THE USES OF CATASTROPHE
Nineveh, Layard, and the Future of Knowledge

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This paper is adapted from the final chapter of a book manuscript in process, entitled The Simmering Horizon: Meditations on Mediation, Memory, and Meaning.

"But its rendition usually exaggerates, omits details or adds them, disfigures the fact or else embellishes it, so that the nearby instruments receive impressions that are in truth those of the instrument that is speaking, but hardly those corresponding to the thing that actually happened."

--- Denis Diderot, "D'Alembert's Dream" (1769)

Layard's Lucky Strikes

The Victorian Englishman Austen Henry Layard, who made some of the most important discoveries in the history of archaeology, was one of those larger-than-Hollywood characters that defy fiction to come up with something anywhere near as extraordinary.

Blessed with a peripatetic childhood and a rambling, restless youth (his parents were too poor to give him a university education), Layard fell madly in love, as a young man, with the nearly lawless deserts of the late Ottoman Empire. He threw up a tedious job in a London law office to wander on horseback through Syria and Anatolia.

Traveling alone to the mysterious Nabatean city of Petra, he was taken prisoner by a Bedouin sheikh and robbed of all his possessions. It was not the last time his curiosity turned life-threatening but, if anything, these misadventures only whetted his appetite for more.

Later, Layard crossed the Syrian Desert with a camel caravan and passed the Eurphrates to the upper reaches of the Tigris River. In the vicinity of Mosul, in what is now Iraq, he walked the huge mounds of buried, ancient cities, littered with the broken clay relics of past glory.

Contemplating these Romantic remains, Layard was entranced by the "deep mystery" hanging over the remains of ancient Assyria. "Desolation meets desolation," he wrote in his diary. "A feeling of awe succeeds to wonder, for there is nothing [to] relieve the mind… [to] tell of what has gone by."[1]

Layard's youthful interest in the Assyrian past soon turned into an obsession, fueled by a two-month's stay in Baghdad waiting for a caravan into Persia. There he browsed goods from all over the Muslim world in the bazaars and picked up Mesopotamian lore "like a sponge," with the help of the British resident and his excellent library.

In his early 20s, Layard's evident intelligence, adventurous spirit, travels among various Middle Eastern tribes, and excellent command of Arabic, Persian, and Turkish led to his appointment as an unpaid attaché and the "ideal confidential intelligence agent" to the British ambassador to the Ottoman court, Sir Stratford Canning. He was charged with various "unofficial" diplomatic missions in the region. But he was always determined to return to Nineveh.

In the late 1840s and early '50s, Layard overcame the intrigues of local officials and burrowed deep into the ancient mounds along the Tigris to make a series of spectacular discoveries. The stone sculptures and reliefs he excavated in the ruins of Numrud (the Biblical city of Calah) and Nineveh[2] once decorated the residences of Assyrian kings who figured in Old Testament accounts. Layard's finds (partly inspired, as we shall see, by Victorian Christian evangelisim) astonished Europe and made up triumphal exhibitions in London.

Braving enormous logistical barriers, Layard carted out of the Mesopotamian desert some of the British Museum's greatest and most famous treasures, including the huge winged bull from the reign of King Ashurnasirpal II (a human-headed lion in the museum still bears the mark of a musket-ball from an attack of bandits) .

Through a strange chain of circumstances, a number of Assyrian reliefs also made it to a group of New England colleges, including Dartmouth, Bowdoin, and Yale, where they were intended for the edification of young students of religion.

Layard wound up his career as one of the world's most daring and successful archaeologists while he was still only 33 years old, having. His travels and archaeological adventures were fodder for a series of best-selling books, voluminous accounts of his travels and discoveries. He moved on to a long political career as a Liberal member of Parliament and as a British diplomat, serving for eight years as British ambassador to Spain and another seven in the same post in Constantinople.

At 52, after many passionate love affairs, he was happily married to a cousin half his age. After Layard left from government service, the couple moved to an elegant palazzo on Venice's Grand Canal, where they enjoyed a blissful retirement amid Layard's extensive art collection and fine library.

Reframing the Bible

An archaeologist in the heroic age of archaeology's dawn, when academic qualifications, professional procedures, and political concerns were only mild restraints, Layard moved with (ironically, relative to modern archaeology) lightning speed, overcame monumental obstacles, and made astonishing discoveries--- among them the most important in the history of the discipline.

