1 A Brief History of the Archive

> There is no political power without control of the archive, if not memory. Effective democratization can always be measured by this essential criterion: the participation in and access to the archive, its constitution, and its interpretation.
>
> Jacques Derrida (1995, 4, note 1)

According to some scholars, the origins of the archival craze characterizing the late 20th and early 21st century stems from 19th-century Victorian England when imperialism induced a knowledge-gathering mania that aimed at synchronizing and unifying information at a global level. At this time, practices of writing were likened to mapping and colonization, archiving, and information gathering, ultimately leading to the creation of museums, nation states, as well as large national archives (Richards 1993). For others, it stems from the Enlightenment period, and formed part of the then emergent "scriptural economy" (de Certeau 1984, x). There are interesting parallels between these particular historical periods and the 20th and 21st centuries. These have manifested themselves, among other things, in a renewed fascination with archives, albeit nowadays usually digital archives. This chapter, introducing different archiving methodologies and practices stemming even further back in history, adopts Michael Shanks's theorization of Archives 1.0, 2.0, and 3.0 to show how archives evolved historically. Shanks explains that Archive 1.0 shows "bureaucracy in the early state—temple and palace archives—inscription as an instrument of management"; Archive 2.0 indicates a phase of "mechanization and digitization of archival databases, with an aim of fast, easy and open access … associated also with statistical analysis performed upon the data"; while Archive 3.0 consists of "new prosthetic architectures for the production and sharing of archival resources—the animated archive" (2008). The chapter, offering numerous examples of archives for each of these periods, builds on Shanks's model, tentatively introducing also Archive 0.0 and Archive 4.0, the latter, in particular, to show how archives now operate pervasively within the digital economy. The chapter demonstrates how the popularity of archives well precedes the archival craze of the late 20th and 21st centuries, showing, however, how the emergence of what has been described as an archival "impulse" (Foster 2004), or "*mal,*" or, in the English translation, "fever" (Derrida 1995), is in fact a condition, in the

postmodern sense of the word (Lyotard 1985), that is symptomatic of our obsession with the augmentation, documentation, and transmission of our own presence.

Archives 0.0 and 1.0

Both the ancient Greek and Roman empires had archival repositories, though little is known about them, since many had been destroyed during the invasions of the AD 5th, 6th, and 7th centuries (Duchein 1992, 15). In fact, even before that, archives had been assembled by Egyptians, Assyrians, Medes, Hebrews, Phoenicians, among others, though most of them were subsequently lost, probably because they were formed by organic materials like papyrus or paper. Middle Ages archives, in contrast, usually created by churches, royal families, or political leaders and cities, survived, often almost intact, into the present day. There are well-known exceptions, such as Alexander's edict to Priene, which consists of a series of inscriptions, and was described as an "'archive of' connected texts" (Sherwin-White 1985, 69). What is distinctive about this, as well as other archives of the Hellenistic period, is that a community had chosen these inscriptions to make public a particular version of events, suggesting that the history of such an archive had, even in those early days, formed part of the history of the civic community in some respect (p. 74). These initial archives, described by Shanks as archives 1.0, not only, as he suggests, show the bureaucracy of the early state (2008), but also reveal information about transactions by individual traders (Veenhof in Faraguna 2013, 27–63) and often mark the occurrence of salient events in family histories, including those pertaining to women (Jacquert in Faraguna 2013, 63–87). Arguably, a form of pre-archive (Fissore 1994, 344), or, possibly, Archive 0.0, this kind of archive tends to be quite local, focusing on the story, or history, of a given person or community. Interestingly, it is often difficult today to interpret the significance of the various components of these archives. Thus, in excavating ancient archives, it is not always clear whether archeologists are dealing with an archive or, simply, with the remains of some waste. Prussian state archivist Ernst Posner, for example, tells the story that when Berard P. Grenfell, Arthur S. Hunt, and J. Gilbart Smyly discovered the mummies of the "papyrus enriched" holy crocodiles in Egyptian Tebtunis, they included in their publication a '"classification of papyri according to crocodiles,' for papyri in the belly of the same animal might reveal relationships reflecting their administrative provenance and original arrangement" (1972, 5).

