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CONTENTS PAGES

EDITORIAL		5
DOSSIER - ARCHAEOLOGY: FROM THE AGENDA 2030 TO THE WORLD POST-COVID		
G.P. Brogiolo, A. Chavarrfa Arnau	Archeologia e sostenibilità nell'era post (?) COVID-19	7
P. Gould	Resilience and innovation: an economic contemplation on public-facing archaeology after COVID-19	21
P. Gelabert	Past diseases: present questions and future perspectives from an archaeogenetic approach	35
C. Holtorf	An archaeology for the future: from developing contract archaeology to imagining post-corona archaeology	57
P. Everill	<i>Quo vadis?</i> What next for British archaeology?	73
D. Henson	Archaeology's place in education: under threat or an opportunity?	91
A. Rey da Silva	Sailing the waters of sustainability. Reflections on the future of maritime cultural heritage protection in the global sea of development	107
R.J. Williamson, M. Nevell, B. Humphrey-Taylor	Increasing the resilience of cultural heritage using novel technologies: the perspective from a UK volunteer-led site	135
C. Rynne	Waterpower and sustainable energy in 19 th -century Europe and the USA. An archaeology of the water turbine	147
RESEARCH - RETHINKING THE LATE ANTIQUE COUNTRYSIDE		
C. Corsi	The villa- <i>mansio</i> in the Late Antique Mediterranean: between historiographical creation and archaeological impotence	165
T. Lewit	<i>"terris, vineis, olivetis..."</i> : wine and oil production after the villas	193

- N. Conejo** Coins and *villae* in late Roman Lusitania: collapse of the Roman currency economy? 219
- A. Carneiro** Adapting to change in rural Lusitania: zooarchaeological record in the Horta da Torre Roman villa (Portugal) 247
- R. Montagnetti, D. Pickel, J. Wilson, F. Rizzo, D. Soren** New research in the Roman villa and late Roman infant and child cemetery at Poggio Gramignano (Lugnano in Teverina, Umbria, Italy) 279
- J.M. Nolla, M. Prat, A. Costa, N. Corominas, L. Palahí** La visualización de los visigodos en Gerunda y sus entornos. Datos significativos de un problema sin resolver 303

BEYOND THE THEME

- N. Tsvikis** Moving beyond the Invisible Cities of Byzantium 325
- P. Todaro, G. Barbera, A. Castrorao Barba, G. Bazan** *Qanāts* and historical irrigated landscapes in Palermo's suburban area (Sicily) 335
- S. Bianco, E. Allué, S. Riera Mora, A. Fernández, M. Soberón Rodríguez, C. Miró Alaix** The evolution of wood fuel exploitation in the El Born Market site (Barcelona, Spain) during the 15th-18th centuries starting from charcoal analysis 371
- A.R. Staffa** La transumanza in Abruzzo fra tarda antichità e medioevo 401
- P. Marcato** Analisi diacronica del paesaggio storico delle malghe di Brentonico (TN) tra XIX e XXI secolo 449

REVIEWS

- E. Dodd, *Roman and Late Antique Wine Production in the Eastern Mediterranean: A Comparative Archaeological Study at Antiochia ad Cragum (Turkey) and Delos (Greece)* - by **T. Lewit** 473
- M. Cavalieri, F. Sacchi (eds), *La villa dopo la villa. Trasformazione di un sistema insediativo ed economico in Italia centro-settentrionale tra tarda antichità e medioevo* - by **G.P. Brogiolo**
- F. Grassi, J.A. Quirós Castillo (eds), *Arqueometría de los materiales cerámicos de época medieval en España* - by **C. Citter**
- G.P. Brogiolo, A. Chavarría Arnau, *Archeologia postclassica. Temi, strumenti, prospettive* - by **A. Guidi**
- C. Giostra (ed), *Migrazioni, clan, culture: archeologia, genetica e isotopi stabili* - by **V. La Salvia**
- E. Guttmann-Bond, *Reinventing Sustainability: How Archaeology Can Save the Planet* - by **M. Fecchio**
- I. Huvila (ed), *Archaeology and Archaeological Information in the Digital Society* - by **L. Durjava**
- C. Holtorf, A. Pantazatos, G. Scarre (eds), *Cultural Heritage, Ethics and Contemporary Migrations* - by **A. Borsato**

