

Carceral circuitry

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Carceral Circuitry: New Directions in Carceral Geography

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Abstract

Despite the popular impression of prisons and other carceral spaces as disconnected from broader social systems, they are traversed by various circulations that reach within and beyond their boundaries. This paper opens a new analytical window onto this reality, developing the concept of 'circuits' to critically enquire into the carceral. Drawing inspiration from Harvey's (1982; 1985) work, the paper makes circuits do fresh work, teasing apart the emerging carceral landscape to provide a new critical epistemology for carceral geographies. In so doing, a meta-institutional agenda for critical carceral geography is derived, and possible ways to short-circuit carceral systems are revealed.

Keywords

Carceral geography, circuit, circulation, counter-mapping, prison, institution.

Carceral Circuitry: Opening Remarks

In February 2016 the BBC (2016) reported the increasing use of drones to fly drugs, mobile phones and other contraband into British prisons. While no instances of smuggling by drones were detected in 2013, by 2015 33 instances had been recorded. The biggest find, in December 2015, featured a drone, drugs, a mobile phone, a phone charger and USB cards. Drone flights have reportedly become so common, especially during night hours, that prison staff find them unremarkable (*The Guardian*, 2016a). Drone-drops, alongside the still-popular 'throw over' (the wall) method, are increasingly supplementing in-person smuggling such as during visits; with prisoners 'ordering' drug 'deliveries' in ways which mimic home delivery services on the outside.

The rise of what the UK prison authorities call 'drone attacks' (*The Guardian*, 2016a) illustrates the unprecedented pressure that the prison boundary is under. The popular impression of prisons as impervious, closed-in on themselves and cut-off from the wider world is being challenged by rising prison populations and technological innovations that have precipitated all manner of mobilities and circulations both within prison walls and across them. Geographers have critically discussed Goffman's (1961) notion of the 'total institution' in order to call attention to this inter-connectedness of prisons and other carceral spaces (Moran, 2015; Fortes, 2015; although see Schliehe, forthcoming, for a recovery of Goffman's work in this respect). Their intention has been to counter the imagination of a closed-off and sealed carceral institution, discussing instead the liminal spaces, 'betwixt and between' the inside and outside of prisons (Moran, 2015: 90).

These interventions beg the question of what an meta-institutional geography of the carceral would look like, meaning not simply a geography 'above' carceral institutions, but one that enquires *beyond* them, combining supra-, sub-, inter-, intra- and extra-institutional imaginaries and perspectives. Carceral geography is in a strong position to address such a question because, unlike prison studies, the subject of carcerality is not approached via an institutional lens at the level of the discipline itself. Rather, carceral geographers have already been at pains to emphasise the continuities that stretch across institutional boundaries (Allspach, 2010; Moran, 2015; Moran et al, 2014) providing an ideal foundation for our intervention in this paper. We propose a new critical epistemology of carceral spaces that foregrounds the meta-institutional dynamics of carceral systems. We develop the concept of carceral 'circuitry' as a way to give priority to the connections between, around, within and beyond carceral institutions.

We are motivated by the concern, expressed by prison scholars and critical carceral geographers alike, that the development of carceral systems, and the enrolment into carceral landscapes of increasingly diverse places such as immigration detention centres (Loyd et al., 2012; Mountz et al., 2013; Gill, 2016), homes (Moran and Keinänen, 2012), factories, hospitals and psychiatric asylums (Philo, 2004; Curtis 2010; Curtis et al., 2013), hotels (Minca and Ong, 2015), schools (Gallagher, 2010), poor areas of the city (Herbert, 2009a), ghettos and camps (Marcuse, 1998), is unrelated to any objective rise in 'criminality' *per se* (Gilmore, 2007; Wacquant, 2002). Rather it is driven by mutations in the neoliberal landscape, inclusion of criminal justice systems in industrial systems for the generation of value, criminalisation of poor and othered communities, the mobility and agility of finance capital and the expedient generation of surplus populations (Tyner, 2013; Peck, 2003; Gilmore, 2007).

The Marxist notion of circuits offers critical purchase on these developments because of its connection with a rich lineage of work on resistance to capitalism, neoliberalism and the wastage of swathes of the population (Harvey 1982; 1985; 2008). The explicitly causal relationship between the structural mechanics of capitalism and observable inequalities,

exploitation and exclusion offers a powerful conceptual starting point for understanding why and how carceral spaces are proliferating and evolving.

Of course, there are other theoretical approaches that can and should have a place in the study of carceral geographies. The new mobilities paradigm alerts the sub-discipline to the confinement and curtailment of various *different forms of presence* in the emerging carceral milieu (Gill, 2013). And assemblage thinking promises to cast light on a variety of characteristics of carceral spaces. Recent theorisations of *circulation* (Foucault, 2007; Salter, 2013; 2015), for example, open carceral geography to both the negative and productive elements of security power. The agency of objects like keepsakes, drugs and cigarettes in carceral space is also foregrounded through an assemblage approach. And a focus on the *fragility* that assemblages (like prisons) entail promises to inject intellectual energy into projects of tactical prison resistance that also seek out the ‘gaps, fissures and fractures’ (Anderson and McFarlane, 2001: 125) of carceral institutions.¹