The word archive comes from the old Indo-European root APX, which also appears in Sanskrit and other languages (Leavitt 1961, 175). In Athens the archons were the chief magistrates, who were in power and were also the elders (p. 175). The neutral form of the adjective came to be used as a noun and meant "the residence or office of the chief magistrate," "the senate-house," or in small towns, "the town hall." In the plural the word indicated public records kept in the senate house or town hall (p. 175). The Romans tended to use the words *tabulae* to refer to boards, tables, or tablets on which they wrote (p. 176), though, later, they too begun to use the word *archivium* or *archium,* which had been derived from

the Greek *arkheion*. The word archive means both "the place where records are kept and the records themselves" (p. 178). Implicit in archiving is also the practice of preservation in that "only records worthy of being kept" can enter archives (p. 177). It may not be so surprising that already in Roman Egypt the system of state archives became synonymous with its administration. The five names that started to be used regularly to designate archives, *grapheion, agoranomeion, bibliothēkē, katalogeion,* and *mnēmoneion* (Cockle 1984, 110) thus point to different aspects of the bureaucratic machinery at the heart of its administration. So the archive started to designate a site as well as its content (see also Casanova 1928, 11) and was increasingly identified with what could persist over time, including, possibly, as we know from Posner (1972), whatever else was in the archive that also survived through it. This persistence was made possible through processes of inscription, categorization, preservation, and dissemination.

It was Jacques Derrida who pointed out that the archive represents both the "*commencement* and the *commandment"* indicating "there where things *commence*—physical, historical, or ontological principle—but also the principle according to the law, *there* where men and gods *command*, *there* where authority, social order are exercised, *in this place* from which *order* is given—nomological principle" (1995, 1; original emphasis). This coexistence of the physical, historical, or ontological and the nomological principles is, for Derrida, evident in the origin of the word, the Latin *archivium* or *archium,* which in turn, as we have seen, comes from the Greek *arkheion,* and indicates "a house, a domicile, an address, the residence of the superior magistrates, the *archons*, those who commended" (p. 2). For Derrida this means that "the archive, as printing, writing, prosthesis, or hypomnesic technique in general is not only the place for stocking and for conserving as archivable content of the past," but rather that "the technical structure of the *archiving* archive also determines the structure of the *archivable* content even in its very coming into existence and in its relationship to the future" (pp. 16–17; original emphasis). In other words, the technologies and related processes of what he calls the "*archiving* archive" shape and so determine present and future encounters with archivable materials. For Derrida therefore, "archivisation produces as much as it records the event" (pp. 16–17). Not only is the archive a tool for preservation, and a mechanism for dissemination, it is an ordering system for the production of knowledge. The archive is therefore a site, its content, a medium, and the mechanism, the "*archiving* archive" for its production (pp. 16–17; original emphasis). In this sense, archive is also a verb.

Categorization methods have varied over time and reflect the changing priorities of societies. In fact archives often served different purposes, even within one organization or society. For example, the city of Venice never had just one generic archive; rather each magistrate court could archive its own papers. However, the powerful *Consiglio dei Dieci*, the Council of Ten, one of the main governing bodies of the Republic of Venice between 1310 and 1797 whose actions were often secretive, kept their own archives in the *Segreta,* or Secret Archive, particularly during the 17th and 18th centuries when they were in danger of being mixed with other archives. When an inventory was made of these by Antonio Negri in 1669, he

found that it consisted of 75 *armari* or cases ordered according to the importance of the court that had deliberated. However, over time, these archives became so corrupted that in 1692 Pietro Garzoni drew the attention of the Senate and the *Consiglio dei Dieci* to it (Casanova 1928, 373) and in 1716 old rules were re-applied, which meant nobody could visit without permission and write on any of the papers in the *Segreta*. Despite these measures, it was not too long before old practices were reinstated and in 1783 a "president of the archives" was appointed to make sure a system for preservation was identified and maintained. The history of these archives, their periodic separation and corruption, is indicative of the Venetian structures of government, suggesting that the archive is generally a good *topos* for the study of how individuals or social groups manage their power, whether this is political, administrative, legal, or other.

