

Slow Archaeology, Punk Archaeology, and the Archaeology of Care

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Introduction

The rise in digital methods in both archaeological analysis and fieldwork are transforming the discipline. Digital practices increasingly shape the spaces, relationships, and forms of engagement that define archaeological work. They promote an archaeology that extends beyond the physical confines of the site, the project, or the object as well as the individual excavator. A growing emphasis on assemblages as a way to understand how archaeology produces meaning has repositioned the archaeologist from being the central figure in knowledge making to being just one agent in a dense network of situations, objects, devices, methods, and spaces. The embrace of digital tools has allowed for the emergence of the transhuman archaeologist. While the philosophical and intellectual edges of transhumanism remain fuzzy, transhumanists generally argue that humanity can be improved by expanding beyond the physical, intellectual, and sensory limits of the individual through the use of digital technology (More 2013; FM-2030). According to transhumanists, the resulting “posthumans” would not only experience the world in a different and better way but also produce different social, technological, and political arrangements that offer opportunities for continuous improvement and refinement (More 2003). The concept of transhumanism in archaeology provides a way to reframe both contemporary and historical critiques of archaeological knowledge and its relationship to archaeological practice.

The title of this article reflects three efforts to understand how digital practices are transforming the discipline. The invitation to participate in a panel on transhumanism at the 2018 European Association of Archaeologists annual meeting pushed me think about how my previous work intersects with the concept of transhumanism in archaeology. Punk archaeology refers to a series of conversations on digital tools and archaeological practice that occurred at conference dedicated to punk rock and archaeology in 2013 (Caraher et al. 2014). It explored the potential for an archaeology grounded in radical and performative inclusivity. Slow archaeology evokes a pair of articles that emerged surrounding conversations about the use of digital devices in the field which culminated in a 2015 conference and volume (Caraher 2015; Caraher 2016). It considered the implications of a particular strand of scholarship that celebrated the increases in efficiency, accuracy, and precision associated with digital field practices. The concept of an “archaeology of care” derived from collaborative work in the Bakken oil patch from 2012-2018 with the North Dakota Man Camp Project and foregrounds

social responsibilities inherent in archaeological knowledge making both to the discipline itself and to the communities where we work (Caraher and Rothaus 2017).

These concepts have received some thoughtful critique in recent years (e.g. Richardson 2016; Mullins 2015; Graham 2017; Huvila & Huggett 2018.) which now lurk behind my effort to explore the contours of transhuman digital practices in the context of the history of archaeological work and organization. More explicitly, however, the first section of this article introduces two mid-century scholars who have received little attention among archaeologists: Jacques Ellul and Ivan Illich. Illich argued that technology and modernity worked against convivial practices at the core of a creative and humane society (Illich 1975). Ellul presented a critique of efficiency and modern “technique” as undermining human autonomy and choice (Ellul 1964). The second and third sections use these ideas to consider the significance of efficiency and transhumanism in the emergence of archaeology as both an industrial and digital practice. Transhumanism, in this context, reflects on disciplinary knowledge making as the product of an assemblage of practices, tools, and materials which form an antecedent to the digital methods more typically associated with transhuman view of the world. While Ellul and Illich articulated their critiques of modern work in the context of the assembly line, digital practices in archaeology have increasingly looked to the more dynamic and fluid world of contemporary logistics to describe the seamless flow of digital information between projects, scholars, research questions, and devices. Supply chain logistics describes a key way to transform diverse assemblages into valuable commodities, and the work of Manuel Delanda (2003), Deborah Cowen (2014), and Anna Tsing (2015), have traced the rise of logistics in the second half of the 20th century. The final section considers draws on Gilles Deleuze’s critique of Foucault’s vision of modernity (Deleuze 1992) to explore logistics and assemblages as groups of objects from a single context as well as groups of practices, tools, objects, and individuals who co-produce archaeological knowledge. In archaeology, the increasingly digital character of our practices, tools, objects, and methods have both produced massive, complex, and more inclusive assemblages (e.g. “Big Data”) and demonstrated how these can introduce new efficiencies to knowledge making. The trajectory of these practices probes the limits of current digital practices and transhuman thinking in an archaeological context.

