'The secret of great wealth with no obvious source is some forgotten crime, forgotten because it was done neatly.'
Honore de Balzac

Houston is popularly known as ‘the oil city’. It has siblings bearing the same name in the great oil-producing regions of the world: Baku, Kirkuk, Luanda, Fort McMurray, Midland-Odessa and Murmansk. Some cities carry the appellation because they are the hubs of corporate power in the universe of Big Oil (San Ramon, California and Irving, Texas come to mind). Others, like Dubai, are the products of vast oil wealth, spectacular excretions of a particular sort of financial and consumerist excess. As Mike Davis says, Dubai is the Miami of the Persian Gulf sutured to a ‘monstrous caricature of the future’ (Davis 2007: 53).

Virtually all American cities in their morphology and geographical dispersion – what John Urry (2004) has insightfully called the unbundling of home, leisure and work to produce a ‘splintered’ urbanism – are the products of hydrocarbon capitalism – of a culture of automobility predicated on the availability of cheap gasoline to fuel the particular form of the internal combustion engine otherwise know as the car. Much of what is modern in the modern city is the by-product of oil. The city as a way of life is, in this specific sense, petro-urbanism a la lettre.

I want to reflect upon a particular iteration of the oil city, and upon its future. Such are cities standing at the epicenter of the African oil and gas production, metropolises which house the fundamental oil infrastructure (refineries, gas plants, petrochemical plants, export terminals), serve as barracks for the armies of workers employed on the rigs and platforms, and accommodate the corporate enclaves of the likes of Shell, Agip and ExxonMobil. These cities stand as hubs within a vast regional (and ultimately global) network of oil ‘hardware’. The global oil and gas infrastructure – the arteries and organs of the oil and gas global value-chain (this is the industry term of art) – is nothing short of gargantuan.
To say that the value of the industry now totals more than USD40 trillion says everything and nothing. Close to one million producing oil wells puncture the surface of the earth (77,000 were drilled in 2008, 4,000 offshore); 3,300 are subsea, puncturing the earth’s crust on the continental shelf in some cases thousands of metres below the ocean’s surface; and more than 2 million kilometres of pipelines blanket the globe in a massive trunk network. About 75,000km of lines transport oil and gas along the sea floor. Another 156,000km of pipelines will be completed between now and 2012. There are 6,000 fixed platforms, and 635 offshore drillings rigs (the international rig total for 2009 is more than 3,000 according to Baker Hughes). A total of 4,295 oil tankers (vessels greater than 1,000 long tons or more deadweight) move 2.42 billion tons of oil and oil products every year, a figure which represents more than one-third of global sea-borne trade. Worldwide more than 700 refineries process crude oil and more than 80 massive floating, production and storage vessels have been installed during the last five years. Overlaid on the oil and gas network is an astonishing patchwork quilt of territorial concessions – the oil blocks acquired under long-term lease by the international and national oil companies – spaces within which exploration and production is conducted. Spatial technologies and spatial representations are foundational to the oil industry and include seismic devices to map the contours of reservoirs, geographic information systems to monitor and metre the
flows of products within pipelines, and of course the map to determine subterranean property rights. Hard-rock geology is a science of the vertical, but when harnessed to the market place and profitability it is the map – detailing the spaces of oil – which becomes the instrument of surveillance, control and rule. The oil and gas industry is a cartographers’ wet dream: a landscape of lines, axes, nodes, points, blocks and flows.

These industrial landscapes – let’s call them petrolic surfaces – become, over time, relics and ruins, residual and abandoned landscapes as photographer Edward Burtynsky calls them:

"You have an industrial process that has transformed a primal landscape, and then once forgotten, it begins to turn into something between the natural landscape and a man-imprinted landscape. They become the leftovers after the banquet, residual territories; not quite dead, as they regenerate, they begin to generate a new life, but it is a compromised life. (Burtynsky 2008: 42)"

The transformative power of oil, that is to say the human ecology of hydrocarbon capitalism, dwarfs virtually every other sector (with perhaps the exception of the spectre of nuclear winter). The collateral damage associated with producing and moving vast quantities of oil – the nightmare of Exxon Valdes, the massive scarification of the Canadian tar sands – is hard to calculate. In any inventory of the most polluted spots on the face of the earth, the oilfield figures prominently. Virtually none of these costs (externalities as the economists quaintly put it) show up in the price we pay at the gas pump. When deployed as a target of war or insurgency, oil infrastructure becomes a weapon all of its own. The stunning aerial images of Kuwait’s incendiary oilfields, detonated by Saddam’s retreating forces, have become part of the iconography of war.
This oil hardware is fed, literally and figuratively, by a seemingly unstoppable rush to discover more of a resource that everyone agrees is finite. The appetite for oil is insatiable, and the lengths to which the industry will go to obtain more is, well, to the ends of the earth, or a mad gallop to the bottom of the ocean. Deepwater exploration is the new mantra (deepwater offshore production is expected to grow by 78 per cent between 2007 and 2011).