His discoveries came at a time when the paradigm of history was being reworked along scientific lines. No longer were the written accounts of antiquity considered sufficient proof

that the events they described actually took place. The new field of archaeology was calculated, in part, to sort out myths and legends handed down over the centuries from hard facts that could be confirmed with physical evidence.

One of the texts needing such concrete confirmation was the Bible, which Layard's excavations helped reframe from scripture to historical document. In mid-century Britain, North America, and throughout other British possessions around the world, an intellectualized Christian evangelism was taking hold. With missionary zeal, educated Christians founded schools and colleges around the world and established academic programs to probe the history and science of their religion.

Ancient Assyria became the beach head of a new campaign to confirm the historical truths of sacred scripture. All but forgotten by the first century A.D., Assyria merited only the briefest mentions by the Greek historians. In the early 19th century, the only account of Assyria's great power and persecutions in any detail at all was in the Hebrew Bible. Were the accounts of the Assyrian invasions of Israel and the deportation of the "Lost Tribes" a mere legend? Or could archaeology prove otherwise?

"This was really the beginning of biblical archaeology," explains Susan Ackerman, Professor of Religion at Dartmouth College, where some of Layard's discoveries ended up. "[Layard's] Assyrian excavations served as a vivid, tangible, linking of the Bible to the real world-as proof of historicity of the biblical account. To the [Christian] missionaries [in the Middle East], the winged genies in the reliefs appeared exotic, even demonic, and they concluded that they were evidence of the moral superiority of the biblical account--multiple, winged deities in contrast to the single, unimaged God of the Bible."[3]

At the time, the reliefs had a specifically religious significance that brought to them to Dartmouth and other New England colleges. "As they were understood in the 1850s, the reliefs were really brought for the students' spiritual edification, from a site mentioned in the Bible, to prove the verse word for word."

Layard's most important discovery, however, came near the very end of his archaeological career. Working at Nineveh in 1851, Layard became disillusioned with the British Museum and decided to wrap up the excavations. Returning from a trip, he found his workmen, while clearing out a palace storeroom, had uncovered two previously undiscovered doorways.

"Each entrance was formed by two colossal bas-reliefs of Dagon, or the fish-god…," Layard wrote later. "It combined the human shape with that of the fish. The head of the fish formed a mitre above that of the man, whilst its scaly back and fanlike tail fell as a cloak behind, leaving the human limbs and feet exposed. The figure wore a fringed tunic, and bore the two sacred emblems, the basket and the cone."[4]

Behind the doorways, Layard found two small chambers, opening into each other. There he made one of the most momentous discoveries in the history of archaeology:

> The chambers I am describing appear to have been a depository in the palace of Nineveh for such documents. To the height of a foot or more from the floor they were entirely filled with them; some entire, but the greater part broken into many fragments, probably by the falling in of the upper part of the building. They were of different sizes; the largest tablets were flat, and measured about 9 inches by 6 ½ inches; the smaller were slightly convex, and some were not more than an inch long, with but one or two lines of writing. The cuneiform characters on most of them were singularly sharp and well defined, but so minute in some instances as to be almost illegible without a magnifying glass.[5]

What Layard had discovered was, in fact, the largest library of antiquity, created by the Assyrian ruler Ashurbanipal in the 7th century B.C.E., who scoured the Middle East for material to fill it. Now known as the "Library of Nineveh,"[6] the clay tablets, Layard soon deduced, correctly, represented a vast storehouse of human knowledge:

> These documents appear to be of various kinds. Many are historical records of wars, and the distant expeditions undertaken by the Assyrians; some seem to be royal decrees, and are stamped with the name of a king, the son of Essarhaddon; others again, divided into parallel columns by horizontal lines, contain lists of the gods and probably a register of offerings made in their temples. On one Dr. Hincks has detected a table of the value of certain cuneiform letters, expressed by different alphabetical signs, according to various modes of using them; a most important discovery: on another, apparently a list of the sacred days in each month; and on a third, what seems to be a calendar. It is highly probably that a record of astronomical observations among them, for we know from ancient writers, that the Babylonians inscribed such things upon burnt bricks… Many are sealed with seals, and may prove to be legal contracts or conveyances of land. Others bear rolled impressions of those engraved cylinders so frequently found in Babylonia and Assyria, by some believed to be amulets.[7]

