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Horizons beyond the Perimeter Wall: Relational Materiality, Institutional Confinement, and the Archaeology of Being Global

ABSTRACT

As historical archaeologists, how might we begin to unpick the complex material webs of trades, migrations, and technologies that constitute globalization? How should we simultaneously understand the local and transnational meanings of our study sites? Through examples based around the 19th-century transportation of British felons to the Australian penal colonies, this article considers how recent work in relational theory offers fresh directions for exploring how the process of "being global" enmeshes humans, artifacts, and landscapes into ever-wider *meshworks* of connection and significance. It suggests that by traveling along the dynamic *awful lines* of globalization from the inside out, we archaeologists can consider not only what alternatives could have been, but what might be in our future.

Introduction: (Dis)Connected Worlds

In life, however, there are no start points and end points. There are only horizons that vanish as you approach them, while further horizons loom ahead. (Ingold 2013:140)

Two decades have now passed since Charles Orser issued his famous request: "Dig local, think global" (Orser 1996). Perhaps as a result of the growing maturity of the discipline, a growing field of scholars has turned to ponder how the experience of globalization has itself shaped the modern era. Significant work has examined—to name only a few key themes—the transnational material dynamics of ethnogenesis and creolization (Singleton 1999; Dawdy 2000; Franklin and McKee 2004; Lightfoot 2005; Voss 2008; Schreg and Zeischka-Kenzler 2013); commodification, trade, and (post)colonial capitalism (Hicks 2005; Courtney 2009; Kelly 2010; Richard 2010; Croucher and Weiss 2011); population migrations and displacements (Lawrence 2003; Gosden 2004; Brooks 2013; Mehler 2013); syncretic uses of symbols, rituals, and religions (Fennell 2007; Agbe-Davies 2010; Torres de Souza and Agostini 2012; Akin et al. 2015); and both the labor and intimate relations generated through such global encounters (Delle 1998; Funari 1999; Hall 2000; Ogundiran and Falola 2007; Hauser 2011; Voss and Casella 2012; Horning 2013). Indeed, the temporal, regional, and thematic scope of this research continues to expand toward ever more exciting horizons.

And, yet, important methodological questions remain. The movement of people and objects around ever more distant places not only characterized the modern era, but generated an increasing complexity and diversity of connections amongst all three. *How* do we archaeologists "[d]ig local, think global?" How, in other words, do we begin to grasp the multiple and multiscalar assemblages of places, objects, and people encountered through our research? Orser's (1996) own approach invoked metaphoric "haunts" to describe the echoes of modernity and capitalism that configured his globalized worlds. But how would a spectral energy connect the archaeological remains of a specific research site outward toward wider horizons? And, given that the presence of certain social, political, material, or economic links simultaneously indicates the absence of others, what is the best way to recognize instances when non-connections or disconnections actually hold primary significance for understanding the recent past? As historical archaeologists, our discipline is perfectly placed to analyze the intrinsically *material* conditions of globalization, ranging from its early postmedieval mercantile origins through its contemporary postmillennial belle epoque. How might current work in relational theory encourage a fresh approach toward interrogating how the "stuff" of empire and industry enmeshed

humans, objects, and places into perpetually shifting and mutually dependent webs of transnational connection?

Unfolding in three parts, this article explores how a relational approach offers new directions for these enduring questions. Starting from mathematical principles of topology, it will consider how a close appreciation of links amongst people, landscapes, and artifacts can generate powerful new assemblages—can foster, in other words, new relationships that sometimes defy the received boundaries or known classifications of the surrounding material world. Turning to archaeological applications, this article will briefly examine how European prehistorians use a relational approach to consider the general process by which humans and objects (or social and material worlds) become mutually codependent. Finally, through a series of case studies based in 19th-century Australia, it will explore the value of a relational approach for understanding the multiscalar flows of people, resources, knowledge, and commodities that knit these antipodean British penal colonies into wider global worlds.

Topologies: Toward Relational Approaches to the Material World

Originally drawn from Albert Einstein's concept of relational gravity, *topology* provided a means for describing the bending or warping of space/time as cosmologists now believe to occur in relation to a black hole. It has since evolved into a specialist field of mathematics devoted to the study of how different gravitational foldings of space and time influence relationships between specific points in three-dimensional space (James 1999). A highly theoretical field, it has been applied in the disciplines of architecture and engineering to consider how to optimize management of different vectors of force on points within, for example, the span of a bridge or shifting wind forces against a skyscraper. Topological principles also underpin the nonlinear designs of postmodern urban architecture, such as Frank Gehry's iconic Guggenheim Museum (Bilbao, Spain) and the Walt Disney Concert Hall (Los Angeles, California). Topologies also best describe contemporary mobile/cell telephony. In contrast to (increasingly obsolete) "landline" telephone networks of copper and fiber-optic cables that physically mesh individual house phones into city, national, and international routes of communication, mobile/cell networks of disparate points (phones) only retain a spatial integrity "by virtue of their position in a set of links of relations" (Law 1999:6), rather than through any physically defined lines of network connection. Additionally, these mobile points (handsets) continuously shift in our pockets and purses, while also retaining, updating, and relinking their transient points of connection to this overall enmeshed web. Space and time fold upon themselves topologically when one may chat just as easily with a friend from next door as one from a continent across the globe.