Yet whilst the new mobilities paradigm provides valuable context to the discussion that follows, it does not have a radical heritage that is comparable to the Marxian tradition of resistance. And while Actor Network Theory and assemblage thinking tender valuable insight into the networks that we will discuss in subsequent sections, they have an antipathy towards layered ontologies and macro theories (Callon et al., 1986; De Landa, 2006; MuGuirk and Dowling, 2009; Murdoch, 1997) that makes it difficult for us to elucidate the causal connections to deeper structural and structuring forces, like capitalism and neoliberalism, that we, alongside prominent theorists of carceral space (Sykes, 1958; Foucault, 1977; Wacquant, 2002; Peck, 2003), see as central to the production of the current carceral milieu.²

Our interest in this paper is to provide a new way of critically apprehending the causes and consequences of the increasingly inter-connected, more-than-institutional landscape of carceral spaces and practices that geographers and others have studied, and a Marxist approach is well-suited to this critical aspiration. Our intention is to make the notion of circuits do fresh work, by exploring the real, material and lived circuits that compose carceral systems as the basis for a new analytical window onto the empirical reality of inter-connection across, between and within carceral institutions.

In developing a Marxist approach to urban development, Harvey (1982; 1985) distinguishes between primary, secondary and tertiary circuits of capital. The first refers to investment in commodity production, and the second and third refer to channels into which capital is diverted when commodities are over-produced. These include investment

¹ We note and support the recent self-conscious politicisation of assemblage thinking among geographers.

² See Kirsch and Mitchell (2006) for an elucidation of our adopted position on the persistence of Marxism in relation to ANT.

in large scale physical infrastructure (the second) and investment in technology and social expenditures (the third), both of which would be difficult for capitalists to manage individually, hence requiring the capitalist class and the state to act on their behalf. From its inception then, 'circuitry' has been associated in geography with the political economy of capitalism through ongoing 'spatial fixes' that rely on 'accumulation by dispossession' (Harvey, 2008: 34), which describes the ongoing need for capital's expansion at the expense of marginalised groups.

In this paper we give attention to capital's grounded manifestations and consequences. We take the multitudinous networks and circulations that traverse and comprise carceral systems as the starting point for a radical project of resistance to the structural causes of the contemporary proliferation and diversification of carceral spaces. We are not, then, in the business of developing new metaphors for carceral space. What we are doing is precisely more-than-metaphorical – we are developing ways to ground the inherited metaphor of capital in relation to the phenomena we and other commentators observe in the context of contemporary incarceration.

Given this practical orientation, the paper advocates the critical mapping and counter-mapping of the circuitry it identifies in an attempt to figuratively 'short-circuit' it. Critical mapping facilitates the identification of the topographies of carceral systems that connect seemingly disparate sites through common processes of capital accumulation and erasure (Katz, 2001). By beginning with the transversal components of carceral space, the paper exposes the often-observed circuitry of prisons and other carceral establishments to critical view. Counter-mapping, moreover, involves the generation of counter-topographies, that re-connect communities and struggles that are marginalised through the processes of capital accumulation we identify (Katz 2002; Counter Cartographies Collective, 2012). With these radical cartographic methods in mind we set out an agenda for the critical visualisation and counter-mapping of the carceral circuits we describe.

In the next section we demonstrate the existence and salience of a set of key carceral circuits, which challenge the popular perceived disconnection between carceral establishments and wider social systems. We discuss three in particular: the circuits of people, objects and practices that circulate in, through, between and around carceral spaces in various ways. In the third section we move from the ontology of circuitry to set out our critical epistemology. Here we find it useful to deconstruct dictionary definitions of circuitry³ in order to derive a series of conceptual tools for acquiring and constructing knowledge about circuits, based upon six different ways to probe into the real-but-obscured circuitry of the carceral landscape. In this way we are able to offer a practical analytics of carceral circuitry. In the fourth section we set out the operationalisation of

³ The characteristics of circuits we list in the following section are derived from definitions offered by the following dictionaries: Collins English Dictionary (Complete & Unabridged, 10th Edition), American Heritage Dictionary of the English Language (5th Edition) and Random House Kernerman Webster's College Dictionary (2010). We have synthesised and summarised the definitions offered by these sources.

our project through critical mapping. We explore the types of questions our epistemology gives rise to, and examine how connections across carceral space can be exposed as a means of disclosure and critique. Through our discussion of the ontology, analytics and operationalisation of carceral circuits, our aim is to provide a radical and productive new perspective on carceral systems.

On the Ontology of ‘Carceral Circuitry’

In this section we propose carceral circuits as ontologically suited to aid understanding of the proliferation and development of contemporary carceral spaces. We posit that this perspective will help to check—in the senses of both slowing and inspecting—the sophistication and development of prison and detention-industrial complexes (Davies, 1998; Golash-Boza, 2009), as well as more disparate carceral spaces. We thus advance Turner’s (2013: 41) call for attention to the ‘relational, fluid, contradictory and nuanced spaces of imprisonment’.

We advocate a similar ontology to that which Ian Cook and others have developed in relation to ‘things’ (Cook et al., 2004; Cook et al., 2006). By ‘following’ phenomena such as food and minerals, the complexity, contradictions and over-arching logics of their journeys can be laid bare in a way that is not possible if a partial view of particular stages or places that feature in the supply chain are examined in isolation. This is, for Cook, about the ‘politics, poetics and economics of connection’ (Cook et al., 2006: 656). Such an ontology helps to undo the unhelpful ‘boxing-up’ (Ibid: 656) that a compartmentalised world view can promote, which makes it hard to understand the entanglements *between*, say, fields, packing plants and shipping ports in the case of food, and classrooms, cells, courts, shop floors, living rooms and inmate transportation vans in the case of carceral spaces. Just as Cook’s focus on the journeys of foodstuffs is intended to counter the alienation of consumers from the conditions of production of products they consume (Cook et al., 2004), so the following of circuits through carceral space seeks to re-articulate the relations between peoples’, objects’ and practices’ journeys and the more-than-institutional systems of capital and value-creation that drive them.