On 2 August 2007, a Russian submarine with two parliamentarians on board planted a titanium flag 3.2km under the North Pole. At stake were the lucrative new oil and gas fields – by some estimations 10 billion tons of oil equivalent – on the Arctic sea floor. In late 2006, a consortium of oil companies discovered oil at a staggering depth 240km into the Gulf of Mexico. The test well, Jack-2, delves through 2,100m of water and 6,000m of sea floor to tap oil in tertiary rock laid down 60 million years ago. The drill ships – and the production platforms – required to undertake such are massive floating structures, much larger than the largest aircraft carriers and much more expensive, costing well over half a billion dollars (and close to one million dollars a day to rent). In 2007, a the vast new Tupi field in Brazilian coastal waters was discovered in 200m of water below a massive layer of salt in hugely inhospitable geological conditions. One test well cost more than USD250 million. What is on offer is a great deepwater land grab at 700m below the surface. The technoscience of oil and gas is something of a train wreck: utterly terrifying and compelling at the same time.

We might say that oil cities are centres of political and economic calculation (I take the language from Bruno Latour), within a vast but partially visible network of flows and connectivity. If oil has its onshore and above-ground pipelines, rigs, platforms, flow stations, floating production and storage vessels (FPSOs) and export terminals, it also encompasses an invisible underworld of reservoirs, subsea pipelines, submersibles and risers.

These petro-networks, what I have called an oil complex, are extensive in their connectivity. As a space of flows and connectivity, the oil and gas universe is one of geo-strategic operation, saturated by considerations of power, calculation, security and threat (Campbell 2002: 950). This global oil network is reminiscent of Mark Lombardi’s extraordinary atlas of the ‘uses and abuses of power in the global political economy’ (Lombardi 2003: 19). Like the drug- and money-laundering networks that so intrigued Lombardi in his attempts to map the black sites and blank spaces of the map of the global illicit economy, the world of Big Oil is, in spite of its formal market character, an industry shrouded in secrecy, a world in which even the most basic statistics can be meaningless. It is a zone of economic and political calculation that can only be understood as a form of what Karl Marx called primitive accumulation – in other words, violent dispossession and appropriation. Oil cities, and oil regions generally, are epicentres of extraordinary violence and conflict. For Werner Herzog they are landscapes of the apocalypse.

The hubs, spokes, flows and nodes that make up the oil-military-construction-drug-finance network (the defining qualities of the oil complex) led David Campbell to see the oil and gas system as capsular in form: ‘capsules are enclaves and envelopes that function as nodes, hubs, and termini in the various networks and contain a multitude of spaces and scales’ (Campbell 2005: 951). Oil rigs, floating storage vessels, flow stations, refineries, gas stations and cars, are all capsules within the global oil and gas network. In turn, oil cities might also be read as particular capsules, composed of other capsules, which emerge from and are given shape by a network in which the visible and the invisible, secrecy and duplicity, spaces of flow and immobility, and forces of power and security operate to produce a perfect storm of violence, inequality, militarism and corruption.

When located on this dark canvas, what makes African oil cities – Port Harcourt or Warri in Nigeria, Luanda or Cabinda in Angola – different? Oil states awash in petrodollars embark upon ambitious state-led modernisation programmes: gigantism, ambition and corruption are their hallmarks. Explosive rates of urbanisation – driven by the prospect of urban employment...
amid a sea of rural poverty and typically by the collapse of agrarian employment – compound the problems of weak urban infrastructure and service provision. The slum world of the global south, so vividly captured by Davis in *Planet of the Slums*, assumes a new hypertrophied form. Millions are barracked in the most terrifying squalor with few job opportunities conferred by a notoriously labor-extensive industry. At the same time for the lucky few – those able to benefit from oil rents, political patronage and massive corruption – the city becomes a personal enclave (the heavily walled and fortified compound is its urban form) of unimaginable wealth and conspicuous consumption. Inequality of the starkest sort becomes the stamp of the oil city. Unprecedented rates of urban migration coupled with stupendous wealth among a class of oil oligarchs and state functionaries (whether military or civilian) makes for a peculiar dynamic to real estate markets. On the one hand property prices in oil cities (Luanda is a striking case in point) can be among the highest in the world. On the other, armies of the poor occupy illegally settled lands on the periphery of the city (or are displaced there by violent government-enforced slum clearance in the city centre to make way for the latest oil recruits). Many fall under the sway of slumlords and local government officials eager to exploit their ‘illegal’ status.

The oil city is where the hyper-modern meets the hyper-poor. Luanda’s sparkling corporate sea-front offices meet Luanda’s *musseques* [slums], in which 85 per cent of the population ekes out a miserable existence. The oil city appears as a peculiar sort of parcelised sovereignty: a capsule within the oil infrastructural grid. The corporate enclaves of Chevron and Shell resemble nothing more than militarised encampments. The upmarket residences (and elite government residential areas) are gated communities with fully privatised water, electricity and service provision. Those without the means build their own walled compounds with their generators, wells and guards. Capsules within capsules, enclaves within enclaves. In this sort of petrolic-cityscape it is not at all clear what urban citizenship might mean. The slum world is held together ideologically by the call of evangelical churches or radical Islam, and the world of oil elites by the siren call of the global economy and neoliberalism. Both fear the threat of crime, rebellion and the shadow world of political violence and corruption.

Oil cities are combustible, unstable and ultimately unsustainable in human and ecological terms. Oil is, of course, finite. It will be exhausted. In this sense oil cities must confront their future, and their fate, from the moment the first oil begins to flow. They have in this regard built-in obsolescence. This is both an opportunity and a burden.

References