In other words, a *topology* offers a radically different appreciation of space than the far more familiar concept of *topography*. It is not about measuring or defining spatial/temporal distances in any Cartesian sense. While topographies require a geometric set of points (their distance and shape defined by three-dimensional location coordinates), a topological approach explores how points may be conjoined through meaningful links, assemblages, or clusters irrespective of geographic distances. Topologies question how experiences of expansion and contraction create a concertina of space—requiring a process of movement and transformation. In other words, topological approaches explore how people's sense of space/time changes shape as they actually move through it. Drawing from this conceptual framework, scholars in the humanities have adapted the concept to discuss how both places and objects come to hold particular resonance or mutual echoes of belonging; see Pollock (2013) and Russell (2005). In analyzing these social, technological, economic, and political connections between these humans, places, and objects, this research considers how and why certain links exist, while others are absent. And this body of work ultimately questions what these situational and incomplete nodes mean for understanding the human condition of materiality.

The famous London Underground map offers a useful rendering of topological space

as a translation of a complex urban transport system (Figure 1). Trained as a draftsman, Harry Beck appreciated that his transport map would function primarily as a navigational tool and, therefore, needed to describe simple and efficient lines of movement through the system. Abandoning all topographic details (with the exception of a highly schematic line for the Thames River), his radical new design focused solely on the direction of train routes, sequences of stations, and interchange nodes. First released as a pocket edition in January 1933, it was an immediate success with the public (Garland 1994; Dobbin 2012). It continues to define the experience of transport in urban London and inspired the topological designs of transport maps across other world cities—this diffusion itself providing a second example of a topological global flow of design knowledge. Crucially, when traveling the London Underground, one also personally enters into this strangely folded space—inside those identical dark tunnels are travelers even aware of the moment when their train zooms under the Thames River? Inevitably, certain routes are discovered to be enabled or disabled because of the presence of some connecting nodes and the absence of others. This simultaneously physical and conceptual experience of space offers assemblages of esoteric—yet very material—conduits of tubes, trains, tunnels, and staircases between named places, rather than any "real" surface geography. Londoners, (those "in the know") enjoy their quiet smirk at the crowds of confused and wandering tourists lost between the Leicester Square and Covent Garden stations—two sites only 260 m away from each other, but on separate lines, so no obvious connection between these transport landmarks exists for the unsuspecting visitors caught between these topographic and topological worlds.

More significantly, topological spaces always convey tangible political relations (Casella 2013). As archaeologists, we know that that connections and disconnections—or the presence/absence of trade routes, commodity exchanges, or kinship relations—not only reveal important socioeconomic meanings, but
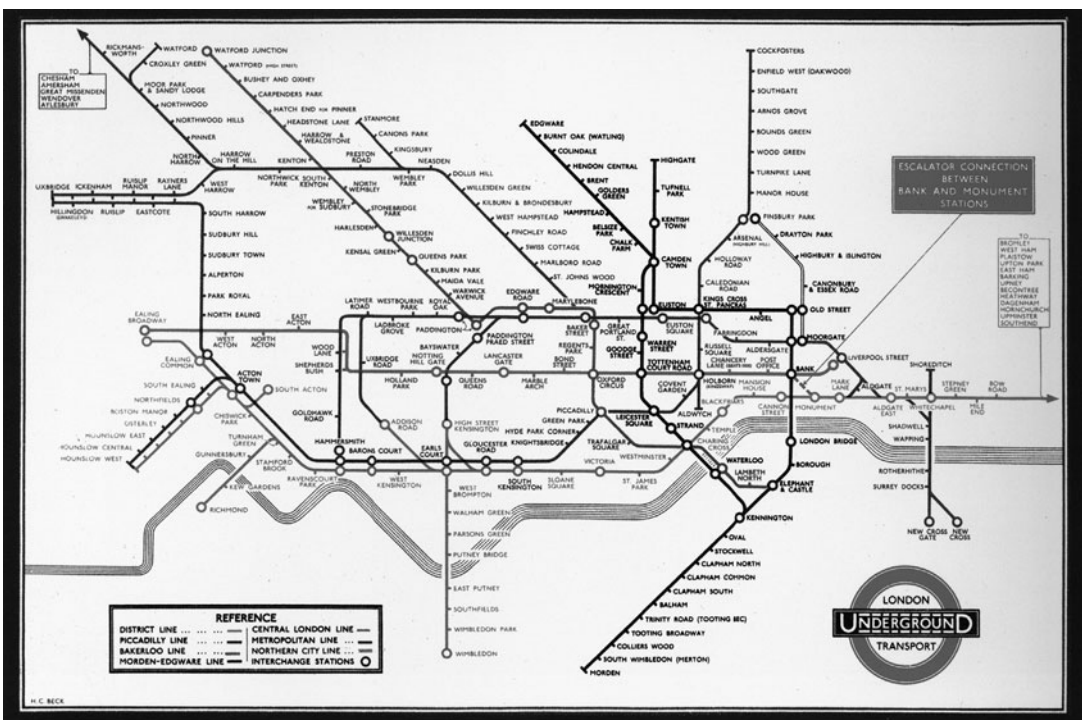

