams via tags, photo pools or links, these streams of images can entwine creating new montages or, again using Benjamin's terms, "dialectical images" with, as we will see, the critical potential to write history in a different way (1999, p. 462; see also Pensky, 2004).

This stream of domestic image-objects and image practices is arguably different than "photography" with its connotations of professionalism, scarcity, art and deliberation². The new scopic practices could perhaps be called "imaging". The informal photographic logging of the everyday from where one's car was parked through a night-out with friends to citizen paparazzi or journalism sits alongside other imaging practices such as the imagist poetry-style observations of Twitter³. Taking it further, these practices could be seen as imag(in)ing. The images, whether visual or textual, are images that become part of the "social imaginary" that, for Lilie Chouliaraki (forthcoming) following Charles Taylor, offers a way to think through the relations between imaging, discourse and power. As images and imaging practices become part

of online relationships they become part of “the ways people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlies these expectations” (Taylor, 2007, p. 23). As part of the “flows of information... images, sounds and symbols” of network society (Castells, 1996, p. 412), the image-objects form personal ‘archives’ on my hard drive or phone, social archives on Flickr and Facebook and state/corporate archives in surveillance and marketing databases within networks.

As Lanier (2010) argues, the network is now a default space where subjectivities become “profiles”, interaction becomes “status updates” and culture becomes mash-ups. It is not necessary to embrace all of Lanier’s rhetoric to accept that the idea of the network is now dominant in military, political, scientific and media discourses. We see terrorism and war, genes and epidemics, elections, economies and audiences in terms of networks and network effects. That space and space of possibility sets the rules for seeing al-Qaeda, swine flu, U.S. President Barack Obama’s success or the financial crash.

It is not the aim of this paper to address the growing power and ubiquity of databases within regimes of surveillance (Lyon, 2007; Laidler, 2008). What I want to address is how the location of images and imaging within those databases creates a particular database aesthetic as Vesna (2007) calls it, and particular discourses of imag(in)ing) around the idea of “visual democracy”.

The discourse and sales pitch of photography has always been one of ease of use, accessibility and openness – “you press the button we do the rest”, a nominally democratic medium. What is happening with the networked scopic regime however is arguably different in terms of quantity and quality. The contemporary discourse is one of always-on, always-available cameras and unlimited storage space for our archives. And of course this archive potential is not only on the desktop, it is also in the Cloud. Ever since Google started a webmail arms race by allowing its users gigabytes of storage in 2004, there has been no need to delete data, merely to file it (Auletta, 2010). Software As A Service (SOAS) or Cloud Apps like Google Docs and Microsoft Office Live as well as online storage services like Dropbox and “remember everything” services like Evernote and ReQall make archiving, the creation and maintenance of a personal legacy, the norm.

The single image, whether the family snap or the photojournalistic “decisive moment” now sits alongside the idea of a flow of images, fragments (or ‘indecisive moments’) of visual experience (as well as other data), a visual legacy rendered as equivalent visual objects within an image database archive. The discourse, as with much of the Net, is one of openness, accessibility and the social. All images and imagers are equal.

Even leaving aside issues of the digital divide, this discourse of participation is clearly ideological when these imaging practices are located within the complex relations of ownership, control and power that establish a new scopic regime articulated around networks, sharing and data and that is determined, closed, proprietary and deeply powerful. Although the scopic regime and its practices are not determined or simply owned and controlled by Kodak, Yahoo, Apple, Nokia or Google, they are deeply enmeshed with their businesses, the globalised political-economic relations in their factories, the marketing and state databases they own, control or enable and the surveillance as well as self-surveillance practices they set in motion. What is more, the emerging definitions of what is worth photographing and keeping,

as well as the creation and searching of personal archive-subjectivities, set in motion relations of governmentality and biopower as practices of 'life logging' (O'Hara, Tuffield, & Shadbolt, 2009) and serve to establish self-policing visual relations that parallel the sorts of policing uses to which early photography was put (Tagg, 1988, 2009).

It is important when seeking to map these relations (as well as develop critical practices around them) to address the forces that enable the particular system or regime. I would argue that what enables the scopic power relations around objects and archives are software protocols.