Our ontology carves up the imagined geography of discrete institutions which men and women enter and from whence they are ‘released’, in favour of emphasising continuity across institutional and urban settings (Wacquant, 2001; Allspach, 2010). To borrow from actor network theory, we conceive of the carceral landscape as ‘fibrous, thread-like, wiry, [and] ropy’ (Latour, 1997: 3). In this landscape, circuitry names the routes, courses and pathways that constitute liminal carceral space, thereby addressing them in their own right rather than as interstices. We discern three central circuits.

Circuits of people

The movement of people is a striking characteristic of carceral space. Carceral geographers have recognised the enrolment of mobility in order to punish through the use of transfers between carceral establishments in both immigration detention and prison (Gill, 2009; Moran et al., 2012; Heimstra, 2013). Moving inmates can sever them from communities of support, discipline them, problematise their access to healthcare (Stoller, 2003) and threaten them with further relocations. Inmate transportation can also act as the initiation into a disorientating and subjectifying system (Feldman 1991; Svensson and Svensson 2006; Moran et al., 2012).

Such 'inmate shuffle' is deleterious in terms of both mental health (MacKain and Messer, 2004: 87) and physical well-being (Gill, 2016) and represents an expedient, unregulated way in which states and private security companies stamp authority over vulnerable populations (Svensson and Svensson, 2006). Transfers can be justified on the basis of administrative procedure, cost, security, sentence severity, informal punishment and efficiency (Follis, 2015). Whatever the justification, the spatial churning of inmates serves an important function in shoring up and performing the symbolic power of carceral spaces.

We would not, however, confine attention to the circuitry of inmates: there is a wider circuitry of people through carceral spaces. Prison guards, for example, often display high rates of staff turnover due to stressful conditions and low pay whilst elite figures including judges and institutional directors orbit within a different, high-status transcarceral space. There is also an ancillary, sometimes opposite, circuit of support workers, carers, partners and significant others who trace and 'trail' (Kofman, 2004) the inmates and detainees that they care about. These circuits are driven by considerations such as loyalty, family and fidelity in the case of supporters (Harman et al., 2007; Comfort, 2008; da Cunha, 2008), and profit, role requirements, knowledge production and career success in the case of elites.

Circuits of objects

The circuitry of people around carceral space is complemented by, and occasionally substituted for, the material circuit of possessions, memos, letters, stamps, books and magazines, photographs, food items, hygiene and grooming supplies, as well as packages and gifts that express emotional attachments and needs. These material objects link incarcerated individuals to families, previous lives and legal supports, as well as positioning them within broader circuits of production and consumption, labour and exchange, and supply and demand.

Photographer Marco Pavan has examined how material objects left behind in camps on Lampedusa, Italy, convey stories of loss and dispossession (Schiller, 2014). Less work, however, examines the circuits of material objects in other spaces of confinement, such as migrant detention centres, despite calls to attend to the material in forced migration

studies (Darling, 2014). This is partly because of the challenges associated with gaining access to these 'closed contexts' (Belcher and Martin, 2013), but it may also be linked to the privatization of a host of services within spaces of confinement. Conlon and Hiemstra (2014; 2016) suggest that the ability of incarcerated and detained individuals to acquire objects whose availability many of us take for granted, such as soap, socks, tobacco, branded clothing and trainers, and phone cards, is not only regulated by informal exchange economies within the prison and across its boundaries. It is also tied to the operation of commissaries, often run by national and global corporations, who profit from a captive market in every sense. Prisoners' access to material commodities is also often linked to their behaviour with well-behaving prisoners receiving 'access to private cash, television in cells, more family visits, the opportunity to wear one's own clothes and to work in better-paid jobs, and more time outside the cells' (The Economist, 2013).

The material lives of contraband constitute a further facet of the circuitry of materials. The tightness with which carceral authorities spatially restrict various materials is a clear demonstration of (the fear of) 'thing-power' (Bennett, 2010). Anxiety that things could be contentious, contagious and contracted, resulting in the spreading of undesirable viruses, rumours, behaviours, addictions, delinquency, riots, fires, know-how, attitudes, language and dangerous ideas or information, has had a profound effect upon the architecture of carceral spaces and will continue to structure them as long as authorities fear their captives (Sibley and Van Hoven, 2009; Salle, 2011; Jewkes and Moran, 2014).

By tracing the circuitry of material objects through carceral spaces, not only can we gain insight into the social and cultural significance of 'things', we can begin to comprehend how everyday objects are linked to broader political economic processes, underscoring the importance of foregrounding the connection between site-specific and global circuits of capital.

Circuits of practices

Another key circuit concerns opportunities for the experimental mutation and development of policies and practices that a sophisticated and diverse carceral system affords. Carceral scholars have traced the international development of penal policies related to immigration detention (Flynn, 2014) and the diffusion of the American Supermax prison model into developing country contexts (de Dardel and Söderström, 2015), indicating the importance of attending to carceral policy circuits. A geographical approach, moreover, has much to offer such an agenda. Geographers have attended to complex policy mobilities as a way past the notion that policy 'travels' or 'transfers' from site to site (McCann and Ward, 2012; Cochrane and Ward, 2012; Peck and Theodore, 2012). This mutation of policy can be across relatively localised sub-national contexts, across different tracks (such as immigration/criminal, or jail/prison in the US) or across diverse international domains. We welcome Melossi et al.'s (2011) focus on the circulating responses to crime and punishment in their sociological study of punishment

and crime prevention policy mobilities. Nevertheless, they frame their investigation in terms of flow, travel and diffusion (following Wacquant, 2009), which leaves little room for examining how policies mutate through space or are assembled in contingent and emergent ways (Prince, 2010).