FIGURE 1. Harry C. Beck card folder "No 2, 1934," London Underground map, London Transport Museum. (Photo by author, 2014.)

serve to generate and maintain powerful forms of inequality. Expanding upon the iconic example of the London Underground, one can travel with relative ease from Heathrow Airport to central London along the Piccadilly Line (one direct tube link), or from the Houses of Parliament in Westminster to the royal boroughs of Kensington and Chelsea with two, direct tube options for the various West End stations along the Circle and District lines. But heavily populated parts of London are distinctly missing from this municipal transport system. These, most blatantly, include the East End, that historically rich district of dockland workers, cockneys, rogues, and Jews—and from the postwar decades—the heart of transnational Anglo-Asian communities centered around Brick Lane. Similar politics of dis/connection obviously shape all municipal transport systems, with California's Bay Area Rapid Transit system of offering numerous commuter stations linking the professionals and scholars of north and central Berkeley to the financial district of San Francisco, but only one station for West Oakland. Like London's Brick Lane, the limited public-transport connections for this historically African American working neighborhood—a district perhaps ironically linked to the transcontinental terminus of the Santa Fe Railroad from the 1870s (Praetzellis et al. 2007)—graphically demonstrates the wider inequalities revealed through the folded spaces of topologies. Which points link together, and to where and for whom? Who and which have been disconnected or never connected? And for what historical reasons or broader purposes?

Assemblages and Meshworks:
On Relational Theory in Archaeology

How would archaeologists best translate the diverse myriad of connections that forge and fabricate the modern world? Initially drawing from philosophical works by Bruno Latour (1987, 2005) and John Law (Callon and Law 1997), actor network theory (ANT) attempted to explore the situational connections that related people, places, and objects across local to global scales of analysis. While foregrounding the relational

links between both "object" and "human" actors as equal (symmetrical) entities within the networks of society, this approach was subsequently critiqued (sometimes by its own protagonists), not only for its paternalistic and anthropomorphic tendencies, but also its limited recognition of the powerful economic/political fractures that sustain the stark inequalities of the globalized worlds; see Casella (2013) and Lucas (2012). In contrast, work variously described as "science and technology studies" (Harvey 2012) or "science, technology, and society" (STS) (Law 2010) has been more interested in *why* such networks, clusters, or connections come to exist amongst diverse (non)human actors (Law and Hassard 1999; Latour 2003). Taken together, these STS debates explore the idea of *relationality* (Deluze and Guattari 2004) as a means for exploring the mutual ties that fold together humans, objects, and places. How does an *assemblage*—defined as a set of points (whether artifacts, people, or sites)—become conjoined into a line, cluster, network, collection, or community? And why do other possible points fail to connect or disconnect as an assemblage?

European prehistorians, particularly those working in the Neolithic and early Bronze Age periods, have enthusiastically embraced this relational approach to the field of archaeology. For example, in attempting to define how material and social elements fundamentally relate to each other, Ian Hodder (2012) explored relational networks as sets of abstracted formulas, drawn from his almost two decades of work at the Çatalhöyük site in Turkey. In his recent model: Entanglement=(HT)+(TT)+(TH)+(HH), although his further discussion offers a perhaps more accessible version: "The defining aspect of entanglement with things is that humans get caught in a double bind, depending on things that depend on humans" (Hodder 2012:88). This idea would indeed seem to echo the symmetrical relations proposed by the ANT scholars (as critiqued above). Similar to recent work by Chris Fowler (2013) on prehistoric assemblages from northeast England, Hodder ultimately envisioned these relationships as temporally sequenced or scheduled events, ones that contribute to a "stickiness" or messiness shared between people and

objects, with this "Human–Thing" dependence (like the mobile/cell phone connection) inherently unstable, unruly, and always situational (Hodder 2012:206–207). Applying this approach to the methodological practices of archaeology, Gavin Lucas (2012) considered how the archaeological record itself results from the intermingled foldings of humans (both past inhabitants and contemporary fieldworkers) and objects (both artifacts under study and the tools and equipment used for fieldwork). Ultimately, these relational approaches all question whether humans and objects enjoy symmetrical (equally empowered) or asymmetrical (differentially empowered) relationships within simultaneously material and social worlds.

While offering interesting, if perhaps abstract, perspectives on the relational nature of archaeology, recent work by Tim Ingold might offer a more directly inspirational perspective. As someone interested in the global links of migration, trade, and colonialism that defined the modern era, I worry about the fundamental nature of the connections in themselves. Do all links operate similarly? Ingold (2013:134–136) distinguished three types of lines. Two can be understood as topographic markers:

- *Geometric lines*: Define the connection between two points. Examples include eye-to-eye contact, a stretched cord, a band of tension, or a measured direction into three-dimensional space.
- *Organic lines*: Trace the contours of things, divide surfaces, and define interfaces. Examples include cuts and clear interfaces between stratigraphic contexts in archaeology, or the line of a mountain as it articulates with the sky above.