Ellul and Illich

Ivan Illich and Jacques Ellul offered compelling critiques of the impact of modernity, industrial practice, and capitalism on society that, despite harkening from a decidedly pre-digital age, offer useful perspectives on the expansion of the digital practices in archaeology. Illich is the better known of the two scholars, but still rather marginal in

archaeological literature. In his *Tools for Conviviality*, Illich argued that modernity, technology, and the state disrupted the conviviality that existed among premodern societies (Illich 1975). For Illich, conviviality represented the opposite of modern productivity (with its interest in speed and efficiency) and emphasized the free, unstructured, and creative interaction between individuals and between individuals and their environment. As Michael Given has recently shown, Illich's notion of conviviality can shed light on the resilience and stability of agrarian practices in 17th century Cyprus (Given 2018) and extend to include such non-human actors as the soil (Given 2017). At the same time, he acknowledged that understanding conviviality in the past required a convivial practice among archaeologists in the present (Given 2017: 140) which he articulated as the collaboration between a wide range of specialists who would work together to unpack the complex relationships that form past human environment. An appeal to specialization, of course, represents a distinctly modern approach to conviviality. By proposing that archaeology needs to collaborate with specialists in soil science, for example, Given complicates the tension between the fragmented practices of modern archaeological knowledge making and the integrated practice of premodern conviviality. His modern take on convivial practice offers an approach to understanding the conviviality of the past, but it remains difficult to disentangle the organizational logic of specialization and its basis in an effort to increase the efficiency in industrial processes (Alexander 2008, 65-72; Illich 1971). While convivial practice is not impossible among specialists involved in contemporary archaeological work, Illich's critique suggests that specialization may well be more of a barrier than an asset in genuine conviviality.

Jacques Ellul's emphasis on efficiency is perhaps the more intriguing for any consideration of archaeological practice. In *The Technological Society*, he traced the rise of technology and its distinctive form of human engagement with mechanical tools that he calls "technique." (Ellul 1964). Ellul's technique had five characteristics (for a summary see Benello 1981). First, it was shaped by the need for efficiency. Second, technique was "self-augmenting" with technical problems leading invariably to technical solutions. Third, technique was "monistic" with the good and bad uses of technique being outside the control of the individual agent. Technique, fourthly, extends across fields of activity and disciplines from the economic to the social, political, and even creative. Finally, and most controversially, technique is universal and autonomous. The spread of technique over time effectively severed the attentive individual from autonomous engagement with work and life. In the place of choice emerged practices dominated and shaped by the abstract logic of efficiency. This can be seen in the rise of the specialist and specialization, for example, who played an increasingly important role in production and the organization of practice. Specialized skills, methods, and expertise limited how individuals define and perform their work. For Ellul, the loss of autonomy associated

with efficiency-driven technique ultimately shaped human relations and their relationship with their tools. Like Illich, he saw not just technology, but the technological society, as an assemblage, as robbing the modern world of dynamism and creativity. While scholars have recognized the elusiveness of Ellul's definition of efficiency and the difficulty of attributing a universal structural logic to human motivations (Son 2013; Ritzer 2013), Ellul's diffuse perspective on "technique" brought attention to the relationship between technology, economic motives and political and social goals. As a result, Ellul's view of a technological society reveals how Given can call for a conviviality among specialists that commingles individuals defined by their place within the organizational logic of technical production and premodern practices.