Peter Gould*

Resilience and innovation: an economic contemplation on public-facing archaeology after COVID-19

The prospects for the future course of COVID-19 remain unclear. What is clear now is that the financial disruption to museums and archaeological businesses and their employees will be substantial and lasting, that the capacity and willingness of the public to engage with archaeology in any form is indecipherable, that traditional funders of archaeology will be under tremendous stress, and that the changes in practices and operations required of museums and archaeologists to remain public-facing and financially viable will be substantial. To become resilient, innovative approaches will be essential. This paper offers three scenarios of escalating seriousness for the path forward in public-facing archaeology and explores the implications of each for practice and financial impact.

Keywords: COVID-19, museum management, strategic planning, philanthropy, government funding, risk management

Le prospettive per il futuro corso del COVID-19 rimangono incerte. Ciò che è certo ora è che i disagi finanziari per musei e imprese archeologiche saranno sostanziali e duraturi, che la futura capacità e la volontà del pubblico a essere coinvolto in qualsivoglia forma di archeologia sono imprevedibili, che i tradizionali canali di finanziamento dell'archeologia saranno sottoposti a stress e che i cambiamenti pratici e operativi richiesti a musei e archeologi per rimanere orientati al pubblico e finanziariamente in salute saranno sostanziali. Per essere resilienti, nuovi approcci saranno essenziali. Questo articolo offre tre scenari di criticità crescente per il progresso dell'archeologia nel suo rapporto con il pubblico e esplora le implicazioni di ognuno per l'impatto pratico e finanziario.

Parole chiave: COVID-19, gestione museale, pianificazione strategica, filantropia, fondi pubblici, gestione del rischio

1. "It is difficult to make predictions, especially about the future" Danish proverb, often erroneously attributed to Niels Bohr

COVID-19 is the first truly global, non-economic crisis since World War II. No sector will go unaffected, least of all archaeology and its related disciplines and institutions. Cultural organizations globally have

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been shuttered and face massive financial trauma¹. Already marginalized in academia and commoditized in the public realm, public-facing archaeological research, museums, and archaeological businesses face an uncertain future, as do many other social service agencies, businesses and cultural institutions. This essay draws on the personal experiences of an archaeologist, economist and businessman who, at the time of writing, is engaged with large cultural institutions and smaller archaeology-based organizations that are trying to work through their futures after COVID-19. It is not replete with footnote allusions to prior publications because, for institutions in the thick of the present crisis, the past may well not be prologue.

The prospects for commercial archaeology are considered elsewhere in the volume. In many countries construction work has continued through the COVID-19 crisis so, while many archaeologists in the commercial sector have been furloughed, others are able to work. The fate of commercial archaeology in any event is likely to depend more on construction spending and macroeconomic stimulus policies than on those factors affecting the public-facing elements in archaeology. Similarly, although some in academia have endured job loss, pay cuts and challenging work environments during the COVID-19 crisis, the situation facing academic archaeology, however dire, is outside the purview of this essay. Instead the focus here is on the public-facing segments of archaeology – museums, archaeological sites and parks, field schools, or public archaeology programs – which have largely been shut down in the COVID-19 crisis and face complex operational and financial challenges as they begin to emerge². Many of the challenges, if not the responses, are already clear, including what may become stark differences between the prospects and required actions from large, complex institutions compared to those facing smaller more vulnerable organizations.

In prospect, the nature of the post-COVID-19 world is likely to prove indecipherable. Forecasting the progress of the disease has been technically challenging³. Signs of progress on vaccines and treatments are emerging, but there are still many unknowns about COVID-19⁴, and it is grimly clear that a global economic contraction greater than the 2007-

¹ See the various issues of UNESCO's COVID-19 impact tracker: <https://en.unesco.org/news/culture-covid-19-impact-and-response-tracker>.