Ingold also recognized a distinctively topological line:

- *Abstract or awful lines*: Demonstrate movement, production, change, and agency. They generate awe within the beholder as a witness to these trajectories of motion. Examples include the line followed by a tree as it grows over time, the tracks of slime left by slugs as they creep across a damp pavement, or the rubber tyre skids that mark where folks have revved-up their wicked car engines into loops and spins for mutual admiration and envy. As pathways that connect or link together, *awful lines* work in topological space. They generate knots—interlocked moments where the strings loop or converge together before moving ever onwards.

Thus, Ingold argues that social/material connections operate as sets of abstract/awful lines that knot together into wider *meshworks*. Like the woven basket or string bag familiar to archaeologists, *meshworks* are worlds composed of *awful lines* (pathways or biographies of motion) that converge, fold, tie, or tangle together disparate humans and objects into a recognizable place or archaeological site. He is ultimately interested in the frayed edges of these strings that dangle past the knot itself, thereby always offering a momentary, yet incomplete, connection—the possibility of further movements elsewhere in other directions toward other times and places of connectivity (Ingold 2007). Just just like the materiality of an Australian Aboriginal string *dilly bag* (Figure 2), Ingold sees the global world as an infinitely connected series of knots, with each specific thread of human biography or commodity flow tied into another, yet continuing ever onward past that transient node toward the next space or moment of connection.

Interlocked: Shifting through the Perimeter Wall

For the contemporary visitor, the Ross Female Factory Historic Site appears as an open field, a panoramic landscape that stretches across to the horizon of the Macquarie River basin (Figure 3). Yet, my trained archaeological eye simultaneously picks out a textured topography that corresponds—to varying degrees of accuracy—with existing archival plans of this 19th-century British colonial female prison. When I mentally reconstruct the internal features, the main quadrangle seems very small within all this open space. How did a population of 220 female inmates, 45 infants, and at least 10

FIGURE 2. Knotted textile *dilly bag*, contemporary Australian indigenous art. (Courtesy of the McNiven and Russell Collection, Melbourne; photo by author, 2013.)

FIGURE 3. Ross Female Factory Historic Site, Tasmania, Australia, Ross Factory Archaeology Project. (Photo by author, 1995.)

prison staff actually fit within these enclosed courtyards? Who designed the layout of this institution? Who grew the cotton and sheared the wool that made their prison uniforms? Where had it been spun and woven into lengths of fabric? How did these exiles remember their homelands? Did they ever send letters home? Could this quiet, bucolic field of grazing sheep somehow reconnect these female inmates to their parents, children, partners, and mates back in England, Scotland, Wales, and Ireland? How could a paddock be, simultaneously, so spectacularly open and yet inextricably enclosed?

This experiential paradox frames the new theoretical approach explored through this article. Confinement is generally understood as a stationary, carceral, and immobile experience. It has been characterized by the control and restriction of movement for a person or group of peoples (Casella 2007; Myers and Moshenska 2011; Mytum and Carr 2013). These perceptions tend to produce a rather site-based archaeology, with the human story and resulting material culture both understood to exist inside the perimeter walls. And, yet, as we archaeologists extend our research on these unsettling institutions—which include historical prisons, but, also, missions, POW camps, quarantine stations, almshouses, lunatic asylums, schools, and hospitals—the more they reveal themselves to be deeply enmeshed with essential movements of various categories of both *humans* (inmates, internees, guards, administrators, residents, patients, students) and *things* (water, food, sewage, uniforms, shoes, books, tools, laundry, contraband). The everyday life of confinement, in other words, depends equally on the interlocked flows of both people and resources within and beyond the perimeter walls.

How might emerging theoretical perspectives on the relational links amongst people, objects, and places help historical archaeologists better appreciate this paradox of confinement as a simultaneous experience of both enclosure and connectivity? Might the archaeology of institutional confinement (or indeed the dynamic of globalization itself) be considered as a topological meshwork—comprised of infinite moments of connection knotted together through formal and informal (and frequently illicit) nodes of material carriage and exchange, human passage and migration, and knowledge diffusion and redesign. What might be learned by tracking along these flows of people, places, and objects? Or, as asked by Mark Hauser (2011:432): "Do some goods or people move more readily within

or between boundaries than others? What are the roots of the logics and entanglements that informed those movements, and what are the routes those people and things travelled?" When taken together, these flows increasingly traverse the globe, topologically folding together the distant and the local into new assemblages; see Casella et al. (2001). Therefore, to best understand the archaeology of these places, objects, and people, perhaps historical archaeologists should begin by following along the routes of their *awful lines*.