Archaeology as Industrial Practice

From a transhumanist perspective, Ellul's critique of the modern condition is too pessimistic concerning the influence of the modern world over human autonomy, but his understanding of efficiency in shaping modern practice remains relevant to recent conversations about archaeological practices. As I argued in my work on "slow archaeology," the relationship between industrial practices and archaeology remains complex (Caraher 2016). Numerous scholars have argued convincingly that modern practices shaped the way that archaeology organized the world (Thomas 2004) and that the field adopted industrial practices and organization starting in the early 20th century (Maguire and Shanks 1996; Lucas 2001, 8-12; Leighton 2016, 744). With the rise of contract archaeology and cultural resource management, however, the potential for industrial practices to be of use within archaeology became particularly explicit as practitioners operated with the heightened awareness that time is money (e.g. Paynter 1983). The simultaneous emergence of "New Archaeology" which leveraged the industrial tools that proliferated during the World War II, from aerial photography to large-scale earth movers and computers, to accelerate the pre-war division of archaeology into increasing specialized subfields (Clarke 1973). The emphasis on robust, quantitative data collection in the field as the basis for hypothesis testing further encouraged standardization of practices on archaeological projects (Pavel 2010). These changes proceeded at the same time as the modern American university moved even closer to an industrial model of education with a growing emphasis on specialized knowledge and well-ordered, incremental curricula (Menand 2010).

It is easy to see how the development of archaeology over the second half of the 20th century contributed to how we talk today about using digital technology. An emphasis on efficiency, for example, points to the relevance of Ellul's critique for archaeological practice. As Jennifer Alexander noted in her study of the history of efficiency, continuity exists between early industrial interest in efficiency and its recent status as "an iconic

mantra in the high-tech industries” (Alexander 2008). The expansion of digital practices and their efficiencies across the entire scope of archaeological work indicates that the transformation of the discipline continues to accelerate. In the proceedings of a recent conference and publication dedicated to digital tools in field work, *Mobilizing the Past for a Digital Future* (Averett et al. 2016), Adam Rabinowitz noted that the preoccupation in these essays was “time” or terms related to saving, consuming, or costing time in field practices (Rabinowitz 2016, 495-496). Terms related to efficiency likewise appear throughout as does the term workflow in digital practices. Among the most widely cited and read articles from *Journal of Field Archaeology* is Christopher Roosevelt’s (and team) thorough presentation of the digital workflow from their project in southwest Turkey (Roosevelt et al. 2015). If we accept Colleen Morgan and Stuart Eve’s famous pronouncement that “we are all digital archaeologists now” (2012), the work of Ellul and Illich urge us to also remain critically aware of what Jeremy Huggett has called the “ghosts in the machine” (2015) which shape the complexities, assumptions, and expectations baked into both our digital tools and, more importantly perhaps, how we talk about them. The historic impact of industrial practice on archaeology continues to transform how archaeology has organized, uses, and talks about digital tools.

These influence of industrial practices in archaeology have not escaped critique. For example, Maguire and Shanks’ 1996 article that encourages archaeologists to recognizes the role of craft in archaeological practices. This critique of industrial practices in archaeology, did not reject the outcomes of this work or its value for the field, but sought to encourage a greater awareness of the work of archaeology as the dialogue between “the archaeologist and material, the archaeologist and the community – an expressive and interpreted experience within which the past” (Maguire and Shanks 1996, 86). In a similar vein, efficiency itself has become increasingly regarded as a problematic term deeply embedded in practice and the coincidence of human and material agency (e.g. Shove 2017). Bruno Latour and others have demonstrated that any effort to unpack the complexity of the social, mechanical, or environmental energy in a system requires abstract acts of purification that define and separate energy and effects from their complex network of entangled relationships and practices (Latour 1993; Shove 2017, 7-8). This work, on the one hand, echoes recent studies of both ancient and modern technology that have challenged tradition views of agency and argued that objects and individuals co-create the world (e.g. Barad 2007). This greater attention to the interaction between individuals and objects has provided a compelling theoretical framework for understanding the interplay of technology, tools, objects, and agency in the construction of archaeological knowledge. On the other hand, this work has only just begun to inform the thriving conversation on the impact of digital tools on the organization of archaeological practice (although see Pickering 1995; Taylor et al. 2018), the nature of archaeological skills and expertise, and issues of archaeological

preservation and publication (Huggett 2017). Perhaps this entangled view of the world gives the work of Illich and Ellul new relevance for archaeologists concerned with the social issue of disciplinary practice across the field.