² See, e.g., the public discussion "Audience Matters" on Slack.com. <https://app.slack.com/client/T010GPG69LN/C010M4MRV1C>.

³ See, e.g., <https://www.nytimes.com/interactive/2020/04/22/upshot/coronavirus-models.html?searchResultPosition=2>.

⁴ See, e.g., <https://www.washingtonpost.com/news/powerpost/paloma/daily-202/2020/04/30/daily-202-five-important-coronavirus-questions-that-scientists-and-doctors-are-racing-to-answer/5ea5763602ff15fb0020e1d/>.

9 crisis⁵ will lead to radical financial and psychological dislocation for families around the world⁶. This has been a massive crisis for all public-facing organizations⁷. The arts and culture sector has been hardest hit and is facing projections for a decline of 80% in its contribution to Gross Domestic Product (GDP) in the United States in 2020⁸. Funding for and public interest in archaeology and heritage almost surely will be dislocated, perhaps profoundly. Communities and nations dependent on heritage tourism have suffered enormous losses, estimated by UNESCO to reach \$2.1 trillion in GDP and 1 million lost jobs this year as virtually all destinations in all nations have been shuttered⁹. We know that things somehow will be different in the future, if only because the economic disruption has been so devastating and the political and social consequences will be felt across classes and social groups around the globe. But we do not know in what ways it will be different. However, if the true nature and depth of future dislocations is beyond the far horizon, and that is this author's conclusion after engaging on these challenges in recent weeks, then archaeology's future is like Schrödinger's cat: We won't know if it is alive or dead until we open the box.

2. "Never waste a good crisis."

Variously attributed to Rahm Emanuel, Winston Churchill and Niccolò Machiavelli

If only because every headline screams it, we know we are at present living through a crisis. While for a favored few, the "crisis" is more of a lark, a chance to cocoon and explore online entertainment, for many the crisis is tangible and wrenching. Peoples' lives will change, businesses will fail, career plans will be disarranged. We can either embrace the change and seek to use it to our advantage or resist it and watch impotently as events roll past and perhaps over us. While we cannot pinpoint what exactly will happen, we can act now to comprehend the range of conceivable outcomes and the opportunities as well as the risks each presents to the public-facing heritage sector.

⁵ See the views of the International Monetary Fund at <https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020>.

⁶ For a discussion of the views of the US population as it is about to emerge from lockdown, see <https://news.gallup.com/opinion/polling-matters/309179/americans-attitudes-reopening-business.aspx>.

⁷ See, e.g., <https://www.americansforthearts.org/by-topic/disaster-preparedness/the-economic-impact-of-coronavirus-on-the-arts-and-culture-sector>.

⁸ B. ACHMEYER, N. GAULT, J. REPP 2020, *U.S. Macroeconomic impact and sector implications*, April 20, New York: EY/Parthenon, 4.

⁹ https://en.unesco.org/sites/default/files/issue_3_en_culture_covid-19_tracker-5.pdf.

The need to consider change predates the COVID-19 crisis. The public aspect of the heritage sector has been under profound stress for many years. Museums are grappling with a new generation educated for lives in commerce not culture, and are confronting the impact of technology on whether, when and how the public chooses to participate. The costs to maintain the premises and the programs of cultural enterprises have continued to rise, further putting stress on their capacity to raise funds and pushing the prices they must charge beyond the pocketbooks of many families. Nonetheless, many archaeologists, conservators and others in the field live contingent lifestyles on the fringes of conventional employment. This sector historically was funded by passionate philanthropic advocates or by governments that considered archaeology and heritage intrinsically valuable to the public. For some time, these economic foundations of the sector have been under fire. Government support has waned as successive economic crises have elevated the need for social services and undercut financial support for museums, cultural education, archaeological sites, and research. Many traditional individual philanthropic funders have passed away, while support from institutional funders increasingly is focused on organizations able to demonstrate meaningful social impact. Funding in general was likely to become more scarce in the future even before COVID-19 rearranged government priorities and pummeled philanthropic endowments.