A centrally important policy interface concerns the claimed distinction between mainstream prison and immigration detention. On the one hand this claim crystallises into differences in accountability and provision on both sides of this divide. On the other hand the claim evaporates in situations where detainees experience prison conditions, are housed in prisons, and where they are increasingly the subject of discourse and practices conceived with criminals in mind (Bosworth and Guild, 2008; Martin, 2013).

Towards an Analytics of Carceral Circuitry

Having set out the ontology of circuitry, we now develop a series of ways to acquire and construct knowledge about the ontologies described. In this section we provide a set of analytical tools that will help carceral geographers probe into actually-existing carceral circuits. Our intention is to construct an epistemological toolkit with which to 'dig into' the abstract metaphors of circuitry and capital, inherited from Marxist analysis, in practical and applied ways.

We deconstruct dictionary definitions of circuits to derive six epistemological 'takes' on the concept, each implying particular research avenues pursued to varying degrees by carceral geographers. We organise this section according to these takes, with the intention of provoking epistemological innovation and defamiliarising the terrain.

1. A circuit is a regular course from place to place, usually returning to the point of origin.

A focus on circuitry points towards the importance of *recurrence* and carceral circuitry emphasises the spatial and temporal rhythms of mobility within carceral settings. This is already a theme within carceral scholarship. Within prisons, for instance, Martel (2006) identifies the constitutive role of routines and schedules in the production of prison time. Routines and schedules pervade carceral settings, and often have a coercive edge, as inmates are shunted through the spatio-temporal conveyor belt of (some variant of) cells, canteen, work, recreation, showers and back to cells day after day. Beyond the prison walls, Massaro (2015) describes the 'revolving door' of American prisons in which the circulation of poor, black men between city blocks and prisons is so common that everyday life gets fundamentally refigured. Police tactics develop that span city blocks and prisons, and communities adapt to the frequency of repeated incarceration through sharing the burden of visits and bail payments, and preparing for the next inevitable prison term.

Yet recurrence could be further explored. Concordant with an approach that privileges rhythm (Edensor, 2010), the lens of circuitry provides a way of thinking about the periodicity, frequency and pace of *carceral cycles* – of sequences and loops of ‘bodies’, communities and finance capital. This is promising not only as a way to describe carceral systems, but also as vectors of resistance understood in terms of slowing, interrupting or distorting these cycles. Inherent to this approach is the recognition that circuits return to their own starting point. ‘Return’ captures a key duality. For investors, return refers to the profits made on investments, whereas for those ‘released’ to impoverished communities with prospects equal to or worse than when they left, return captures the cyclical wastefulness of contemporary carceral systems.⁴

2. A circuit is a route along which things pass

Carceral sites are, sometimes accurately and sometimes erroneously, seen as key *passing places* in modern society, both literally and figuratively. Literally, carceral institutions have been stigmatised as sites where diseases spread and viruses pass between bodies. Ex-inmates are almost four times more likely than non-inmates to report urinary tract infections, hepatitis, and tuberculosis for instance (Massoglia, 2008), although it is often unclear whether the close living conditions of prison contribute to the spread of disease, or whether alternative explanations exist. Massoglia (2008) links the higher incidence of hypertension, emotional and psychological problems, chronic lung illness and heart problems among ex-inmates to the stress of being incarcerated rather than conditions *per se*. Moreover, populations that are incarcerated, and the places where prisons are situated (often in deprived neighbourhoods), are often more susceptible to disease, complicating the notion that diseases ferment behind locked doors (Oppong et al, 2014).

What is clear, however, is that the health risks that incarceration might pose are often compounded for minority inmates. Shabazz (2012) highlights how conservative policy-making, such as the banning of condoms, denial of access to clean needles for drug-users, and little if any HIV/AIDS education, has contributed to a disproportionately high rate at which black men from lower socio-economic backgrounds contract the disease in American prisons (see also McTighe 2014).

Alongside the literal passing of disease, carceral institutions have been associated with figurative ‘passing’ in two further senses. The first refers to the passing of time. Prison scholars have long recognised the pains associated with the slow passage of time in prison (Medlicott, 1999), but what characterises contemporary carceral systems is a new type of relationship between carceral institutions and time. ‘Timepass’ refers to the institutionalised disposal of time (Jeffrey, 2010): the organised warehousing of sections of the global population forced to wait purposelessly on the margins of developed

⁴ Major criminological studies have concluded that imprisonment is unlikely to reduce recidivism (Burnett and Maruna, 2004; Gendreau et al., 1999).

economies in prisons, camps, slums and detention centres in response to global politico-economic conditions. The calibration of carceral space to accommodate this wastage, over and above aspirations to reform or even punish the incarcerated, is a hallmark of the neoliberal carceral landscape (for work on waiting in incarceration see Conlon, 2011; Schuster, 2011; Mountz, 2011; Hyndman and Giles, 2011; Armstrong 2015). Such wastage of human life demands that we urgently find ways of addressing how ‘surplus populations’ are rendered ‘stagnant’ (Tyner, 2013: 704), considered ‘expendable’ (Ibid: 708) and are treated as ‘disposable’ (Ibid: 701) in the contemporary era.