Transhumanism and Industrial Practice

An emphasis on efficiency as existing within a larger system of practice, tools, and technology not only complicates how we consider it in archaeological practice, but also it also offers a useful reminder that the ghost cannot be separated from or even understood outside of the machine. The understanding of the modern world as a dense network of tools, institutions, techniques, and expectations complements the views of Illich and Ellul who saw the logic of the modern world as irreducible from its constituent parts and as extending from tools and techniques to social institutions and individual practices. Their emphasis on the individual, however, as a formerly autonomous agent compromised by modern technologies, produced anxieties in their works, whereas for transhumanists, some of these same conditions inspired the hope for a post-human world (More 2003).

A reading of transhumanism that views the distribution of agency across a diverse assemblage of technologies, institutions, and individuals parallels recent work in the archaeology. Rodney Harrison, for example, has suggested that archaeology could replace the linear processes of excavation as the discipline's dominant metaphor with the perspective offered by the surface assemblages of survey archaeology (Harrison 2011; 2013). Rather than systematic revealing an occluded, but materially present past, the work of constructing meaning from a surface assemblage may better represent the relationships between people, objects, tools, and techniques necessary to produce archaeological knowledge. Similar approaches have informed the recent work of Shannon Lee Dawdy who recognized the key role of the relationship between field work, local knowledge, ritual activities, and various pre- and anti-modern ways of locating, narrating, and producing social value for artifacts (Dawdy 2016). For Olivier (2011), this speaks to the chaotic nature of time and memory from which the discipline of archaeological seeks to produce order, but not a singular order or the only possible, useful, or meaningful arrangement of the past. In this context, the rather linear practice of stratigraphic excavation with its institutional, disciplinary, and performative underpinnings (for a useful critique see Gnecco 2013) gives way to raucous and uneven performance of archaeology which often eschews expertise, barriers to access, and specialized knowledge. The growing interest in ontology among archaeologists, in particular, has tended to support more dynamic, inclusive, and provisional approaches to archaeological knowledge making that question the integrity of traditional archaeological categories and methods (see Caraher 2016 for a survey). In short,

transhuman practice, whether built on the metaphor of surface survey or entangled universe of early-20th century ontology focuses on the relationship between individuals, methods, and technology in archaeological work.

A transhuman perspective on the entanglement of the body and machines in archaeological work creates new ways to understand the pervasive influence of modernity and, in particular, the assembly line in the organizational logic of archaeological work. The linearity of the assembly line, for example, shared with archaeology the modern conception of linear time. Work flows from one station to the next in a structure replicated in archaeological periodization schemes or in the orderly arrangement of boxes in a Harris Matrix. The relationship between the individual and work on the assembly line is likewise organized into managed movements frequently following the tenets of Edward Taylor's scientific management. The transhuman individual becomes another moving part in the industrial machine that multiplies and expands the archaeologist's labour while, at the same time, disconnecting it from a clear sense of the work's goals and products. The project director, in contrast, authors and manages the final publication, which stands as a traditional product of archaeological work. While the physical and embodied process of work often echo the embodied knowledge acquired through craft production, a century of archaeological workers have experienced the same anomie and alienation that characterizes the routine of industrial labour (Everill 2012, especially chapter 2).

This distillation of the archaeological process, however, may be too pat and austere. The experience of archaeological work on site, the informal opportunities for analysis and interpretation, and moments of discovery undermine too literal a comparison between archaeological practice and industrial work (Edgeworth 2006). As Edgeworth has shown, the connection between embodied and material knowledge, the traditional ways in which field techniques are passed from one excavator to the next, and the dynamic character of excavation reinforced the prevalence of craft in archaeological work. Craft practice also grounds excavation in the distinctive materiality of the site and organizes work and knowledge with a commitment to space and place. The commitment to vertical and horizontal space, provenience, and local, regional and national contexts have long shaped archaeological practice and goals of the discipline. The coincidence between the linear and spatially localized character of craft-inflected practice, the assembly line, and modernity exerted a significant influence over the field archaeology and the nature of transhuman engagements that functioned within the tools, methods, and practices present in archaeological work. Mary Leighton's recent studies of the organization of archaeological labour demonstrates that the production of archaeological data often overwrites the contribution of skilled workers and obscures the organization of archaeological labor (Leighton 2016). They become, in Paul Everill's phrase, "invisible diggers" (Everill 2012).