More than 20,000 of these tablets eventually found their way back to the British Museum. Once again, Layard did not exaggerate:

> We cannot overrate their value. They furnish us with materials for the complete decipherment of the cuneiform character, for restoring the language and history of Assyria, and for inquiring into the customs, sciences, and, we may perhaps even add, literature, of its people. The documents that have thus been discovered at Nineveh probably exceed all that have yet been afforded by the monuments of Egypt… It is to be hoped that the Trustees of the British Museum will under-take the publication of documents of such importance to the history of the ancient world.[8]

Subsequent scholarship has proved Layard to be uncannily accurate. For historians of the ancient world, the Library of Nineveh has provided treasure beyond price: the accumulated lore of the Middle East, ranging from history to science to religious doctrines. Far from consisting of only dry inventories, like the tablets at Knossos, Layard's find also included work of great literary value, including the most complete text of *The Epic of Gilgamesh,* the story of the most revered of all Mesopotamian heroes. The stories of all these discoveries are so rich and fascinating at the recovery of *Gilgamesh* alone has rated a whole book of its own[9].

Ashurbanipal, the creator of the library, was the last great king of Assyria. Under his rule, the Assyrian Empire stretched from Mesopotamia and Babylon through Syria and the Levant to incorporate, at least nominally, much of Egypt. Like his predecessors, Ashurbanipal kept his multi-ethnic realm together by political intrigues and alliances, enforced by kind of state terrorism. His efficient and ruthless armies quickly and effectively rooted out any sign of resistance.

Ashurbanipal was exceptionally rare among ancient rulers in being literate. Whether this was by accident or design is unclear. He apparently showed, at a young age, an impressive talent for ancient languages and the complicated cuneiform writing system, skills that his family encouraged and developed.

There may have been a political reason as well. The young prince's father, Esarhaddon, grandson of the Sargon II who defeated Israel, was not literate himself. Given, by nature or occupational hazard, to extreme paranoia, Esarhaddon was tortured throughout his reign by fears of uprisings and palace conspiracies against him. He was especially tormented by the thought that seditious court scribes could be lying to him about the contents of important messages and state documents. Perhaps, some scholars speculate, he wanted to spare his son the same fate.

Ashurbanipal's seamless integration of luxury, culture, and political brutality in adult life is perhaps best illustrated in a magnificent stone relief from his palace called "The Garden Party," now in the British Museum. The relief shows the king and his wife enjoying an elegant meal in their palace gardens overlooking, hanging from a nearby tree, the severed head of the late King of Elam, whom Ashurbanipal's armies defeated not long after he made communications interpreted as insults to the Assyrian court. In the relief, Ashurbanipal's face has been defaced, probably not long after his death, when the capital was sacked and burned by the combined forces of those he had so terrorized and humiliated.

Thanks to fragments of accession records, scholars have been able to deduce some of the ways Ashurbanipal assembled the library. In 648 B.C.E., following the brutal defeat of his half-brother, co-ruler of Babylon, Ashurbanipal had access to vast archives and libraries from temples, Tiglath-Pileser's library at the old Assyrian capital in Ashur, and private collections. His agents confiscated or induced gifts of books, loaded them into carts, and brought them back to Nineveh.[10] Other ancient texts were copied for the king in "luxury editions." We shall see that this idea of the universal library, formed partly from plundering or absorbing other libraries, has persisted throughout history.

Writings in the library and at Nineveh were probably in at least four media: stone, principally in inscriptions on the carved reliefs that decorated Nineveh's palaces[11], clay tablets, the traditional medium of the region, wooden writing tablets, and, most likely, also leather and papyrus scrolls.

Clay tablets with cuneiform writing survived in the ruins in large numbers. Wooden tablets are mentioned in library inventories.

Because so few of them have come down to us[12], wooden writing tablets are the "forgotten" medium of the ancient world. Made of wax coated folding wooden leaves, written on with a metal stylus, writing tablets were probably the most familiar medium to most people because they could be erased and reused. Useful in keeping household inventories and merchants accounts, for rough notes and drafts, and to Roman schoolboys writing out their lessons, they were the floppy disks of antiquity. They had a very long life, originating in ancient Egypt and lasting at least until the Middle Ages. Charlemagne the Great, who never quite mastered literacy, is said to have kept one under his bed to practice his letters.