A second figurative form of passing concerns deaths (euphemistically, ‘passing on’) among incarcerated individuals. Glamsa and Cabana (2003) list five causes of death in prison including natural causes, ill health or disease, suicide, execution and homicide, and we would add ill-treatment to this list. Deaths in custody are often obscured by impersonal bureaucratic processes, which blur lines of accountability immeasurably (Erfani-Ghettani, 2015). The issue of deaths in custody, however, has long been a rallying point for activists, protestors, prison abolition groups, and families who have lost loved ones. In the US, recent deaths of those in custody and at other points of contact with law enforcement agencies, such as Eric Garner, Michael Brown and Sandra Bland, have provoked wider awareness and invigorated campaigns seeking to end their occurrence. These campaigns highlight the highly racialised circumstances of the deaths and the wasteful loss of life and challenge the continued lack of accountability of law enforcement officers and prison guards.

These issues are not exclusive to the US. In Australia, the disproportionate deaths of indigenous inmates have also led to calls for justice and transparency following loss of life while in the supposed care of law enforcement agencies (Hooper, 2009). Prisoner deaths in the UK increased by 68% from 2006 to 2015⁵, with increases in both suicides and killings, triggering condemnation of a crisis in the prison system (The Guardian 2016b). Similarly British immigration detention has witnessed a steady stream of migrant deaths in immigration detention since 1989 (Athwal, 2014; Gill, 2016). These deaths illustrate that carceral institutions are located within a circuit of state-sanctioned violence that connects ghettos, institutions and borders, frequently with lethal consequences.

3. The circuit is a component of a larger system.

Another characteristic of circuits, particularly electrical circuits, is that they form part of a broader system, like a computer, and are not intended to be visible as part of the product. This facet of circuitry captures the way carceral systems are configured with a broader purpose in mind: namely the containment and management of purported economic and social risks (Rose, 2000). With electrical circuits much effort is expended

⁵ From 153 to 257.

nurturing the belief that a product, such as a smartphone, is both desirable and necessary. Likewise with carceral systems, significant political energy is devoted to propagating the idea that certain groups' incarceration is necessary to maintaining social order (Tyler, 2013).

Geographers and others have identified and critiqued a series of purported risks that prisons are understood to contain. The first is social risk. Wacquant (2009) documents the rise of an unmistakably racialised penal state in North America that cages a population that is considered 'contemptible and expendable in the post-civil rights and post-welfare era' (ibid: 195; Peck, 2003). Yet the development of modern American prisons has coincided with the recalibration of justice systems that *actively criminalise* minority segments of the North American public for political and economic, not judicial or protective, ends (Gilmore, 2007).

The argument that prisons absorb economic risk, a popular refrain in rural areas of the US (Glasmeier and Farrigan 2007; Bonds 2009), should be similarly criticised (Hooks et al., 2004; Gilmore, 2007; Kateel 2012). The fact that mass incarceration offers a short term way to reduce unemployment by removing surplus labour from the market (see Tyner, 2013) has proven irresistible for some politicians, keen to 'clean up' communities to attract investment. Unfortunately this strategy eventually leads to either a higher unemployment rate, coupled with social alienation because imprisonment often effectively dispossesses incarcerated individuals of future employability, or to spiralling imprisonment rates as more prisons are built to contain the unemployable (Western and Beckett 1999; Bonds, 2012).

Another way prisons are supposed to absorb economic risk is through the generation of cheap, flexible, contingent pools of labour. Often prison work is justified with recourse to its rehabilitative potential or its ability to relieve boredom – and often prisoners themselves can be grateful for the work opportunities. Although traditional forms of training in practical, employable skills such as forklift driving and plastering are highly valued by prisoners, the trend is increasingly to offer the kind of low-skilled work reminiscent of precarious and insecure 'zero-hours' employment on the outside. US prisons offer low-skilled private sector jobs to prisoners in sectors as diverse as furniture manufacture, call-desk support and electronics recycling (Stephan, 2008; Nowakowski, 2013). Prison work in Australia is often mandatory, and is exempt from many labour laws (Fenwick, 2005). In immigration detention in the US and UK, detainees are encouraged to participate in so-called 'voluntary' work programmes with exploitatively low wages, maintaining detention facilities and securing substantial savings for management companies (Conlon and Hiemstra, 2016). Of more significance than the rehabilitative promise of the work, then, is the fact that prisons house vulnerable, exploitable, low-skilled labour forces who represent the profitable 'spoils of hyper-incarceration'

(Wacquant, 2009: 165) in the form of a captive resource that Bair (2007) has likened to debt bondage.

4. Once within a circuit, movement is compulsory

A further characteristic of some modern carceral systems – often those located in the heartlands of liberal democracies – is the obligatory movement they entail. For some carceral scholars, the traditional association between punishment and immobility is being reconfigured in important ways (Mincke and Lemonne, 2014; Gill, 2013). While mobility has always haunted punishment, for example via historic sentences such as ‘banishment’ (Herbert, 2009a) and ‘transportation’, modern prisons in liberal democracies increasingly require the mobility of prisoners in ways that are connected to their active participation in liberal society. This is one manifestation of what Mark Salter has described as ‘the security techniques of inclusion, facilitation, and acceleration’ (2013: 9).