Disciplinary Transhumanism

Viewing the historical practices of archaeology through a transhuman lens, then, offers a reminder that that archaeology is both craft and industrial work despite the traditional emphasis on the product of archaeological labour. These approaches shared an emphasis of archaeological work on site and emphasized the physical, embodied relationship between workers, the site, and the place. In Gilles Deleuze's critique of Foucault's vision of modernity, he recognizes the assembly line as a space of enclosure and understands the localization of human and material capital as being vital to maintaining control in the disciplinary society of the 19th and early 20th century (Deleuze 1992). During the second half of the 20th century, changes in technology and the increased emphasis on speed divorced capital from enclosed spaces in processes that David Harvey's described as time annihilating space (Harvey 1992). As Deborah Cowen has observed, the growing interest in speed and time shifted the logistics has come to supplant the logic of the assembly line in our understanding of production (Cowen 2014). The ability to move products, processes, and capital around the globe undermined the utility of the enclosure and ushered in an era of organization dominated less by the ability to discipline the body to the time and space of work and more by the ability to track and control the flow of objects. For Deleuze this inaugurated an era of fragmented "dividuals" who are coded, tracked, and numbered across global systems. Applied to archaeological work, this shift both delocalizes practice and expands it beyond the limits of our bodies distributing it reciprocally through technology, techniques, and social organization.

The concept of distributed production in logistics emphasizes the interdependence of tools, techniques, methods, and individuals characteristic of 21st-century archaeology and recognizes the need to reduce the friction present within assemblages. The shift in attention that logistics implies holds forth the potential to transform the social organization of archaeological practice. Digital technology, for example, whatever its integrative potential continues the industrialist and Taylorist approach of dividing complex tasks into rather more simple ones (Caraher 2015; 2016). This non-linear, fragmentation, however, make the product of digital tools more interchangeable and allows it to be aggregated and combined in different ways. As such, digital practices reject the linearity of the assembly line for the "web" of digitally networked world in which dynamism and adaptability serve to overcome barriers between sites, levels of expertise, and the distinctive character of archaeological knowledge. This approach to producing archaeological data facilitates new combinations of archaeological information, but also allows for the disaggregation of archaeological information previously embedded in archival contexts, catalogues or other forms of more rigidly

structured relationships.

Nowhere is this logistics-oriented approach to archaeological knowledge making more apparent than in the linked open data (LOD) movement in archaeology (Geser 2016; Seifried 2014). The Alexandria Archive's Open Context provides a model application linked data standards through a platform allowing for the highly granular publication of archaeological data (<https://opencontext.org/>). Each archaeological object in this online database has a unique URI. This allows for artefacts, archaeological contexts, strata, types, or survey units to be shared, linked, combined, and remixed in different ways. The potential of linked open data standards is clear. While Open Context strives to preserve each projects' way of organizing data, the structure of their platform and the granular character of the data encourages archaeologists to create new assemblages of archaeological knowledge that extend far beyond the borders of the site, region, method, or context.

The ability to integrate granular digital data is likewise manifest in various crowd-sourced research projects have likewise shown how digital tools allows for fragmented bits of knowledge to be marshalled to address complex archaeological problems (e.g. Bonacchi et al. 2014; Parcak et al. 2017; McCoy 2017). Digital mediation in these contexts allow for the collecting of archaeological information from a relatively unstructured cluster of participants. Obviously, the use of crowdsourcing, where a large community acts as a kind of mechanical Turk, is not ideal for all forms of archaeological knowledge making, but it has clear applicability for managing our growing access to big data (e.g. Bevan et al. 2014). At the same time, it presents a distinct form of digital deskilling or re-skilling of the work of archaeological analysis (Roosevelt et al. 2015). The complex anonymity provided by "the crowd" likewise risks obscuring the range of users willing to contribute to crowdfunding projects and the real limits to the promise of digital democratization (Richardson 2014). The increasing mobility of archaeological information, ease of integrating collaborators, and granularity of specialization, the social impact of these kinds of systems on the discipline remains unclear.