PROTOCOL: THE POWER OF CODE

Alexander Galloway argues that the power of networks and the power relations that networks enable emerge from the "protocols" that generate and discipline the forms and operations of those networks. He describes protocol as a "management style... the principle of organization native to computers in distributed networks" (2004, p. 3). Galloway's focus is on TCP/IP, the protocols that enable the transmission of data and the connection between internet-connected computers, and DNS (Domain Name System), the structure that enables network transactions by assigning unique addresses to computers.

As Foucault (1980) has argued, power and the "rules" through which it incites discourse, is productive as well as disciplinary. These powerful protocols produce networked communications. They enable robust internet structures that are simultaneously decentralised through packet switching technologies that route 'traffic' around blockages and outages, and centralised in their utilisation of fixed IP addresses.

These protocols also "discipline" internet practices, determining how clients and servers relate, how peer-to-peer relations are set up and the way traffic is routed, monitored and controlled. These protocols of course enable a wider societal discipline. Without TCP/IP and DNS, neither Google nor government agencies would be able to amass data and track interaction. But they also operate at the micro level by generating particular network practices and particular media forms and communications practices from email to Twitter to Facebook imag(in)ing.

The concept of protocol can be productively addressed in terms of Graham Harman's reading of Bruno Latour as an object-oriented philosopher (2009). It is beyond the scope of this paper to address the debate that Harman's reading generated⁴. Suffice it to say that Harman reads Actor-Network Theory (ANT) in terms of ontology. For Harman, the potential of ANT lies in seeing natural and non-natural objects as actants which are "entirely concrete"; "we do not find its reality in some lonely essence or chaste substrate but always in an absolutely specific place in the world with completely specific alliances at any given moment" (2009, p. 16). Actants are their relations (p. 17). Harman reads Latour as replacing the concept of substance with that of the 'black box', an actant where relations become so firmly established we take the interior for granted and forget the complex network of alliances of which it is composed (p. 34). On this reading, protocols can be seen as "actants", black boxes that are so established we overlook the networked power relations of which they are composed. These actant-protocols generate particular sets of relations within the network "system".

The network scopic regime is enabled by these basic internet protocols, but there are others that enable the specifically *scopic* regime, notably JPEG and XML. Together they manage

the style of imaging and imagining in network space.

JPEG is a compression algorithm used in saving digital photographs⁵. A key aspect of the JPEG protocol is that the file includes metadata. This exchangeable image file format (EXIF) data or tags can include time, date, aperture, shutter speed, focal length, metering mode, ISO speed and geolocation. This metadata, which enables images encoded according to this protocol to be easily catalogued, searched, shared and used within network relations, is added by the camera and/or software that processes the image. It is possible for a user to manually add or edit that data (although very few social imagers are likely to do so). This metadata is different from the human-added tags that a user attaches to an image in their own local or social database. These tags are not part of the JPEG image"; rather, they are added to the images entry in the database. The EXIF metadata is built into the JPEG image and is part of the way the protocol enables interoperability.

JPEG/EXIF creates images as objects that are interchangeable, malleable and networkable. As a ubiquitous standard, these image files can be archived as a visual legacy. Its ubiquity across devices as well as on and offline photo editing, archiving and sharing systems generates particular visual practices. The photographer whose camera, computer, software and internet services choose JPEG/EXIF as their default knows that their pictures can be archived, catalogued and found, and that they can be seen by others and be used as part of other visual practices, whether that is social networking or (as I discuss in the final section) mash-ups. The protocol also disciplines their imaging practice. A JPEG is a single file, a decisive or indecisive moment but still a moment, taken in a discrete space and a specific time within particular parameters encoded into the EXIF data. To see, to image or imagine through this protocol is to know that the image is one among many data/visual fragments interchangeable with any other within the database, whether on the Web or on a photographer's own computer, whether my own or a group's. As a compression protocol it also encourages more imaging (more files on the aptly named "memory card" or hard drive). As a universal protocol it encourages sorting, sharing and streaming. It assumes and presupposes an existence on networks and that the imager's practice is on the network, whether a global, a local or even a personal one.

There is a second protocol actant at work in the network scopic regime. XML is the protocol of network sharing. It provides a common standard by which data can be exchanged. Databases that publish XML feeds ensure their data can be easily read by other databases, search engines and applications. XML underpins RSS feeds, mash-ups, widgets, apps and many other Web 2.0 practices. It allows data to flow from one site or database into others. And, as with JPEG, it generates and disciplines scopic practices. XML's focus on reusability and interoperability positions images as data objects that can be easily shared, connected, embedded and mashed up. It disciplines networked scopic practices, making the database the default home for images and the database fields that generate the XML data the default way of relating to them, ensuring that image fragments can be found, connected and used.