In effect, archaeology and heritage are in a double-barreled crisis. The unexpected global COVID-19 catastrophe is compounding the long-simmering burden of relevance, economic viability, and technological transformation that the sector bore into the present moment. None of these trends were initiated by COVID-19 but all will be inflamed by it. What is to be done? A crisis is a unique event in any organization's history. It is an opportunity for a stock-taking, for opening the door to new ideas and experimentation with new approaches. It can be an excuse to make hard decisions long deferred and face facts long ignored. This is such a time for the public side of archaeology and heritage. Other sectors of society obviously face the same challenges, and many have begun that internal reappraisal¹⁰. One technique for doing so being used in many public-facing institutions confronted by COVID-19 dislocations is to articulate potential scenarios that may unfold in the months and years ahead and contemplate how to respond to each in a fashion that both preserves organizations and enables them to emerge from the crisis stronger and more resilient¹¹.

¹⁰ See, e.g., [https://www.parthenon.ey.com/Publication/vwLUAssets/EY-beyond-covid-19/\\$FILE/EY-beyond-covid-19.pdf](https://www.parthenon.ey.com/Publication/vwLUAssets/EY-beyond-covid-19/$FILE/EY-beyond-covid-19.pdf).

¹¹ See, e.g., <https://www.artsy.net/article/artsy-editorial-three-museums-dealing-covid-19-crisis>.

Rather than plan for one specific projection, organizations must plan for several and learn in the process how to respond when the actual trajectory becomes clear. In that spirit, three broad scenarios may help frame the issues and options for public-facing heritage in the months and years ahead:

- **The Prompt Return:** COVID-19 is vanquished by mid-2020, everyone returns to work and school, and life goes on, with the primary consequences stemming from the economic damage of the past few months.
- **The Relapse:** After a tentative reopening, COVID-19 makes an ugly reappearance, perhaps, like the 1918 flu, in a more virulent form, with a reprise of shutdowns, job losses, government turmoil and personal hardship more damaging than this first episode. We have already seen the potential for this in countries in Asia that reopened too soon¹².
- **The Reset:** In time, life returns to a “new normal”, but we find that the economic and psychological toll inflicted by COVID-19 restructures political priorities, social practices, and economic relations on a global scale.

We cannot know today which scenario is more likely. Nonprofits and businesses are feverishly conducting research for insights into consumer behavior. Economists churn out forecasts virtually daily in the face of market turmoil and an opaque economic outlook. Most likely, any post-COVID-19 future will embody elements from each of these scenarios, but we cannot know now. Thus, the best approach is to plan now, in the earliest stages of the crisis, to be ready when the fog over the future clears.

3. “Plans are worthless, but planning is everything”

Dwight D. Eisenhower

Any good plan requires a clear purpose. What should be the objectives of public-facing heritage as it emerges from the COVID-19 crisis? Future sustainability – of archaeological and heritage resources and of the public-facing heritage sector itself – must be paramount. To achieve sustainability of places and people, the sector needs to earn financial support for heritage and heritage workers. Archaeological sites, expensive to excavate, conserve, maintain and present to the public, require vast funding. Museums have enormous investment requirements, carry the costs of specialized curators, conservators and educators, and are expensive to maintain and open to the public. Archaeologists who are committed to delivering value directly to the public, and they are an in-

¹² See <https://news.artnet.com/art-world/hong-kong-museums-reopened-closed-again-1812030>.

creasing cohort in the discipline, need to be able to pursue their profession in a manner that is safe to them and the public and delivers them better, more predictable livelihoods.

All of these objectives were imperiled before, and none of them is guaranteed in the post-COVID-19 world. Furthermore, although the public-facing heritage sector – archaeologists, museum curators, conservation specialists, and so many others – is highly interdependent, the people engaged in it have do not have identical priorities, values or incentives. What should unite everyone in this quest for sectoral sustainability is the reality that COVID-19 is challenging the world's support for heritage in ways not seen for generations. To secure the future, three dimensions of practice require focus and likely will demand innovation.