Some modern scholars hold that most of Nineveh's books and records were actually contained in papyrus scrolls, though, since they would have all been destroyed in the fires that finished the city, evidence for them is less direct. As rulers in Syria and Egypt, where

papyrus was the writing medium of choice, Assyrians were certainly familiar with its advantages, especially for recording texts in the new, pen-oriented languages like Aramaic, increasingly important throughout the empire.

Many important Egyptian artifacts were uncovered in the ruins of Nineveh, most of them probably booty from Ashurbanipal's successful military campaigns to Upper Egypt in 667 and 664, which sacked temples in Thebes and other Egyptian cities. It is more than likely that at least some papyrus scrolls, perhaps many, also made the trip. They would have been of great interest to an antiquarian of Ashurbanipal's erudition.

It is worth pointing out to enthusiasts of the internet and other new media that the clay tablets found at Nineveh represent the "old media," of Mesopotamia. Much--- probably most--- of the imperial library was written on "new" media (relatively speaking): wax coated tablets, leather, and, probably, papyrus scrolls[13], which were far easier to manage. When invading alliance of Babylonians, Sythians, and Medes burned the city in 612 B.C.E. and ended the Assyrian Empire for all time, the new media was destroyed.

The sun-dried clay tablets, however, were accidentally fired into ceramics, making them all but indestructible[14]. For that reason alone, we know far more about Assyria than any other pre-Christian civilization. Ashurbanipal's library was burned and forgotten barely a generation after he created it. Yet, from all the great libraries of antiquity, including the more famous Library of Alexandria, which survived more-or-less intact for centuries, the only books we have left were his.

The existence of clay tablets, at the time of the Assyrians, requires some explanation. Papyrus, invented centuries earlier, had effectively made bulky clay tablets obsolete. Eventually, pretty much every civilization around the Mediterranean made use of this convenient medium which, as long as it was kept dry, was durable as well as light and reasonably portable (though not, it turns out, not all that much lighter or portable than clay tablets and considerably less durable[15]).

It wasn't until the Middle Ages that Western Europe, which, thanks to the Arab conquests of Egypt, no longer had direct access to the material, entirely replaced papyrus with parchment. (In cold, damp Northern Europe, parchment was also far more durable than papyrus, making it popular for books as early as the 3rd century A.D.)

But in Mesopotamia, clay tablets had a long and well established cultural history. Cuneiform writing, invented for clay, was perfectly adapted to the medium. Since writing systems are notoriously conservative, cuneiform alone probably helped clay tablets survive. Moreover, Ashurbanipal ransacked the libraries of all the territories he controlled for material. This included original Babylonian documents in clay, which he had brought back to Nineveh along with later copies.

As king of Assyria, Ashurbanipal was always very aware of the more ancient and, Assyrians and Babylonians both agreed, more civilized empire of Babylon. Ashurbanipal's clay tablets preserved Sumerian and Babylonian texts not only physically but symbolically. Possessed in their original, classical languages and in their original cuneiform, these ancient books were icons not only of the continuity of these predecessor civilizations in the Ashurbanipal's empire, but his conquest of them as well.

The clay tablets of Nineveh were "old media" in another sense. Despite Ashurbanipal's veneration of it, the period ca. 900-450 B.C.E. was, in fact, the last hurrah of cuneiform writing. It was quickly giving way to the far more convenient alphabetic systems, specifically Aramaic, which eventually became the dominant script in the Levant[16]. As we have seen, alphabetic systems, which were matched to sounds rather than words or ideas, had many advantages over ideographic systems like cuneiform. Among other things, they were far easier to learn and contributed to the change in literacy from skill possessed only by specialists to one that ordinary people and even kings could acquire, as an adjunct to their work and career instead of its focus.

Although the use of cuneiform records in some form survived into the first century A.D., the switch from many culture-specific language and writing systems to a single alphabet-based lingua franca (first Aramaic and then Greek) proved to be revolutionary and irreversible.

With an easily written, widely understood language, one ordinary citizen could communicate with another from a completely different culture, across space and time. Among other things, his created the possibility of religions that were universal, rather than tied to a specific ethnic group or tribe. It is no random accident of history that Jesus of Nazareth preached in Aramaic, understood by Jews and non-Jews alike, and that his teachings spread on wings of Greek from one end of the recently consolidated Roman Empire to the other.