Flows of Knowledge: Palaces Built for Felons

Appointed high sheriff of Bedfordshire in 1773, John Howard revolutionized the British prison system with his meticulous surveys of county lockups and jails throughout England, his results published as *The State of the Prisons in England and Wales* (Howard 1777). His efforts at penal reform led to his late-18th-century design collaborations with William Blackburn, a London-based architect. Together, they developed a new modern architecture for the promotion of visual and auditory surveillance; the spatial classification, segregation, and management of individual prisoners; and the enforcement of disciplinary routines, rather than corporeal punishment of those imprisoned. These new architectural layouts included the now familiar "Block, Courtyard, and Octagonal Plans," in addition to the "Radial Plan"—where a series of cellblocks were located around a central administrative zone, much like the spokes of a wheel (Brodie et al. 2002). Extended to sublime form in Jeremy Bentham's infamous design for the *Panopticon; or, the Inspection-House* (1791), following passage of the Penitentiary Act of 1779, elements of this radical new approach to penal architecture became incorporated into a few experimental male penitentiaries in England, including the Liverpool Borough Gaol (1785), Ipswich County Gaol in Suffolk (1786), New Bayley Prison at Manchester (1787), and Hereford County Gaol (1792). Built to foster the centralization of authority around the focal guard's lodge, governor's parlor, or prison chapel, the entire institution "was brought under observation from one key position" (Evans 1982:146).

Establishment of the Australian penal colonies of New South Wales (1788) and Van Diemen's Land (Tasmania) (1803) provided a fresh impetus for experimentation with these new penitential designs—and a direct material example of the *awful lines* of knowledge transfer that enmeshed both *humans* and *things* between Europe and the antipodes. Faced with mounting problems of security breaches and high infant-mortality rates at the Cascades Female Factory—the colony's first female prison, established during 1828 within a series of enclosed yards, originally built as a bottling factory just southwest of central Hobart—the comptroller general of convicts entrusted John Lee Archer (born 1791 in Kent, England, and both chief engineer and colonial architect of Van Diemen's Land from 1827 to 1838) with the creation of new plans for a second female factory to be located in the northern town of Launceston. Representing the next design generation of British penal architecture and directly inspired by John Howard's radial design for the Hampshire County Gaol (1788), Archer experimented with a rectilinear layout before eventually settling upon a two-story cruciform building set within an octagonal perimeter wall, with additional interior, radial, separation walls set between the arms for enhanced interior segregation of inmate classes (Kerr 1984:92–94). Constructed in 1832, the Launceston Female Factory became the world's first purpose-built and self-administered female prison, predating similar female-only institutions in North America and Europe by almost 50 years (Figure 4). Consisting of a central "hub" for the superintendent's quarters and prison chapel, the radial arms held inmate dormitories, kitchens, dayrooms, and the washhouse. These were flanked by exercise yards, the hospital, and nursery, and all encased within a thick sandstone perimeter wall, which itself was capped by broken fragments of olive bottle glass. But despite its monumental scale, this outer wall remained a permeable boundary. Routes of circulation for fresh water and sewage were carefully delineated upon Archer's original architectural plans, revealing his concern over the flows (and links) of essential resources and waste materials that dangerously enmeshed the worlds inside and outside his carefully designed octagonal boundary wall.
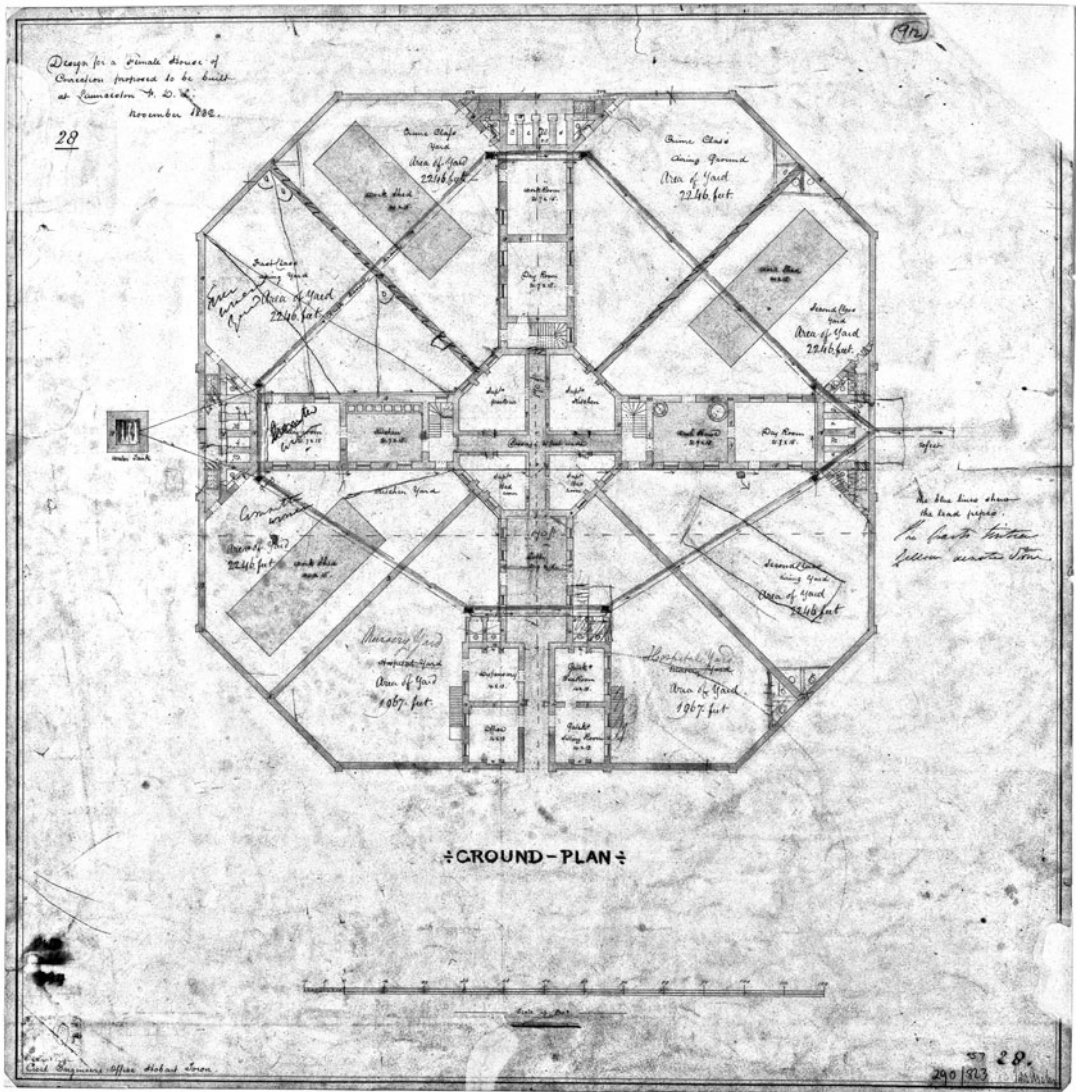
FIGURE 4. Launceston Female Factory, ground plan by John Lee Archer, 1832. (Courtesy of the Tasmanian Archive and Heritage Office, PWD 266-1894.)