The concept of slow archaeology offered a preliminary critique of use of remote, structured or simplified recording digital recording interfaces, the ease of point-and-click data manipulation, or the use of software to synthesize unstructured data such as generated by digital photography into 3D structure-from-motion images (Caraher 2016; Morgan and Wright 2018). The adoption of digital tools and the understanding of digital technologies at both a conceptual and applied level is not merely exchanging one set of skills for another (*pace* Roosevelt et al. 2015) or another way to communicate and publish the same archaeological knowledge. The fragmentation of information through the use of digital tools and techniques parallels the transformation of ontological assumptions of archaeological work. The recombinant character of the digital assemblage and the attention to moving data from one context and relationship to

another parallels the intellectual and practical consequences of logistics revolution. Many of the barriers that the mobility and modularity of digital data seeks to overcome have long defined the complex nature of archaeological contexts, experience, and practices. In Deleuzian terms, the spaces of enclosure that have defined archaeological practice are giving way to dividuated archaeological data. The use of digital tools to produce more efficient data collection has anticipated the recent fascination with "Big Data" well in advance of the consistent demonstration of its results (Kansa 2016; Bevan 2015). This is not to say that big data will not lead to important breakthroughs in our field, but to suggest that the efficiency possible in digital data collection, analysis, and dissemination, has outpaced our ability to formulate questions. As Roosevelt and others cleverly quipped, digitization is an alternative to destruction in the context of field practice, but it is not the same as the creation of meaningful pasts.

Conclusions

Ellul and Illich saw the technological revolution of the 20th century as fundamentally disruptive to the creative instincts and autonomy of individuals because it falsely privileged speed and efficiency as the foundations for a better world, then this same strain of reasoning in archaeological practice should give us pause. Transhuman practices in archaeology reflect both long-standing industrial modes of organizing archaeological work according to progressive technological principles and the position of the individual amid a network of relationships that extend and constrain their influence. As a critical position, transhumanism shifts our views of how we understand the transition from the enclosed space of craft and industrial practices to the more fluid and viscous space of logistics. In short, it expands the mid-century humanism of Ellul and Illich and offers a cautionary perspective for 21st century archaeology as it comes to terms with the growing influence of logistics as a the dominant paradigm of organizing behavior, capital, and knowledge.

A transhuman perspective frames an "archaeology of care" that take cues from Illich and Ellul in considering how interaction between tools, individuals, practices, and methods shaped our discipline in both intentional and unintentional ways. If the industrial logic of the assembly line represented the ghost in the machine of 20th century archaeological practices, then logistics may well describe the ghost in the machine of archaeology in the digital age. In higher education, Gary Hall has recognized a trend called "uberfication," which describes the use of data to map the most efficient connections between the skills

of the individual instructors and needs of individual students at scale (Hall 2016). In this system, individuals are divided into pedagogical skills and educational needs in the same way that we parse archaeological contexts, disciplinary specialization, and types of materials. Like in archaeology, the analysis of this data, on the one hand, allows us to find efficient relationships across complex systems. On the other hand, in higher education, this dystopian vision splinters into granular network of needs and services the holistic experience of the university, integrity of departments and disciplines, and college campuses as distinctive places. The ability to link individual agents to particular needs is no more a simple tool than the college campus is a geographic or spatial convenience. The organization of practice influences the behavior of agents to satisfy the various needs across the entire network. The data, in this arrangement, is not passive, but an active participant in the shaping the entire assemblage.

The issue in this case is not the existence of a transhuman assemblage; in fact, transhumanism both makes the assemblage and its critique possible. The emergence of a fragmented, distributed future for archaeology suggests that the tools and techniques available to the transhuman archaeologist are as embedded in archaeological practices as they are in the logic of capital, efficiency, and modernity. The performative context of archaeological practice, whether “punk” or otherwise, offers the space for critical engagement. “Slow archaeology,” despite its grounding in privilege, nevertheless offers an ideal archaeological future that challenges the expectations of efficiency. Finally, an “archaeology of care” is my term for an approach to the discipline that embraces human consequences of both our methods and the pasts that they create.

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