When first- and second-century Christians adopted another media innovation, the bound codex, another wave of evangelizing was released. Far more durable than fragile scrolls, leather bound books were easily transported, easily passed from hand to hand, and, in times of persecution, easily hidden. The survival of forbidden collections like the Nag Hammadi Library, hidden under the Egyptian sands for seventeen centuries, proves the point.

Ultimately, the relationship of religion and empire reversed. Where once religion was the tool and support of empire, now religion became, first its competitor, then, when Christianity itself was made the state religion of Rome, its conqueror.

Through the early centuries of Mesopotamian civilization, clay tablets were a practical solution in an area of rivers, where good clay was abundant and easy to come by. Contrary to the assumptions of many, these clay tablets were probably not deliberately fired to make them permanent, though there is no definitive evidence or scholarship to make the case. Fired clay tablets from ancient times were, in fact, probably accidents of disaster, usually, as with Nineveh, the destruction of cities and palaces during invasions, or else from modern

firings made by archaeologists in the field, to preserve recovered tablets for transportation, or by antiquities dealers, to make them appear like the tablets seen in museums.

As a practical matter, like most literate civilizations, the Assyrians made use of whatever media were available to them. Besides the clay tablets, papyrus or leather scrolls, and wax tablets in their libraries, the Assyrians, had inscriptions carved into the reliefs that lined the walls of his palaces. The Assyrians also made ample use of purely visual media. The impressive, part-human figures carved into those palace reliefs were clearly meant to intimidate even those who could not read the inscriptions.

Although the Library of Nineveh was once considered to be the oldest library of the ancient world, later archaeology and scholarship has proved that it was not. It was, however, unusual in another respect: it seems to have been the personal library of Ashurbanipal rather than an archive of the Assyrian bureaucracy (tablets warning against borrowing books and not returning them, however, suggest that others had access to it).

Because Ashurbanipal was that very rare ancient ruler who was able to read for himself, his library may also represent the slow transition of literacy from a specialized technical skill (like reading and writing computer code today) to being part of the basic equipment of every educated person.

Like later literate rules, Ashurbanipal also seems to have regarded the accumulation of books as one of the privileges of imperial rule. Thus his library had important symbolic functions. Ashurbanipal may not have been the first to regard knowledge as power. But he clearly raised the symbolic energy of libraries to a new and higher level. He guarded his books as a kind of fetish. At Nineveh, for example, the library was surrounded by mythical figures representing the divine origins and knowledge. And the association he made between his library, as both a repository of knowledge and a symbol, and his own temporal power seems to have been crucial to his self-image as a monarch.

Although it was not the original library of the ancient world, the Library of Nineveh represents one of the first, if not the first, attempts to establish a paradigm of the imperial and universal library. The universal library is not simply a palace archive (as, apparently, at Knossos) or a repository of national history or other specialized branch of knowledge. It is intended to assemble *all* knowledge in a single place, to cover all realms of learning, from science and medicine to history and literature, and to go beyond national boundaries to acquire the knowledge of the entire world.

Ashurbanipal, who had inherited the upstart Assyrian Empire after a series of conquests across the Middle East, was particularly interested in acquiring books from the Babylonians, that older and more sophisticated culture, which played Athens to Assyria's Rome. Thus to some extent the library was a political tool, cementing Assyria's self-image as the successor-empire to the Babylonians and the leading power of the ancient world. This political aspect of national libraries and museums has persisted ever since. The Library of Alexandria and Google Books are, in fact, Nineveh's direct spiritual descendants.

As at Nineveh, the universal library is also a potent social symbol: not only containing knowledge but representing knowledge itself. Even in modern libraries, like the Library of Congress in Washington, knowledge and authors are represented symbolically as well as in books, in allegorical statuary, mosaics, and murals connecting the building with classical deities and the intellectual traditions of the ancient world. Thus the universal library continues to be a sacred space, a temple to knowledge far more than a simple repository.

Alexandria and Its Legends

Thanks to tablets in Ashurbanipal's library which describe how it was compiled, organized, and composed, in addition to the survival of a good portion of the library's contents, we know a great deal about the Library of Nineveh. In comparison, the Library of Alexandria, founded some three centuries after Nineveh, survives only in its influence and

stories about its rise and fall. We don't know precisely when it was founded or by whom and when or how it was finally destroyed.