First, the way archaeologists and heritage professionals work – the practices that determine costs when we excavate, curate and manage museums, teach and engage with the public, conserve and preserve artifacts and sites and buildings – will need to be reconsidered in light of the trajectory coming out of COVID-19. Further, the need to provide more sustainable employment to workers also suggests that cost structures need to be resilient to crises in order to avoid recurrent layoffs. To an economist, this is a call to re-engineer the discipline; that is, to raise the efficiency and productivity of heritage work in order to deliver the public product through a less vulnerable work force. This has been the fate of every manufacturing and service business in the world for decades. Reengineering is only possible, though, if traditional ways of working are subjected to critical scrutiny and innovation.

Second, the sector needs to earn its financial support, whether from visitors, philanthropists, or governments. No segment of society is entitled to funding, no matter how valuable its adherents perceive it to be. This requires understanding and adapting practices to address the emerging expectations of visitors and key stakeholders as they work through the impact of COVID-19. Some may decry this approach as “marketing archaeology”, but we should rather see this as an opportunity to reimagine the relevance of archaeology and heritage for the modern world. We want to deliver experiences that both satisfy the public and enable us to define, measure and promote the positive impact that public-facing archaeology can have.

Third, the issues, risks and answers will be very different for large and for small-scale institutions. Scale is a complicating factor across every dimension of this discussion.

How can we plan now to rebuff the challenges and take advantage of the opportunities that will emerge post-COVID-19? Let us consider the question scenario by scenario.

3.1. *The Prompt Return*

Even in a *Prompt Return*, the most benign case, we will be burdened by the aftermath of government coffers emptied by spending for health care and to offset depression-era levels of unemployment. The loss of tax revenues from jobless workers and shuttered businesses will make fiscal recovery that much more difficult, especially as governments will need to spend to preclude a repeat of this disaster. The collapse in financial markets that underpin private philanthropic spending on heritage will force private supporters to reevaluate their priorities. Due to the unprecedented magnitude of government spending and financial market collapse, these challenges likely will persist for years. Businesses and other public activities will need to invest in protections for employees and the public in order to reopen.

Based on the preparations underway at the public institutions I am aware of, it is likely that museums, parks and archaeological sites will be required to pulse in visitors subject to per-square-foot daily quotas and distancing rules, while their costs are increased by requirements to check temperatures, provide personal protection, sanitize facilities, control food safety, and use technology to eliminate cash use or prevent touching of surfaces¹³. Archaeological excavations and field schools are likely to require personal protective equipment, limit direct contact, and perhaps impose impractical spacing in the trenches. Public archaeology may fall victim to safety precautions or public wariness to participate. Visiting museums or touring archaeological sites may become a financial luxury for families battered by job loss and illness, and will be avoided by those concerned by the risks. Countries dependent on foreign heritage tourism may face protracted economic losses and sites may be exposed to damage or looting. When travel will be able to resume, and whether the public will have the appetite to venture far from home, are still open questions.

The best information available today suggests that all of this seems likely to characterize the *Prompt Return*. Indeed, many cultural institutions are weighing whether the high costs of reopening to diminished crowds means they are better off to stay closed for this year. Some already have made that decision. Thus, *Prompt Return* does not mean that public-facing archaeology springs back to former levels of public participation and organizational income.

¹³ See, e.g., the US Centers for Disease Control reopening guidelines at <https://www.cdc.gov/coronavirus/2019-ncov/downloads/fs-reopening-america-workers-at-risk.pdf> or <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html> or <https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html>. See also the #out-the-other-side channel on the Audience Matters channel on Slack.com <https://app.slack.com/client/T010GPG69LN/C010J93207L>.