The JPEG and XML protocol actants underpin the scopic regime. They enable and discipline scopic practices in terms of the archive and scopic texts as database objects. And in their turn, those database objects and practices work as actants generating powerful relations at other levels of the system. As Galloway points out, protocols are not neutral. They set in motion sets of truth/power relations within institutions such as old and new media spaces, telecoms and software companies and state and corporate surveillance operations. If we were not imaging (and imagining) in JPEGs streamed through XML feeds, if our images were in heterogeneous

formats with no metadata on off-Network hard drives, then old media would never be able to find and use citizen media; Google would not be able to search and show us ads; Facebook would not be able to data-mine our image interactions and ISPs; and phone companies would not be able to sell us access to the streams⁶. Furthermore, state surveillance operations would be more difficult and expensive as search algorithms attempt to deal with multiple, discrete files in unique formats. TCP/IP and DNS enable networks to function and JPEG/EXIF and XML enable images to be seen, shared and made social.

It is not just the saturation of images but also their heterogeneity. A search on Google or Flickr creates a flow of official and unofficial images (from PR companies, corporate interests, 'citizen journalists', government, etc.) that visualises the search term and renders all stories equivalent and interchangeable.

This is not just to rehash postmodern critiques of saturated imagespace (Baudrillard, 1994) but rather to focus on how those images (as enabled by JPEG/XML protocols) circulate and connect. It is not that images have somehow become disconnected from their referents but rather that as they connect and reconnect across networks, they generate new meanings and relations - new imaginaries. The protocols that enable this distributed imaginary establish an archive, a supposedly democratic scopic legacy open to all. It is those processes of legacy and democracy that are also the key ideological concerns of 2012.

INTERLUDE

The bus windows are not the only frames through which to see 2012. The Olympic Park Viewing Gallery (OPVG) is a portacabin perched on top of a 1960s towerblock in East London which now operates as sheltered accommodation for residents who may well remember a London Olympics that was not referred to as a 4-digit number. For £250 (corporate groups) or £100 (charity and local groups) the cabin, originally built for the visit of the IOC during the bid process, acts as an ideological camera obscura, offering a particular view of 2012 framed by windows looking across Stratford, through 2012 and on to the City. When I visited, an enthusiastic council officer mixed tales of her own childhood in the area with visions of the new shopping mall, transport system and Team GB as well as the new Newham set to be born – past, present and future held together in 2012.

LOOK AT THAT: IMAG(IN)ING 2012

The London Olympics, or to be more precise the lead-up to the Olympics (the "Big Build" as it is called), offers an instructive case-study to explore the implications and operations of distributed protocol imagery. Not only does 2012 come at a time when, as we have noted, the quantity of images circulating has exploded, but it also is being constructed literally, discursively and visually at a time when mainstream media, marketing and PR are in economic crisis and seeking to come to some form of settlement with "citizen media" and social imaging. What is more, 2012 offers a way of seeing how protocol-driven discourses of archives and objects connect with ideologies at work in the construction of this globalised media event.

From the start, 2012 has been built around legacy articulated in terms of participation. Jack Straw (then Foreign Secretary) told parliament the day after London won the games: "London's bid was built on a special Olympic vision. That vision of an Olympic games that would not only be a celebration of sport but a force for regeneration. The games will transform

one of the poorest and most deprived areas of London. They will create thousands of jobs and homes. They will offer new opportunities for business in the immediate area and throughout London” (Hansard, 2005). In 2008, the Department of Culture Media and Sport said: “The ‘legacy’ of the London 2012 Games refers to the imprint they will leave. It is therefore not just what happens after the Games, but what we do before and during them to inspire individuals and organizations to strive for their best” (DCMS, 2008). The current London2012 website says: “After the Games the Olympic Park will be transformed into one of the largest urban parks created in Europe for more than 150 years.” Under a section with the clarion call “Get involved now”, it says: “You don’t have to wait until 2012 to get involved with the London 2012 Olympic and Paralympic Games. Explore how you can be a part of ‘the greatest show on Earth’ today” (London 2012, 2010).