Mobility becomes a way to ensure the exposure of inmates to the demands of social life, whilst it is often the powerful who enjoy the luxury of stillness or withdrawal (Bauman, 2000). For many inmates this means that instead of finding themselves with nothing to do, they are increasingly likely to find themselves answerable to a ‘mobilitarian ideology’ (Mincke and Lemonne, 2014: 528) that propels them to engage in a series of activities that promise to render them suitable and useful future liberal subjects: including education programmes, fitness schemes, training, employment and victim compensation schemes (Turner, 2012; see Conlon and Gill, 2013 on comparable immigration detention regimes). While not under-estimating the purposelessness of carceral warehousing globally, this type of mobility involves the instrumental re-purposing of the incarcerated that the prison boundary, as well as its internal divisions, must be permeable enough to allow.

For inmates that refuse this form of circuitry, an auxiliary circuit awaits. Inmates who show no interest in participating in their own improvement are likely to be diagnosed as needing special treatment by experts, especially psychologists (Mincke and Lemonne, 2014). Such inmates affront the liberal reformatory system that requires them to desire their own reform. The response is what Martel (2006: 600) calls ‘a perpetual loop-line’ of passing-on: from juvenile delinquent institutions, to psychiatric hospitals (or, more likely, psychiatric prison wings, see Schliehe, 2014) to local community parole officers. The upshot is that a wide range of connected, compulsory circuits have developed within liberal democracies to cater both to the aspirant, ‘good’ inmate, and the so-called ‘incorrigible’ (Rose, 2000: 330) offender.

5. Derivative: “Circuitous”, as in obfuscatory, oblique or tortuous.

The word ‘circuitous’, derived from circuit, connotes an additional set of meanings, namely the tendency towards hiding and denial of carceral practices. Geographers have

called attention to the remote, often extra-territorial locations of incarceration used in the 'global war on terror' (Gregory 2004, see also Sexton and Lee, 2006). These covert prison systems, characterised by the unmonitored transfer of suspects through legally ambiguous space, have been linked to torture 'at the pleasure of sovereign power' (Gregory, 2006: 84; Vaughan-Williams, 2008; Paglan, 2011).

The existence of obfuscated forms of carceral space challenges the imagery of obvious and indiscreet prisons, no doubt popularised by the world's most famous prisons like Alcatraz and the Tower of London. Recent trends, however, often work in precisely the opposite direction: occluding rather than announcing the presence of carceral space (Combessie, 2002). This concealment is driven by a desire to escape the inconveniences of public scrutiny, legal constraint and the physical capacity restrictions of existing carceral facilities. The EU has been a particular proponent of the development of extra-territorial carceral spaces for example, locating immigration detention centres in countries that are not signatories of the 1951 Refugee Convention, resulting in a paucity of oversight and access to international monitoring (Dikeç, 2009; Andrijasevic, 2010; Bialasiewicz, 2012; van Houtum, 2010; Flynn, 2014).

Governments use islands to obscure practices associated with prison and detention. While prisons have been located on islands routinely for many hundreds of years (think of notorious prisons like Chateau d'If and those on Devil's Island, Robben Island and Goree Island) Alison Mountz and colleagues' research has identified the same practices in locating immigration detention centres on Pacific Island sites such as Guam and Christmas Island in the Indian Ocean (Mountz, 2012; Coddington and Mountz, 2014). They highlight the use of distance and invisibility as governmental strategies used by Canada, America, Australia and the EU. Although these islands are located at the margins of sovereign territory, they are often used as test-sites for onshore detention practices (Coddington et al., 2012; Mountz and Briskman, 2012). In this sense, off-shore sites feed into a circuit where policies and practices are fine-tuned before being rolled-out closer to home and are thus recognisable both as obscure carceral spaces and as components of a larger system.

Remoteness and legal ambiguity have been accompanied by the proliferation of novel and informal spaces of confinement, partly to avoid scrutiny, but also to meet the economically and politically-produced demand for expanded carceral capacity. Describing the conversion of a famous Abbey in France into a prison, as well as the relocation of various other prisons from urban to rural areas across the country, Combessie shows that the 'isolation' (2002: 535) of prisons, 'off the beaten track' (ibid: 538), was already well underway by the early 1990s. This sequestration, though, was accompanied by a contagious prison sociology that 'seeps through the walls and infects a wide range of social relationships' (ibid: 535), even in supposed seclusion.

The improvised appropriation of remote places for carceral purposes has spawned what Martin and Mitchelson call the 'uneven topography' of carceral sites, where 'people are held in former jails, alongside prisoners in existing prisons, in tent cities, on ships, and in makeshift cells in courthouses, airports, and ports-of-entry the world over' (2009: 469). Geographers have made important contributions to understanding, and making visible, this topography, for example by highlighting the tactical rapidity of immigration law enforcement raids and legal processes (Herbert, 2009b; Burrige, 2009). The contracting of overseas prisons, as in the case of Dutch prisons leased by Norway and Belgium, further reveals the complexity of such inter-connections in the carceral landscape.

Another expression of the proliferation of obscured carceral environments is their embedding in everyday life. On the one hand, the use of electronic monitoring to render homes and workplaces effective extensions of carceral space has become commonplace (Paterson, 2007; Gill, 2013). On the other hand, new-build prisons are often architecturally dull and characterless; so bland that they 'practically disappear' (Jewkes and Moran, 2014: 8) and hide in plain sight (Moran et al., forthcoming).