Ultimately, Archer's early design experiment offered a built model, a test case, for application of these new octagonal radial plans to subsequent male penitentiaries established at Pentonville, England (1842), Lincoln Castle, England (1847), Port Arthur, Van Diemen's Land (1847), and Mountjoy, Ireland (1851). The very presence of these Australian sites was knit into wider transnational philosophies and debates over penal architecture, moral philanthropy, and criminal correction. Global flows of knowledge topologically linked the built environments of these institutions to each other, requiring them to be best appreciated in relation to each other, rather than as an isolated set of historical sites.

Flows of People: Transported for the Term of His Natural Life

Australia's convict archaeology may be understood as a series of heritage places (including the 12 granted World Heritage status on 31 July 2010), but also as the various global pathways of transportation, royal commission, and involuntary migration

experienced by exiled British felons, military servicemen, and colonial administrators who occupied this transnational system. In addition to following the *awful lines* of knowledge that knit British penal-design philosophies to the world outside that small North Atlantic island, we archaeologists can also explore the topologies of the people tangled within this dark heritage. As with London's fabled underground transport system, human exiles flowed through exit and entry nodes—their transit choreographed by the daily routines of an arduous eight-month sea voyage—and, thereby, generated a particular resonance amongst these topographically distant—yet fully enmeshed—historical places of confinement.

The materiality of "ordinary criminals" has been interpreted from objects that, at first glance, may appear mundane. Now described by collectors and museums as "love tokens" (Donnelly 1997), these recycled keepsakes offer an example of topological objects produced by and for less auspicious (and frequently anonymous) convicts. Crafted from the soft copper of defaced British cartwheel pennies, these emotive mementos were reinscribed by hand with messages of memory, exile, and legacy (Field and Millett 1999). Gifted either by or to those under sentence

of criminal transportation to the Australian penal colonies, their makeshift, pecked and scratched engravings ranged from generic sentimental messages (When this\You See\ Remember\Me; Forget me Not; or LIBERTY IS SWEET) to more personalized items—such as: John\Williams\who left this\Country 6\ December\1820 [on obverse]; Dr Jane\A Gift from\a friend whose\love to you\will never\ end [on reverse] (Field and Millett 1999:83); or the depiction of a small, generic Georgian house underscored by: This was once\ my cotage\of PEACE\E.A (Field and Millett 1999:111); or Thomas Alsop's request: Accept this dear\Mother from your\Unforunate son\-Thos. Alsop-\Transported July\25 Aged 21 1833 (Donnelly 1997:27). Thomas Tilley, a convict on the First Fleet of Australian exiles, journeyed to the antipodes with a copper love token (27 mm in diameter and 1 mm thick) most likely crafted for him in Portsmouth, England, sometime during 1786–1787 (Figure 5). Fully hand engraved, the obverse inscription recorded his global pathway in brutal summary: THOMAS\TILLEY TR\ANSPORTED\29 IULY 1785\FOR SIGNING\A NOTE SENT\THE HULKS\IANY 24 1786. The reverse face depicted a cockerel or pheasant with a chain around its neck—a symbol of the proverbial jailbird.

FIGURE 5. Convict "love token," fashioned from a modified copper penny, obverse and reverse faces. (Courtesy of the Powerhouse Museum of Sydney; photos by author, 2005.)