Reengineering organizations in this context has two aspects – taking steps to reduce costs permanently and taking steps to grow public engagement. The first implies rethinking how museums or archaeological sites deliver their experience. This should not be a process of deferring maintenance and conservation, but it may call for investments to bring significant portions of archaeological sites or museums up to top standards of interpretation and conservation, even if that means other areas are mothballed or reburied. Museum practices in conservation and artefact handling are highly labor intensive and a search for technological or procedural changes to reset those costs may be required. Such a re-envisioning of the operations needs to enhance, not sacrifice, the visitor or participant experience. Can artefacts and even exhibits be mounted and rotated more quickly but at lower cost in order to generate an “urgent reason” for the public to visit? Research to understand the priorities of visitors to museums or archaeological sites can stimulate the best minds in your organization to think about how to deliver your product at ever-lower costs. Innovative digital platforms and new forms of educational outreach may need to be evaluated seriously.

Justifying financial support likely means that reengineering will be a necessary but not sufficient condition to long-term backing. Demonstrating social impact is a growing requirement from public funding bodies, such as the National Lottery Heritage Fund in the United Kingdom (UK) and is a growing concern in Europe generally¹⁴. North American philanthropists are deeply interested in the subject. Public-facing heritage organizations need to demonstrate with convincing data and emotive anecdote that they are delivering real value to society and so should be sustained despite financial challenges.

Large-scale organizations will have the challenge of innovating in complex organizations and can expect to encounter resistance to changes in well-established protocols. Moreover, their higher running costs will put museums into competition for funding with other large cultural and social service organizations seeking funding from diminished philanthropic and government sources. Small organizations, such as local museums, will need to build both digital and personal bridges to their communities that demonstrate their social value-added and build a new base of financial supporters. Some organizations in the UK, for example, have already begun this effort¹⁵. Because small organizations have fewer resources

¹⁴ See, e.g., <https://www.heritagefund.org.uk/about/insight/evaluation>, and C. GIRAUD-LABALTE *et al.* (eds) 2015, *Cultural Heritage Counts for Europe*, Krakow. Available at <https://www.europanostra.org/our-work/policy/cultural-heritage-counts-europe/>.

¹⁵ See, e.g., https://www.museumsassociation.org/museums-journal/news/01052020-grassroots-fundraising-efforts-take-off?utm_campaign=1737713_01052020%20MA%20newsletter&utm_

in reserve, when temporary COVID-19 emergency funding ends they are especially vulnerable to the possibility that financially strapped governments or donors will face more needs than their resources can support.

Finally, planning for the next crisis needs to begin in earnest now. This is the third major economic crisis of the 21st century. There will be more. Institutions that are planning for a resilient future are already thinking this way¹⁶.

3.2. The Relapse

Public health experts remain fearful that COVID-19 will resurface next fall. A recurrence of COVID-19, especially in conjunction with a seasonal flu, would reframe the personal consequences of this epidemic worldwide. Until vaccines exist and are widely distributed, or treatments can avert catastrophic loss of life, the return of COVID-19 could induce a re-run of the early 2020 experience or worse. The inevitable government response to a *Relapse* would leave governments further weakened, economies traumatized by more permanent job losses and business bankruptcies, philanthropies facing reduced endowments and funding sources, and members of the public scarred financially and scared for their health. The damage may be mitigated through learnings from this first round, but perhaps not. All public-facing archaeology work would experience a dramatic loss of visitors and participants or be forced to absorb the costs of a second period of closure. Elderly citizens, often the backbone of public archaeology and museum audiences, may recoil from venturing outside at all. Families may simply decide to forego public activity out of fear for their children's health. Prolonged public aversion to converging in large groups will threaten museums, sites, festivals, and public archaeology projects whose revenue streams historically have depended on in-person attendance. The restructuring activities anticipated in the *Prompt Return* scenario will gain in importance and urgency.

Furthermore, in the *Relapse* scenario, the scramble for new ways to engage the public and keep up interest in heritage could be intense. During the COVID-19 crisis, museums and archaeological businesses have resorted to a host of online gallery tours, courses, lectures, and special events intended to keep their institutions top of mind, extend their reach to new constituencies, and demonstrate the value they can bring to communities under stress. Online access to collections already has produced

medium=email&utm_source=Museums%20Association&dm_i=2VBX,118TT,27M3YN,3XVM5,1 or <https://secure.givelively.org/donate/lower-east-side-tenement-museum/tenement-museum-gala-2020>.