6. Circuits can be mapped.

Despite often being hidden, carceral circuits can and should be unearthed and exposed. Identifying the nodes, routes and pathways that constitute carceral space offers a way to resist their concealment. This is not to say that such mappings are 'objective' or 'complete'. Rather we understand mapping as a 'processual, creative, productive act' (Dodge and Kitchin, 2013: 19). Mapping offers a means to challenge, or simply make challengeable, current carceral configurations, and project other possible worlds. Our thinking about circuitry here is more than merely a descriptive device. It promotes ways to think about how hidden confinement practices can be brought into public knowledge and circulated for scrutiny and collective action. We take up this theme in more detail below.

By foregrounding the recurrence, passing, component-like, compulsory, obfuscated and mappable characteristics of carceral circuitry, this section has exposed six practical epistemologies of carceral circuitry that are driven by capitalist and neoliberal imperatives. In so doing we have developed a toolkit for apprehending the inter-connectedness of carceral spaces for the first time. Such an approach foregrounds connections over discrete and compartmentalised ways of understanding incarceration, providing a corrective to the popular institutionalist perception of the 'sealed off' nature of carceral places.

While we have generally drawn on Anglophone Western examples, there are indications that carceral circuitry is also a timely epistemological intervention in non-Western contexts. South Africa's fusion of prison and mining infrastructures has long challenged a

compartmentalised view of carceral space: the mine compounds' sociological and cultural influences over-spill and transgress the spaces set aside for them both in theory and by the state (Crush, 1994; Dirsuweit, 2005). The Chinese Laogai program links factories, prisons and schools via an extensive system of forced manufacturing job placements (Pejan, 2000; Luard, 2005). And recent geographical work in Guatemala's prisons reveals the centrality of prisons to licit and illicit economies to such an extent that prison guards, the media, politicians, the military and high-level government officials 'all play a part in building and bypassing prison walls' (Fortes, 2015: 89). The prison boundary consequently acts like a 'porous membrane across which all kinds of exchange...take(s) place' (Ibid: 89), revealing 'how deeply the state, the law-abiding world, and the underworld overlap one another, how illusory the dream of their separation is' (Ibid: 117).

Counter-Mapping Carceral Circuits

Having developed our ontology and epistemology of carceral space, we now seek to operationalise our approach by identifying the sorts of questions raised by thinking in terms of circuitry, and advocating for critical mapping as a way to address them. In what follows we sketch the broad agenda that critical carceral circuitry reveals and that critical cartographic practices can begin to address.

Concordant with a geographical approach, we ask what are the geographies of our six analytical characteristics of carceral circuitry? In particular:

- Where are the intensities of the phenomena revealed through this epistemology and what factors bring about such intensities?
- Conversely, where are their edges and peripheries? Where do the political-economic mechanics that underpin recurrence or concealment, for instance, falter and begin to give way?
- Who or what gets connected or separated by particular circuits? Which institutions and actors line the compulsory path from delinquent young offenders' institutions to court houses and jails, for instance? And how are the lines between carceral and non-carceral re-drawn and reconfigured along such routes?
- What phenomena are spatially correlated with the circuits we have described? What tends to occur or not occur in the same places? For example, to what extent do densities of urban and telecommunication infrastructures overlap with the phenomena described?
- Where are the beneficiaries of these carceral systems such as the contractors and investors? Who and where are the consumers of prison-made products, and are they aware of their status?
- What are the dynamics of the systems identified, including their rhythm, frequency and current levels of acceleration?

Critical mapping offers ways to identify hidden connections in order to visualise them for collective scrutiny. It connects places that are 'typically encountered as discrete' (Katz, 2002: 722) but that have been caught up in the same processes of marginalisation and exclusion. 'Finding, demonstrating and understanding ... connections and what they give rise to are crucial to challenging them effectively' (ibid: 721). Geographers are in an unrivalled position to undertake the work of addressing these lines of enquiry owing to their familiarity with radical, critical and counter-mapping techniques (Counter Cartographies Collective, 2012). In the spirit of Katz's (2001) concept of counter-topographies, critical mapping of carceral circuitry affords the production of new visions from the margins of, and against, the development of carceral circuits.

Katz observes that topography as a traditional methodological tool in geography links physical locations of the same elevation. It is, in effect, a way to identify the hidden connections between seemingly discrete, isolated nodes. Applying Katz's (2001) framework to carceral circuits, critical counter-topographic mapping offers a way to explore the analytical connections between places confronted with similar forms of accumulation by dispossession. Critical mapping and locating projects can be deployed to not only support individual activist struggles against incarceration by being 'publicized to garner public attention, to advocate, to change policies and practice, and to support [inmates] in the immediate challenges they face' (Mountz, 2012: 100), but also to place activists in solidarity with other struggles by tracing the contours and signature techniques of the neoliberal system that becomes embedded in different places in similar ways.

Walters notes that there are 'various tactical cartographers, critical geographers, self-styled hacktivists, and visual artists' (2009: 129) that undertake critical cartographic methods aimed at unveiling, unravelling and destabilising entrenched forms of power (Crampton, 2001; Crampton and Krygier, 2006). Critical cartography aims to subvert conventional notions with the objective of promoting social change (Bhagat and Mogel, 2008) and is usually a bottom-up response to the top-down organisation of power and representation of space (Kurgan, 2013: 204).

There is already valuable work underway (see Casas-Cortés and Cobbarubias, 2008). Paglen and Emerson's (2008) attempt to map the dynamics of carceral systems, including planes chartered by the CIA to transport inmates to facilitate their rendition, resists the aggressive screening of secretive practices of state-sponsored incarceration. Other mapping projects that also work to represent absences include Mitchelson's (2013) mapping of prisoners who are omitted from census data, Moran et al.'s (2011) maps of the Russian prison system and Kurgan and Cadora's project *Million Dollar Blocks* that maps the 'city-prison-city-prison migration flow' of prisoners within several U.S. cities (Kurgan, 2013).