As handcrafted objects, the love tokens provide a visceral material link back to those missing. These *awful lines* not only mark a shared moment in anticipation of separation, but also anchor the memory of a previous life—a time and place always present, but increasingly distant (Donnelly 1997:25). They offer testimony to the wrenching pain of penal transportation in the pre-global communication era, where loss, most typically, included not only the specific transported exile, but future generations who would no longer participate in the local kinship network, although they continued to hold a certain resonance as overseas cousins, grandchildren, and stepchildren (Casella 2005). As a poignant legacy distilled through a defaced copper penny, these artifacts enmesh spatially distant points of time and space back together—human pasts and dislocated futures knotted through the medium of these tiny, yet deeply emotive, objects.

Flows of Objects:
Commodities of Empire

All institutions require conduits for the large-scale inflow of fresh water, food staples, soap, and medical supplies, and parallel outflow of sewage, wastewater, dirty laundry, and human remains. Any carceral labor regime will require additional management apparatus to coordinate the delivery of valuable raw materials (timber, iron, coal, leather, fabric) and essential work tools into the institution. It will need to oversee the rates and process of inmate production, and audit the final delivery of commodities created through this system of unfree labor (Garman 2005). When the routes of these *awful lines* are tracked, a meshwork of unsettling human and material processes emerge from these globalized commodities. As previously detailed (Casella 2012), three small, lead, textile bale seals were excavated in 2007 at the Ross Female Factory—another institutional node within the same colonial penal network as the Launceston Female Factory. These unusual objects materially knit this Tasmanian heritage prison to sites of unfree and poorly waged labor across the world's oceans—from the cotton plantations of the antebellum American South, through the grim industrial weaving sheds of Lancaster

(England), and back to the regimented production of convict uniforms from imported cotton textiles by British female convicts assigned to labor in the workrooms at the Ross penal establishment; see Casella (2013).

Other examples of these commodity *meshworks* can be found throughout this Australian penal colony. In 1822, Sarah Island, a small island inside Macquarie Harbor, was settled as a penal establishment for refractory male prisoners (Maxwell-Stewart 2010). Located on the topographically remote far western coast of Van Diemen's Land (Tasmania), this British prison island was explicitly intended to ensure the maximum of disciplinary isolation. Male convicts sentenced to hard labor at Sarah Island were primarily tasked with a combination of timber procurement (drawing from the dense temperate rainforests that rendered surrounding lands impassable) and shipbuilding (the well-built boat slips now significant features at this World Heritage Site). Given the isolation of this penal settlement, other specialist industries were also fulfilled by convicts, including ironmongery, shoemaking, carpentry, gardening, cooking, and brickmaking (Butler 1838:276). Although this Macquarie Harbor penal settlement could have housed up to 370 convicts at any given time, the average number of convicts was 245 between 1822 and 1826 (Hughes 2010:377). Sarah Island was operational for 11 years, between 1822 and 1833, during which time up to 1,127 convicts had been put to work on the island or logging on the settlement outstations.

Secondary punishment for local infractions was administered through two mechanisms: public floggings performed before the full muster of inmates, with both settlement commandant and medical officer as witness to the exertion of His Majesty's justice, and solitary confinement within the jail—a brick and sandstone block of 12 isolation cells within the main compound of the settlement. Excavated during 2010 as part of the Sarah Island Archaeology Project, a 2 × 2 m trench across the two rear cells of the jail structure revealed an assemblage of linear remains: the rotten floorboard joists recovered in situ (Figure 6). While curious in themselves, these ghostly features—these *organic lines*—also suggested far more topological material relationships.

FIGURE 6. Solitary Cells 5 and 6 at the rear of Gaol House, Sarah Island World Heritage Site, Tasmania, Australia, Sarah Island Archaeology Project. (Photo by author, 2010.)

A particularly rot-resistant hardwood, the native Huon pine (*Lagarostrobos franklinii*), rapidly became a signature commodity for early colonial Van Diemen's Land. Surrounded by the temperate forests of western Tasmania, the Sarah Island penal establishment applied its unfree convict laborers to the exploitation of these rich timber resources and the construction of ships for registration and consignment to both local colonial and British imperial purchase (Brand 1984). But like its sister prisons at Ross and Launceston, this spatially isolated penal settlement folded together *humans* and *things* into deeply intimate connections. The ghostly floor joists linked unfree men to the surrounding forests: convict laborers felled the tall trees, floated the logs across Macquarie Harbor to Sarah Island, carried them to the sawpits, cut them into timber joists, and laid them as floor supports within the jail. On a deeper level, the constant interactive relations between these

things and *humans* inextricably transformed the nature of both—perhaps offering a useful application of Hodder's (2012:88) entanglement formula. Shackled with heavy leg irons, the men developed a characteristic shuffling gait in response to both the additional weight on their ankles and the length of chain available for each step. Soaked with saltwater during work hours, convicts on the timber gangs developed open sores and enfleshed calluses from the constant chafing of their heavy iron anklets. Those working the sawpits tore and callused their hands, inhaled and swallowed the billowing clouds of sawdust, and frequently died of pneumonia. As they rapidly depleted the surrounding forests of old-growth tall trees (forever transforming this unique natural environment), the basic physiology of their bodies simultaneously adapted to the repetitive tasks required to transform a living tree into a length of timber plank (Brand 1984; Maxwell-Stewart 2010).