¹⁶ See, e.g., [https://www.parthenon.ey.com/Publication/vwLUAssets/EY-beyond-covid-19/\\$FILE/EY-beyond-covid-19.pdf](https://www.parthenon.ey.com/Publication/vwLUAssets/EY-beyond-covid-19/$FILE/EY-beyond-covid-19.pdf).

digital attendance at major institutions that outstrips physical footfall. Online conferences, online festivals, and online lectures are on offer everywhere. Typically, all of this has been provided to the public for free. In the wake of a *Relapse*, such activities may need to become core revenue-generating elements of organizational missions. This will not be easy for two reasons.

First, expertise to conduct digital public-facing activities effectively and inexpensively is not abundant. Furthermore, competition for the attention of the public will be intense, especially if people are permitted to return to work and no longer have long empty days at home to watch videos. Creativity will be at a premium, as will be readiness to invest in new technologies and presentational approaches intended to put archaeology vicariously into the hands of the public. Second, monetizing virtual activities is notoriously difficult. The public has become used to “free” as the price of internet-based offerings. Experiments with new avenues – crowd-funding, pay-what-you-want, tips, and so forth – may need to be accompanied by efforts to put critical content behind a subscription paywall. Experience to date, however, has been that consistent funding through those mechanisms is rare and that the few organizations that have achieved it had to become masters at online community building.

For large organizations that have the collections or programming in place, the challenge will be to learn to exploit digital opportunities and build large-scale communities that are willing to pay to gain access to content. Major newspapers have come to enjoy profitable paywalls, but this will be new territory in the social sector. For smaller organizations, whose reach may be limited by definition, creating digital communities may be the key to survival. Finding those supporters, whether local or not, who are willing to fund small organizations and participate in their activities may not only be key to essential cash flow but also to demonstrating their social value and sustainable business models. The latter may be key to securing support from funders who will need to let some organizations fail in the face of stark triage funding choices.

3.3. The Reset

In this most extreme scenario, life in the heritage sector is likely to be altered beyond recognition. A population traumatized by extended, perhaps repeated isolation may retreat to the online world at the expense of public venues, restaurants and coffee houses, festivals and mass events. Public spaces may be required to achieve degrees of cleanliness and enforce personal safety measures never before contemplated. Families may be less likely to venture out to visit museums or archaeo-

logical sites or other public spaces, and schools may cut back on field trips for economic or health reasons. In this scenario of the future, experiencing heritage in person may be devalued in deference to virtual experience, wreaking havoc with traditional personal engagement with heritage. Self-curated museum and site tours over the internet, already feasible, may become a normal activity but must be monetized. Heritage tourism might increase eventually, but virtual tourism may become a standard option with dramatic implications for local communities, especially in emerging economies. The economic consequences of such a violent restructuring of global life would be vast, rearranging the priorities of governments, creating an unknowable set of winners and losers, but certainly putting to rest any expectations of business-as-usual heritage management.

In the *Reset*, heritage organizations would need a clear vision of their purpose in the new order. What does archaeology do for a society facing extreme change? Defining and measuring social impact will be mandatory. Should museums incur the expense of storing millions of objects that fewer and fewer people will see? What is the alternative? How can the legacy of human life on earth be sustained and transmitted to the future in new configurations using new technologies? In other words, a scenario of change this abrupt would not merely call for enhanced museum or archaeological productivity, better justifications for our work, and new techniques. It would call for reinvention of the sector along lines enabled by technology and dictated by new public behaviors and government priorities. Admittedly, this scenario is highly unlikely, but it is not without precedent. Wars, pestilence, and technological innovations have reset societies in the past. Terrorism changed the air travel experience permanently. Disease, economic crisis, or climate change may precipitate change in the future. The question is whether COVID-19 is the occasion for that to happen. It is not too early to contemplate how institutions will respond if this turns out to be the future.