Taking Kurgan and Cadora's work as an example, Figure One shows how they have represented the concentration of expenditure on prisons within specific communities in the US in cartographic form. The map illustrates 'single blocks in inner-city neighbourhoods across the [US] for which upwards of one million dollars is allocated each year to imprison its residents' (ibid: 201; Loyd and Burrige, 2015). In this way, they convey the wastefulness and racial targeting of public investment in the criminal justice system.

Figure One

Source: Kurgan, L. (2013) *Close up at a distance: Mapping, Technology and Politics*. Cambridge, MA: MIT Press.

Efforts are also underway to gather statistics about the capacity of immigration detention centres, numbers of persons detained, deaths of detainees and interdictions at sea that is often obscured from public view (Hiemstra, 2013; Martin, 2013). The Island Detention Project, for example, is concerned with mapping sites of extraterritorial detention while the US-based Detention Watch Network (DWN) has developed interactive maps of various features of detention and struggles against it (Mountz, 2012). The Global Detention Project has developed a comprehensive interactive map of global detention sites that includes the location, capacity and status of detention facilities globally, as well as operational and bureaucratic characteristics of the centres such as security level and size (Global Detention Project, 2016). And geographer Olivier Clochard and colleagues have produced maps of the approximately 250 detention centres in the EU-27 (Clochard et al., 2013; Clochard and Rekecewicz, 2010) alongside maps showing the deaths of migrants across Europe.

There is, however, much more to do. Dodge et al. (2011) note, in advocating for more political-economic approaches to mapping, that 'the vast bulk of mapping, measured in terms of volume, scale and spatial coverage, is still produced and owned by government institutions and large corporations' (ibid: 230) and carceral spaces are no exception. We encourage geographers to devote more time, resources and skills towards critical mapping of the carceral system and we see various empirical areas as ripe for investigation.

Little is known, for example, about the circuits of elite governors, accountants, politicians, consultants, experts and specialists between prisons, detention, military assignments, government departmental positions, and posts within global security companies. Relatedly, we still know relatively little about the specific spatial relationships between finance capital and carceral systems. Still less-known is the circuitry of material goods and

possessions within carceral spaces, and prison-made goods and products within and beyond them. Despite recent geographical advances in the understanding of policy mobilities, the mutation of carceral policy innovations and more informal practices of control across carceral space is also insufficiently understood. Deaths and other forms of suffering in carceral settings are not sufficiently mapped either, not only in relation to humans but also other sentient beings whose experience of industrial captivity and slaughter opens up a whole new area of carceral geography (Morin, 2016). And the representing, both through indices and cartographic means, of the impact of incarceration upon families and local communities—for example in terms of mental health—is a clear potential focus of future geographic effort.

Conclusion

This paper has been motivated by a concern that whilst the fantasy of a separate carceral sphere, whereby carceral and non-carceral are neatly segregated, has been critiqued by geographers and others, it continues to over-shadow the way carceral spaces are studied because a new way of understanding carceral systems has not taken its place. What is more, as the momentum of the capitalist and neoliberal mechanics driving contemporary carceral spaces continues, the side-lining of the connections between disparate components of the carceral system acts to occlude capitalism itself, thereby making it harder to confront and resist. Our contribution here is therefore to move carceral geography into a meta-institutional phase no longer ‘confined’ by sometimes awkward intellectual boxing-up of carceral systems.

The paper has developed a new critical epistemology that seeks to ground the ontology of circuits of capital by identifying their practical manifestations. The central characteristic of this new epistemology is that it foregrounds the connections beyond carceral institutions and the cross-cutting circulations that flow through, within, around and between them. Having described the three key circuits that characterise carceral space—of people, objects and practices—we then set out an analytical toolkit that schematises the key dynamics of these circuits. This includes the recurrence of carceral systems; the passing of time, diseases and lives in carceral space; the component-like nature of carceral places that ensures that they play their part in wider systems of risk containment; the compulsory nature of circulation in liberal democratic prisons; the obfuscated nature of carceral space; and its mappable quality. By providing this taxonomy, the paper affords analytical purchase on a set of evasive processes.

The identification of this new epistemology led us to a range of practical questions about the nature, extent, limits, correlates, beneficiaries and dynamics of particular carceral circuits. The paper has set out an agenda for the exploration of carceral circuitry, and advocated critical cartography to address the circuits and dynamics therein.

Circuits are not a flawless explanatory tool, and our hope is that our propositions will be productively challenged. Although carceral spaces are often vertically extensive and voluminous (Turner and Peters, 2016), for example, we acknowledge that circuits may invite a rather flat understanding of carceral space. Circuits are also closed systems, whereas carceral systems are not only infusing social systems in the ways we have described, but are also becoming infused by them in countless ways (Baer and Ravneberg, 2008), from private acts of domestic and family life performed in carceral spaces (Comfort, 2002), to the 'drone attacks' that have so rattled British government authorities.

Nevertheless, the ideas developed in this paper have broad resonance. It is through following and visualizing the connections that undergird carceral spaces that geographers are in an unrivalled position to offer insights into carceral systems not just within human geography, but in conversation with prison studies, criminology, penology and the sociology of crime. We believe that the epistemology of circuitry will prove useful as a way for geographers to critically intervene in these disciplines. Such dialogues are more pressing than ever in the face of the seemingly remorseless extension of carceral spaces.

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