Ultimately, their unfree labor focused on the creation of a valued commodity (timber) that through its sale, delivery, and dispersal further linked this remote penal site to ever-wider regional, colonial, and global pathways. As with the rough sandstone perimeter wall that surrounded the Ross Female Factory, the spatial boundaries that isolated Sarah Island were always permeable. On the evening of 13 January 1834, a group of 10 convicts gathered to hijack the newly completed brig, *Frederick*, from the shipyards on the southern coast of Sarah Island (Rees 2005). Accomplishing this by dawn, they sailed the craft to Devil's Gates (the treacherous mouth of Macquarie Harbor), bribed the master shipwright and harbor pilot with rations from their three-months' stash of provisions, navigated across the North Spit, out beyond the Heads, and turned south.

Six weeks later, this band of convict mutineers safely arrived at the Araucanian coast of Chile, a mere 6,000 mi. across the Pacific Ocean from the Van Diemen's Land penal colony. Posing as survivors from the wreck of the brig *Mary*—a merchant vessel that had left Liverpool for Chiloé the previous December—their true status was not discovered by Don Fernando, district governor of Valdivia, for another month. As tales of their incredible escape spread throughout the coastal ports, their illegal presence was eventually reported by Don Joaquin Tacornal, Chilean secretary of state for foreign affairs, to Colonel Walpole, the British consul general. Months passed as Walpole awaited for return of instructions from Lieutenant George Arthur, governor of the Van Diemen's Land penal colony, and the men enjoyed the continued hospitality of Don Fernando—some working on his boats, others running cattle, a few even settling into marriage with local women.

By April 1836 only four of the original gang could be located for recapture. James Porter, Charles Lyon, William Shires, and William Cheshire were transported in shackles on HMS *Basilisk* from Valdivia, Chile, across the Atlantic Ocean to their English homeland, transferred to HMS *Sarah* (a convict-transport brig), and on 20 December 1836 left Portsmouth Harbor to retrace their original voyage of exile back to the antipodes. Tried for piracy in the Hobart Town Criminal Sessions from 25 April 1837, they were generally expected to be hanged for their offenses. Faced with increasing popularity of their adventures, by then dramatically serialized in the colony's *Courier* newspaper, advice was sought from both the colonial secretary and home secretary in London. By October 1838 their sentence was announced. No theft had been committed. They had hijacked the *Frederick* the night *before* it was to be formally commissioned and registered. It, therefore, did not legally exist, and could not be considered stolen Crown property. Found guilty of absconding from the Sarah Island penal station, their death sentences were commuted to life imprisonment. They had successfully escaped on "The Ship That Never Was" (Davey 2002).

Conclusion: On Being Global

This article has embraced Charles Orser's famous request to "[d]ig local, think global" (Orser 1996) by exploring *how* we archaeologists might start to unpick the continuously shifting tangle of people, objects, and places that characterize our modern era. Relational theorists have coopted the term *assemblage* to describe relational groupings of humans, objects, and places that mutually influence each other. The elements of such an assemblage are all deeply interconnected through lines of constant biography or motion—people come and go; commodities are produced, traded, discarded, and sometimes reused; places transform over time. As trajectories, these *awful lines* of motion, change, and agency generate topological relations. Through their flows of people, knowledge, and objects, distinct social places may be folded or knitted closely together, even if separated by vast geographic distances.

These social/material links transform global assemblages into *meshworks* of connectivity, where (like an urban transport system or knitted textile bag) the moment and place of convergence generates a knot—or archaeological site. And, yet, like the fibers of a woven basket, these *awful lines* continue perpetually onward, creating ever-further biographies of use, trade, migration, discard, reuse, and post-depositional transformation.

Ultimately, globalization involves processes of (deeply unequal) socioeconomic conditions imposed by imperial powers (or transnational corporations and non-governmental organizations) on colonial societies (or nations and local communities). But, to enter into the nuanced, diverse, continuous, and multiscalar dynamics of global connectivity, it is perhaps more fruitful to explore these *meshworks* of power from the inside out. While ever-expanding networks of people, artifacts, and knowledge may arguably be considered intrinsic to the human condition, the capitalist and deeply inequitable form of globalization is neither inevitable nor infinitely sustainable. By unpacking how, when, and why specific commodities, occupants, and material technologies came to assemble within the sites we archaeologists study—by traveling, in other words, along their various *awful lines* toward their moment of material conjuncture—historical archaeology can better illuminate globalization as a powerful, yet contingent, dynamic, rather than a static entity. And, by analyzing the specific material histories of its inner workings, perhaps we can help imagine alternatives that could have been and, therefore, might somehow be?

Thus, by approaching sites as knotted clusters of travel connections, commodity routes, human migrations, and knowledge transfers that mutually enmeshed the humans, objects, and places of these complex material worlds, we historical archaeologists can begin to appreciate globalization as a process of *being* global. We can begin to see it as a topological practice of entangled links and enfolded connections that move us beyond our specific archaeological sites to horizons beyond any perimeter walls.

Acknowledgments

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