The Alexandrian library had, at one point, two main locations, in the city's "Museum"--- literally, a "temple for the muses," which was located in the palace precincts and also housed scholars, scientists, and writers under official patronage--- and a "daughter" or branch library in the sanctuary of the god Serapis not far away[17], and possibly some off-site warehouse locations. But we don't know exactly where any of these buildings were located. Estimates of the number of books it contained vary by a factor of ten, Moreover, it has never been clear whether the institution was a truly universal library or concentrated on the Greek-language Hellenistic culture that was the glory of Alexandria, founded by Alexander the Great in 322 B.C.E. and capital of the Greek Ptolemaic dynasty of Egypt until the Arab Conquest.

Finally, no one is at all sure how the Library of Alexandria ceased to exist. According to legend, it was destroyed on four different occasions: the first, and best-known, disaster was in 47 B.C., when Julius Caesar occupied the city during the civil war with Pompey. A fire broke out in the harbor which destroyed part of the collection, though probably only those books houses an off-site storage area. Marc Antony later presented Cleopatra with replacements taken from the library at Pergamum, a Roman-controlled city in Asia Minor, whose royal library was Alexandria's only significant rival in Hellenistic times. Clearly, the library continued to exist for several centuries under the Roman Empire.

According to other legends, the library was deliberately destroyed on three subsequent occasions: on the order of the Roman Emperor Aurelian in 272 C.E., while defeating the uprising of Zenobia, Queen of Palmyra; in 391, during the suppression of pagan temples under the decree of the Orthodox Christian Emperor Theodosius I; and after the Arab Muslim conquest of the city in 640-42, following the defeat of the Byzantines. Later historical accounts relate that, while sacking the city, the Arab commander asked the ruling

Caliph what to do with the books he found. The Caliph gave the famous answer: "They will either contradict the Koran, in which case they are heresy, or they will agree with it, so they are superfluous." Thus books were burned.

Obviously, only one of these four stories could be entirely true. But current scholarly thinking holds that none of them are. The Arab "burning," at least, has been described as a hoax or propaganda by modern historians. The destruction of Alexandria's books (they were said to fire the army's baths for six months) may have been a useful myth when the 12th century Muslim leader and Sunni reformer, Saladin, destroyed heretical Isma'ili libraries he found in Cairo[18].

The majority view also holds that this great library actually disappeared by small steps, mostly from simple neglect abetted by media change. Like Nineveh, Alexandria spanned a major change in media, in this case, the change from scrolls to bound books around the end of the first century.

As time went on, this theory goes, writings of greatest current interest (increasingly, in Alexandria, this meant books that Hellenized Christians though were important) were copied into the new medium and passed on to other libraries. The works of lesser interest languished on the shelves as scrolls and eventually crumbled into dust. In this way, most of the literature of ancient Greece and Rome may have been lost to us.

In any event, it seems unlikely to many that much of the library could have survived the attacks, if they happened, of 272 and 391. Time and neglect finished off what was left. By the eighth century, it is clear, nothing at all remained of the collection. Soon, even the location of the library's buildings was forgotten.

What is much more clear is the intellectual impact the Library of Alexandria had on later perceptions of the classical world. In this context, it should be pointed out that, until very recently, "libraries" were not simply collections of books and documents. They were communities of scholars, bureaucrats, and scribes that not only gathered knowledge but

studied it, classified it, evaluated it, wrote commentaries on it, and put it into context for future generations. Thus large, universal state libraries like Alexandria or Nineveh were libraries research centers and publishing houses as well as repositories. They were also a major source of national image and propaganda.

To a large extent, it was the libraries who decided what, from the past, belonged in the frame and what could be relegated to the backstory.

As we have seen, Alexandria was, above all, a center for Hellenistic culture. The library's scholars helped create a canon of classical literature, especially in poetry, and to make standard editions of classical texts, divided into books and chapters. Backed by its Ptolemaic patrons, the library was legendarily aggressive it acquiring new texts, supposedly demanding to copy any book that came within striking distance. In most cases, though, the original text was preferred because it was assumed to have fewer errors. It is said that when Ptolemy III borrowed, from Athens, the official manuscripts of the great Greek tragedians, he not only paid a hefty copying fee but posting a huge bond to ensure their return. In the end, though, he sent the copies back to Athens instead of the originals. The Athenians had to be content with keeping the bond.[19] At other times, or so the stories go, Egypt's rulers banned the export of papyrus, so competing libraries, such as the one at Pergamum, couldn't surpass it.