This discourse of legacy and participation is increasingly articulated in visual terms as the stadiums are built, the artist’s impressions of the new parks are pushed through local residents’ letterboxes and, as we shall see, the web presences constructed. Questions can of course be raised about whose legacy this is and how the Olympics impact on East London communities, as well as how those various communities relate to the Games themselves, the new architectures and the facilities and housing that will be left over. Rather than address these particular issues, I want to explore how the ideology of legacy, as it is articulated visually, relates to the broader network scopic regime and the protocols that drive it.

The London 2012 site (www.london2012.com), the official home of the 2012 imaginary, includes Flickr-style photo albums and webcam images that flow as image objects. When a user rolls their mouse over a live webcam image they are allowed to “watch progress over time”, a timelapse flow of legacy being built⁷.

“London 2012 Official” is also a [Flickr user](#). At the time of writing (August 2010) it had added 268 ‘items’, as Flickr calls them, to its photostream; set up a Group ‘[Celebrate London 2012](#)’ and boasted 56 contacts. It had also selected 13 images as “London 2012 Official’s favorite photos from other Flickr members”. The ‘London 2012 Official’ user organises its items into four sets: “Inclusive Design Strategy launch”, “Aquatics Centre September construction progress”, “VeloPark Design Launch” and “London 2012 Olympic Games handover photos from around the UK”. Its Group has 146 members who have added 296 “items”. Of course, within the database protocols of the miscellaneous (Weinberger, 2008) these items can exist in other Groups as part of other streams, potentially even Groups opposed to 2012.

On both its own site and on social sites, the organisers picture 2012 in terms of legacy. The focus is on the architecture and engineering, the transformation over time of an old London into a new one. The images on the site and the ways of interacting with them are in terms of history being preserved and made. 2012 extends from ‘handover events’ through to engineering triumphs and on into a timeline future available as a rollover.

Unofficial visions of 2012 are also articulated through legacy. The two biggest Groups on Flickr – “[Construction of the London 2012 Olympic Site](#)” with 70 members and 1,623 images; and “[London2012](#)” with 155 members and 631 images – frame 2012 in terms of history and the future. While neither Group endorses a particular political position with respect to 2012, their imag(in)ing too is structured around images of engineering marvels and transformed landscapes (for good or ill).

Avowedly critical organisations also articulate their critique through a discourse of legacy. Here the same issues of history, the future and participation are connected. [Games Monitor](#) positions itself as “debunking Olympics myths”. Like a latter-day Barthes, it seeks to add history back into the ‘natural’ discourse of 2012. It uses statistics, historical research and images to tell a different story, one of increasing globalisation on the part of media/sports business, increased state surveillance and impact. Demonstrations and activist interventions as well as graffiti visually represent a struggle over the future shape of the East End site, the legacy for the area.

Both imaginaries (and those between the ideological poles) articulate their visions in terms of the same themes. 2012 is deeply historical – looking back to one London and forward to another; and simultaneously global and local – connecting the East End to globalised sport, brands and business. Legacy is articulated through an ideology of participation. For all sides, 2012 is a matter of involvement. For London2012, we all have an opportunity and a stake in the games and its legacy; for Games Monitor we all have a responsibility to engage with 2012 in order to preserve or build a social legacy. Both sides in the representational struggles around 2012 encode their vision through the JPEG/XML protocols as network image objects. If they did not, they could not work in distributed space or harness the network effects that both the ODA and Games Monitor require for their marketing and campaign.

What I want to argue is that the protocols that drive the network scopic regime are implicated in those visions. In short, protocols drive a particular form of imag(in)ing 2012 (for both official and activist imagers) that underpins the ideology of legacy and participation within 2012 discourse. What is more, those protocols carry within their structure the potential to disturb that visual and ideological hegemony.

At the moment of production the JPEG protocol positions the 2012 imager as a collector of image fragments, such as a view snatched through the Fence or the bus window. These are fragments collected and archived individually or socially – an archive of the Big Build. At the moment of uploading, the JPEG and XML database protocols that structure Flickr groups, photostreams or website content management systems, positions the imager and her 2012 images as one among many. The former is positioned as a Flickr-user object and the latter as a Flickr image-object. The former is constructed in a user database, the latter within an image database. Even offline, protocols create the same positions. To use my own local photo database is to position my images as objects within an archive and myself as a user. At the moment of consumption, too, the protocols set in motion imaging in terms of archive objects in database flow. The visitor to a Flickr page, my local photo “album” or a Google image search stands by the side of a photostream of 2012 image objects. That flow positions images and imaging as an issue of archive that parallels (and underpins) 2012 legacy. Images – like London 2012’s webcam archive – are equivalent and interoperable objects in an archive with a timeline looking back and forward, visualising a history and a future.