4. "He who lives by the crystal ball soon learns to eat ground glass" Edgar R. Fiedler, "3Rs of Forecasting"

The purpose of this essay is not to forecast what *will* happen after COVID-19. We will know that only when we experience it. If we cannot know what will happen, however, the argument here is that we can at least trace out a range of possibilities and contemplate how the heritage sector could respond to circumstances as they arise. For that we do not need a working crystal ball, but we do need imagination.

The world after COVID-19 will not be the world we lived in during the fall of 2019. At a minimum, in the *Prompt Return* scenario, the economic consequences on governments, institutions and families will be severe and lasting, as was the damage from the 2007-9 Great Recession. Indeed, at present trajectories, the impact of Covid19 on economic life could be as deep as and faster than that of the Great Depression, with the pace of recovery from it open to such a wide range of potential outcomes that macroeconomists are dueling over it. However, institutions trying to reposition in order to cope with the post-COVID-19 world are deeply concerned that some form of the *Relapse* is likely and that a *Reset* is not precluded. I have been part of planning around these scenarios in some cases. If the heritage sector chooses to go down this path of imaginative planning, four imperatives become evident.

First, everyone needs to be prepared for a financial context in which business as usual in the heritage world is over, at least for a time. Steady focus on reengineering business processes to reduce costs, sustain staff employment at appropriate wage levels, and still increase services to the public will be required. Public-facing archaeology and heritage organizations cannot endure repeated draconian shutdowns like those in place now for COVID-19. This is the opportunity to re-evaluate everything we do to find less expensive, more flexible ways to operate, build the broadest possible support networks, and so structure the organization for resilience to external shocks.

Second, the world's acquaintance with and comfort with technology will be changed permanently post-COVID-19. Grandmothers are now fluent in Zoom and Skype. Children are attending virtual kindergartens and graduating from college online. For businesses and organizations, working from home has become convenient, flexible, low cost and very productive. Enormous potential exists for technological innovation that is not merely cost-reducing, but in fact creates new audiences, new markets, and new ways to bring the story of archaeology and history alive through artefacts, sites, lectures, games and other means we have yet to imagine. This potential should be embraced optimistically, not as a distraction from our mission but rather as a process to engage in taking archaeology and museums, themselves artefacts of the 18th and 19th centuries, into the 21st.

Third, money will be in short supply. The consensus that held governments responsible to sustain heritage was breaking down before COVID-19, just as skepticism about privatization as a cure-all has been increasing. New models are required. But in the post-COVID-19 era nations will face demands for investments to restructure the economy (farewell to

offshore-only supply chains), to rebuild the health system on more resilient foundations, and to address the challenges of income inequality that have been grievously exacerbated by the pandemic. Governments will have other priorities. Philanthropic funders dedicated to heritage today are spending funds to sustain the sector, but those funds will become exhausted, unavailable to support new investments tomorrow. For heritage to remain vital and viable, the sector will need to be seen as innovative, efficient, and socially valuable. Thus, the opportunities to reinvent archaeology and heritage in the post-COVID-19 era may be the key to preserving the financial viability of the sector.

Fourth, and finally, as the COVID-19 crisis winds down, institutions in archaeology and heritage will need to define the set of indicators they will use to determine which trajectory we actually are on and thus trigger a response. Some are intensively conducting market research on visitors' attitudes. Some run financial scenarios on the cost of reopening safely to determine, if crowds are small and costs are high, whether and when they should reopen. Some will count the number of students who say whether they will or will not return to the classroom in the fall to identify market conditions. When doors do open, some will count and survey the visitors coming through the turnstiles in order to draw conclusions in real time. Others will compile a composite dashboard of economic forecasts, consumer attitude surveys, proclamations from the government, and other data to inform their views on where we are all headed? Forward thinking organizations are doing all of these things right now. The safest path forward in the face of this uncertainty is to attach to each scenario a set of such metrics and a set of action plans to deploy if the scenario is playing out. Then, even if we end up on an together different path, you will have thoughtful and creative responses to apply to reality as it unfolds. The plan is meaningless, but planning is everything.