As with libraries that came before and after, like Nineveh, Alexandria seemed dedicated not only to gathering knowledge. It also wanted to dominate it.

Unlike the Islamic scholarly centers that came later, which translated into Arabic thousands of Greek and Latin texts and thus preserved them for retransmission into Europe, the Library of Alexandria is known to have sponsored only one major translation project: the famous Septuagint, a translation of the Hebrew texts of the Old Testament into Greek, named for the 72 scholars who, according to legend, carried out the work sometime in third

and second centuries B.C.E. This has been widely taken as another example of the Greek-focused nature of the library.

Like all universal libraries, then, Alexandria could not resist the impulse to sort knowledge into frame and backstory. And what it considered backstory simply has consequently not come down to us.

The Fate and Future of Universal Libraries

The strength of the universal libraries--- their centralization of knowledge—has always been their greatest weakness. The larger and more important the library, the more they are sitting ducks for the ravages of war and accident, especially fires, which feed on their concentrations of highly combustible materials. Moreover, because they are highly visible cultural and national symbols, they are also vulnerable to deliberate attacks on the civilization they represent. This is obvious in such depredations as the attack of Theodosius I on the Library of Alexandria, which most likely ended its useful history, as a relic of his empire's pagan past.

Similar catastrophes, natural or manmade, as well as simple neglect and igonorance, have afflicted universal libraries down to the present day. There was the destruction of the magnificent libraries of Baghdad during the sack and destruction of the city in 1258 by the Mongol ruler Hulagu, grandson of Genghis Khan. There were the great public and private collections of Constantinople, built up over centuries and finally dispersed in 1452, when, after a long siege, the city fell to the Turkish sultan Mehmet II.

In 1764, the Harvard College Library, whose original donor, John Harvard, gave his name to the school, was destroyed in a fire at Harvard Hall. Even the Library of Congress has been burned--- once in 1814, by British troops who burned the capitol, and in 1851, when an even more devastating fire destroyed two-thirds of its collection.

Throughout this destruction, knowledge survived, not so much by design as by accident (as at Nineveh) and dispersal. The manuscripts that preserved ancient texts for

posterity were saved at the margins--- at the specialized library found near the ruins of Qumran, now known as the Dead Sea Scrolls, which may have been created for use by a Jewish sect, as waste paper used in the wrappings of Greek and Roman period mummies in Egypt, in ancient town dumps, in isolated monasteries. The great central libraries had played their role. They sorted and digested the accumulated knowledge of humanity and transmitted to the fringes, where some of it was saved for the future.

In a way, these great think tank-libraries acted as collective editors--- partly intentionally, partly by accident. It has been said more than once that, if all the knowledge of the past had been preserved, it would have presented an unwieldy mass that modern scholarship would never have been able to digest.

Nowadays, the long history of the universal library seems to be taking yet another turn. Enthusiasts for new technologies herald a day when everything goes "on-line," when dusty books are obsolete, when the new dawn of technologically enhanced information will take sway. Technology companies like Google promise to "change the world" by creating vast digitized collections available instantly to everyone.

Organizations that aspire to be a modern Ashurbanipal. Google and its contemporaries are sadly ignorant of their own predecessors. Great empires like Assyria, Rome, and the Abassid caliphate eventually failed, leaving their libraries prey to invaders. High tech companies are even more ephemeral--- the great high tech empires of a generation ago--- Digital, Commodore, Atari, Visicalc, Lotus--- are already vanished.

Diderot's Dream

The great writers and thinkers of the European Enlightenment, on whose achievements so much of the modern world depends, had different ideas. They were well aware of the limitations of empire, of the fragility of human knowledge. One of the Enlightenment's greatest projects, the *Encyclopedie* edited by the French philosopher Denis

Diderot and finally completed in 1772, had a different approach. Written by some of the greatest minds of the Enlightenment itself, the *Encyclopedie* was designed not only to summarize human knowledge but to organized it, classify it, evaluate it, and preserve it from the very devastations that had winnowed out so much of human knowledge from the past. It created, for knowledge itself, a "frame" and a "backstory" intended to make it comprehensible.