These protocol-driven practices of image-object production and consumption position the 2012 imager as creating an archive, a visual legacy online or on their hard drive. What is more, that 2012 archive/legacy is social. It is in social media spaces or displayed as a slideshow on my laptop for friends. The protocols position images and imaging in terms of a supposedly “visual democracy” that parallels the ideology of 2012 participation. There is no one image of the VeloPark design launch or the protest march, no decisive moment. The social flow of images on Flickr or Facebook or via a Google search display the archive as a continuing process that

parallels the idea of 2012 as a process. 2012 is an event that has begun and continues, a legacy being built by and for us all. While this image-space is actually owned and controlled by new media businesses such as Yahoo (Flickr), Google (Picasa) and Facebook as well as the telecom and IT companies that provide the gateways to production and consumption, the protocol-driven ideology says we are all participants in a new scopic mediaspace just as we are all participants in imag(in)ing 2012. My images can be added as favourites by London2012. They appear alongside official images in the Celebrate London 2012 Group or in a protocol-driven image search. The ideology of a visual democracy asserts that my images are as present and powerful as “theirs”.

The interoperability and flexibility of the JPEG/XML protocols appear open and democratic, allowing equal participation in a networked visual culture. This parallels and underpins the legacy/participation discourse of 2012, articulated by London2012 in terms of “opportunity” and by Games Monitor in terms of “responsibility”. For both, these are “our games” and network image-space is “our space”. The network imaging protocols position images as part of a purportedly public image commons. Actually these image spaces, existing as part of new media giants’ such as Yahoo and Google’s portfolios of dataspace primed for mining and advertising, are actually private commodity spaces where images become part of spectacular, dehistoricised and decontested distributed image streams which parallel a globalised, spectacular, dehistoricised and decontested event.

It is not that protocols determine the visual discourses and ideologies around 2012. As Latour writes:

All research on foundations and origins is superficial, since it hopes to identify some [actants] which potentially contain the others. This is impossible. If we wish to be profound, we have to *follow* forces in their conspiracies and translations. We have to follow them wherever they may go, and list their allies, however numerous and vulgar these may be. Those who look for foundations are reductionists by definition and proud of it. They are always trying to reduce the number of forces to one force from which others can be derived (1988, p. 188).

Protocols are not foundations, they are actor networks that have become black boxes, so stable and overlooked that the complex internal workings that structure and enable network effects are made invisible. And it is this perspective on code that opens up the possibility for new ways of imag(in)ing.

COUNTER-PROTOCOL: EXPLOITING THE GAPS IN THE REGIME

For Galloway, the notion of code as an actor in regimes of truth and power opens up a potential for critical movements that, taking his language from the computer hacking community, he calls “exploits” or “counter-protocological” struggle (Galloway & Thacker, 2007). Galloway and Thacker talk of a counter-protocol, not as something outside protocol, but as a gap within which a ‘hacker’ can insert an ‘exploit’ which leverages open that space. As they write, “Protocological struggles do not center around changing existent technologies but instead involve discovering holes in existent technologies and projecting potential change through those holes. Hackers call these holes “exploits” (Galloway & Thacker, 2007, p. 81).

Just as a computer virus uses the code of a program against itself or “exploit[s] the

network" (Galloway & Thacker, 2007, p. 85), so the counter-protocological exploit exposes the existing protocols and network relations and reconfigures its power relations. In the case of scopic networks, they reconfigure the imaging and imaginings.

To simply take or write alternative images, as we have seen, is to remain within the emergent regime of truth, in this case 2012 as an issue of legacy and participation and 2012 imag(in)ing as an issue of archive and visual democracy. However, to use the same protocols as the basis for what are commonly called mash-ups is to create an exploit, to make the actants redraw the power relations and re-structure the spaces of possibility for imag(in)ing 2012.

A mash-up is a network-based application that takes data from multiple sources and combines them. Many examples overlay data on maps but a mash-up can include any data in standard protocols. Like a remix artist, a mash-up hacker combines existing content (even copyright content) to create a new work.

The implications and potential of remix culture are well known (Lessig, 2008; Berry, 2008). My aim is not to rehash questions of creativity and copyright, but to argue that data mash-ups raise the same issues and that, as protocol-enabled cultural practices, offer room for counter-protocological struggle.

The JPEG/EXIF and XML protocols, as well as setting in motion particular visual discourses also enable mash-ups. In fact it is the same characteristic of interoperability that drives both. Just as the ideological scopic construction of 2012 is empowered by the JPEG's ability to be viewed, filed and linked as well as XML's capacity for streaming those image fragments across multiple distributed network spaces and relations, so those same protocols, as they glue together the data in mash-ups, set in motion new scopic and ideological possibilities and fields of struggle. A protocol-driven mash-up can set new imaginaries in play, collide dominant and counter imag(in)ings and arguably disturbs the visual hegemony.

As part of practice-based research at Birkbeck, University of London, I am developing a range of such mash-ups. One uses XML feeds to pull distributed JPEG images of 2012 into a slideshow randomly colliding official, unofficial, corporate and activist imag(in)ings, flattening their signification, placing their interoperability rather than their individual signification at the centre. Another mash-up uses the geolocation elements of JPEG/EXIF and the geo-XML protocol, KML to "lift images over the Fence". At the time of writing, the 2012 site is sealed and secured by surveillance, visual and physical policing. It is not possible to image or imagine within that Fence. By changing the EXIF data, I can place images inside that fence and so when people visit my 2012 map (or later when they use the GPS on their phones) they can see whatever JPEGs I choose - my own, other people's, screengrabs of imageflows, historical images, corporate logos, images from sponsors' factories, whatever interoperable JPEG images I choose. I am developing this particular mash-up to enable others to do similar image-hacking.

For Galloway and Thacker, the counter-protocological intervention "must not be anthropomorphic (the gesture, the strike) it must be unhuman (the swarm, the flood)" (2007, p. 98), not a single alternative image or even imaging practice but a flood of imag(in)ings. These experiments or potential deconstructions of the visual hegemony and disciplinary scopic regime are not counter-images, nor do they present a different view. What they aim to do is foreground the processes and visual discourses of archive and democracy that underpin the ideology of legacy and participation. These interventions are possible because of protocols.

A protocol-focused analysis is not just a new form of technological determinism. Addressing software standards and protocols as actants moves the account away from any form of determinism but rather tells the stories of a protocol's network relations with other social, technological and even human actors in terms in their specificities; the particular configurations of data and database practice. It is this account of protocols as black boxes, where power relations can unfold from within overlooked actors that offers the space for a dialectical practice: what Walter Benjamin called "dialectical images".

In his great unfinished *Arcades Project* (1999) Benjamin collected fragments of material about the nineteenth-century Paris Arcades. He brought together (mashed up one might say) traditional historical information with what he called the "rags 'n refuse" of the everyday. He built an analog database of file cards with quotations, aphorisms and historical details perhaps with the aim of producing a traditional linear book but also, as with his earlier *One Way Street* (2009), of writing history in a new way.

The *Arcades Project* can be seen as a form of data mash-up, an exploit opening up the process of writing history. In Benjamin's hands the "rags 'n refuse" – the advert, the window display, the fashions - are 'black boxes' that unfold to tell the story of a particular moment in the history of capitalism. The fragment is his protocol. It gives his work its particular form in the same way that JPEG generates the form of Flickr-space.

One could argue that Benjamin's collection offers a fragmentary view of history where structural processes of capitalist development are hidden by a kaleidoscope of signs which are made the centre of attention by his method. Likewise, mash-ups of 2012 imaginings could be seen as distracting critical attention from the workings of globalisation. I would argue that the two mash-ups tell the story (as Latour might express it) of the Paris Arcades or 2012 in a way that avoids determinism and pays attention to the specificities of the actor-networks at work in those complex historical moments and processes. Furthermore, in terms of critical intervention, Benjamin would argue, colliding fragments in his database of file cards or a mash-up app, creates a Brechtian-style montage that shocks the viewer and sends meanings and significations spinning.