"In truth," Diderot writes in his *Encyclopedie* entry on "The Encyclopedia," published in Volume V, "the aim of an *encyclopedia* is to collect all the knowledge that now lies scattered over the face of the earth, to make known its general structure to men among whom we live, and to transmit it to those who will come after us, in order that the labors of past ages may be useful to the ages to come, that our grandsons, as they become better educated, may at the same time become more virtuous and happy, and that we may not die without having deserved well of the human race.[20]"

Diderot sees the medium of the printed volumes of the *Encyclopedia*, with their combination of learned text and magnificent plates, as having not only social and political functions but a moral one: it will make human beings *better*. It is just this process--- the translation of information into knowledge and then into wisdom--- that the modern technological age needs to practice.

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[1] Quoted in Austen Henry Layard, *Nineveh and Its Remains,* intro. by Brian Fagan (Guilford, CN: The Lyons Press, 2001), p. xxii.

[2] Layard was not the first archaeologist to excavate. French excavations, directed by P.-E. Botta and V. Place, were conducted on the site of Nineveh and in other locations as early as 1842, though the French group misidentified the site of Nineveh and had a great deal of trouble getting their finds back to Europe (several of their barges were attacked and sunk and their cargo has never been recovered). A long series of British and, later, American expeditions worked at Nineveh between 1845 and 1990, after which war and the deteriorating political situation made work by non-Iraqis impossible. See Olof Pedersén, *Archives and Libraries in the Ancient Near East, 1500-300 B.C.* (Bethesda, MD: CDL Press, 1998), p. 158.

[3] Interview with Susan Ackerman, Dartmouth College, March 2005.

[4] Austen H. Layard, Discoveries Among the Ruins of Nineveh and Babylon; with Travels in Armenia, Kurdistan, and the Desert (New York: G.P. Putnam and Co., 1853), p. 343.

[5] Layard, *Discoveries,* p. 347.

[6] The two tablet-containing chambers Layard discovered are located in the main royal palace at Nineveh but they may not have been the original location of the library. The tablets may have been moved here from the library rooms or the library may have been located on an upper floor, which collapsed when the palace burned. Clay tablets have been found in a number of locations in the Nineveh palaces, some in large concentrations that might represent libraries or archives. See Pedersén, p. 161.
[7] Ibid.
[8] Ibid.
[9] David Damrosh, *The Buried Book: The Loss and Recovery of the Great Epic of Gilgamesh* (New York: Holt, 2007).
[10] See Lionel Casson, *Libraries in the Ancient World,* pp.11-12.
[11] Since the vast majority of people who saw them, then as now, would not have been able to read them, it is unclear exactly what purpose these stone inscriptions would have had. Perhaps they, like the diagrams, images, and recordings attached to some space probes, where message from the Assyrian rulers to unknown intelligences of the distant future, asserting the power of their conquests and the magnificent history of their reigns. If that was, in fact, their function, they have performed it remarkably well.
[12] A few ivory writing tablets of similar design were found in Nineveh. Wooden writing tablets, in various states of preservation, have turned up in river beds and other protective environments throughout the region of the Roman empire.
[13] In part of the main royal palace at Nineveh, several hundred bullae or clay seals were found that had originally been attached with ropes to other objects. Since the bullae were first discovered, scholars have assumed that the missing objects were papyrus or leather scrolls or writing boards. The relatively small number of tablets found with "administrative" texts also suggests that most of the routine, bureaucratic documents originally in the library were composed in other media. Numerous surviving clay tablets contain references to writing boards and other lost documents may have been on lead rolls or ostraca (inscribed bones). See Pedersén, p. 7 and pp. 163-164.
[14] Ceramics can be broken but, unless they are deliberately ground into a powder, survive intact under almost any conditions. Many of the tablets found at Nineveh were broken, either deliberately by the invaders or when the floors of the library collapsed. Many have been pieced together since they were recovered. A specialist at the British Museum, Professor Riekele Borger, continues the task to this day.
[15] For much of this information about the specific nature of clay tablets and the significance of various media in ancient Assyria, I am indebted to email correspondence with Dr. Jeanette Fincke of the Ashurbanipal Library Project at the British Museum.
[16] See Pedersén, p. 2.
[17] See Casson, pp.33-34.
[18] Bernard Lewis reference.
[19] See Casson, p. 35.
[20] Denis Diderot, *Rameau's Nephew and Other Works,* trans. by Jacques Barzun and Ralph H. Bowen (Indianapolis: Hackett Publishing Company, Inc., 2001), p. 277.