The protocols (the 'fragment' or JPEG/XML) hold within their black boxes the potential to 'hide' history but also to open it up, as an exploit. The same protocols that can underpin ideologies of consumerism and capitalist development, legacy and participation can set in motion mash-up / dialectical image montages that destabilise that hegemony.

CONCLUSION

There is obviously a question to be asked about the efficacy of the exploit and montage as a critical method. That debate has raged since Eisenstein did his first edits. What is clear is that whether my (or anyone else's) mash-ups, raise the individual viewer's awareness of scopic discipline and 2012 ideology, they set questions and problematics in motion in terms of the broader visual system and industry. How do we understand issues intellectual property in terms of mash-ups? If a mash-up acts as a window allowing one to see images that remain on their owners' pages, does the mash-up infringe the photographer/imager's copyright? If it positions those images within streams of other fragments, does a mash-up constitute a new work? a derivative work? or some new form? How does this sit within debates about Creative Commons?⁸ A related set of

questions emerge around issues of the archive and ownership. Is distributed imagespace really public or is it proprietary, even private? As archives are built in the Cloud and our phones and computers become terminals that provide always-on access to databases held by private media businesses on distributed servers, the question goes beyond “whose data?” to “whose index?” When Flickr, Google and Facebook provide the search, index, tagging and connecting protocols and services that make sense of images and image conversations, the issue is not just one of image ownership but the ownership of network relations.

I have argued that the contemporary scopic regime is characterised by ideologies of openness and democracy which are related to 2012 discourses of legacy and participation. Protocols are intimately connected with those discourses and ideologies. But as protocols they can also be made to work within a framework that unpicks the scopic hegemony, rendering intellectual property, ethics and politics problematic. What is perhaps more important is that mash-ups place those problematics at the heart of imaging for the producer and consumer. The producer is forced to see herself as an imager implicated in social imaging and imagining and network power relations. Similarly the viewer is placed in relation to a heterogeneous but nevertheless power-full set of images and required to engage with them as objects in social and power relations within database systems rather than as discrete signifying images. For both, their stake in the creation and consumption of a particular form of visual legacy and spectacle cannot be avoided.

ENDNOTES

- 1 I use ‘2012’ to draw attention to the fact that the London Olympics must be seen in the context of a brand which is bigger than the sports event itself and has been in process since the bid was announced and will continue after the Games themselves end.
- 2 It is important to see these image-objects as material as well as virtual. The digital code that makes up these objects is located in a particular virtual place in a database as well as a particular physical place on a hard disc (Kirschenbaum, 2008) whether on a personal computer or a state or corporate server farm. This becomes particularly important when we address how code, the material form of the image, can be a site of struggle and critical engagement.
- 3 Sunil Manghani (2009) addresses relationships set in motion by text messaging in terms of Japanese Tanka love poetry and there are clearly parallels between 140 character Tweets and short observational poetry forms such as Haiku. There are perhaps also parallels between the word pictures circulating as Tweets and western forms of short, image-centred, objective poetry developed by the Imagists and Objectivists.
- 4 For an audio recording of the debate between Latour and Harman, see: <http://anthem-group.net/2008/02/08/recording-of-the-harman-review-bruno-latours-empirical-metaphysics>.
- 5 Although it is common to say that an image has been saved in a JPEG format, with .jpg as the file-type, technically the image has been compressed using the JPEG protocol and encoded/saved as a JFIF and/or EXIF file.

- 6 Some services such as Evernote make a selling point out of the fact that images uploaded to a user's account are optically recognised and the text made searchable. Clearly Facebook could use similar OCR software to index data in users' photographs. What Facebook does do with photographs is allow users to annotate them by adding text comments which form part of their datastreams effectively adding image information to the range of data that it holds and sells ads against.
- 7 Other sites such as www.earthcam.com allow users to not only see through the webcams but control them. iPhone Apps such as LiveCams even allows an imager to control take remote photos through the webcams.
- 8 In January 2010, the Independent newspaper used Flickr to search for images of the blizzards that were sweeping the UK. It published a form of image mash-up on its website but was later forced to apologise to a photographer whose image it used for breach of copyright. The paper's editorial director for digital however argued that the photo had remained on Flickr and that the paper had merely provided a view of that space. "We took a stream from Flickr... We did not take the photo from Flickr, nor present it as anything other than as it is shown there. I do not consider, therefore, that any copyright has been breached or any payment due," he told [the British Journal of Photography](#).

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