One of the principal archival collections of all times, and a good example of an archive 1.0, is the Vatican Archives. These were, from their inception, not local, and spun over several hundred years, though, typically, a large percentage of these archives were either destroyed over time or simply disappeared. Like the Venetian Archives, the Vatican Archives do not consist of one physical archive but rather of a set of collections residing under different administrations and reflecting their bureaucratic systems. Thus, for example, there were the separate archives of the Consistory, the *Dataria Apostolica*, the Tribunal of the Rota, the *Secretaria Brevium*, the *Signatura Gratiae*, the Penitentiary, the Master of Ceremonies, the Holy Office, as well as the special repositories of the Sistine Chapel and St Peter's, among others (Haskins 1896, 41). One of the main Vatican Archives is the *Archivio Segreto Vaticano* (Secret Vatican Archive), which hosts the archival holdings of the Holy See, dates back more than a thousand years and spans tens of miles of shelves (Blouin, Yakel, and Coombs 2008, 410–11). The modern archives of the Holy See were established around 1610 by Paul V Borghese, but materials were collected even in apostolic times as part of the *Scrinium Sanctae Romanae Ecclesiae* the Popes took with them as they traveled to their various residences. However, most documents preceding Innocent III were lost because of the fragility of materials and political upheavals. In the 15th century the most important remaining documents were taken to Castel Sant'Angelo and finally, by intervention of Paul V, moved next to the Secret Library were they became known as Vatican Secret Archives. Under Urbanum III, during the 17th century, they were expanded and in the 18th century they were for the first time put in order. Many fonds are still in that order today. In 1810, by order of Napoleon, the archives of the Holy See were taken to Paris, and then brought back to the Vatican between 1815 and 1817. This caused great losses. When the Italian troops conquered Rome in 1870, the archives found outside the Vatican walls were confiscated by the newborn Italian State. They then constituted the core of the new State Archives of the city of Rome. Today, the archives, despite historical depletion, consist of 85 linear kilometers of bookshelves gathered in over 650 different fonds, covering 800 continuous years from 1189 onward (see Archivi Segreti Vaticani).

Traditionally, archives kept evidence of legal and economic transactions to serve particular bureaucratic purposes. For ancient archives this often included papers about the laws of

the land, evidence of administrative action, financial and accounting records, records of the ruler, records about control over people, and notarial records that safeguarded transactions (Posner 1972, 3–4). Such archives tended to be used as instruments of management, legitimization, and consolidation of power. Unsurprisingly then, archivists were often associated with the preservation of this power. Thus, when in 14th-century Ferrara, the citizens, weakened by poverty and aggravated by a series of natural disasters, including famine and the plague, rebelled against the corrupt *Marchese* Niccolò II d'Este (1338–1388), they brutally murdered his archivist Tomasso da Tortona, who was the secretary of the new *cancelleria* or state chancellery at that time, while shouting "long live the *Marchese* and death to secretary Tomasso" (in Brown 1997, 2). The *Marchese*'s strategy, like that of other d'Este princes, had been to distance himself from their own "highly unpopular policies" and, instead, blame the policies on their advisors and appointed communal officials, so Tortona had in fact just been "the first in a long line of sacrificial lambs" (p. 11). Furthermore, at the d'Este court, on three occasions, namely on Good Friday, on the eve of the *Festa di San Giorgio,* St George's Festival, and during the *Festa dei Poveri*, The Paupers' Festival, the destruction of archival record was officially admitted and sanctioned via a ceremony (p. 21). Thus, accompanied by the clergy, cloistered representatives, and courters in attendance, featuring the cathedral altar as a backdrop, the Duke, during a mass, let prisoners go and, at that moment, solemnly destroyed, or at least removed, their records from the archive. Problematic past actions or histories would at that point be erased and new lives could be started.

In this kind of archive, inscription is synonymous with power, though interestingly, the order of such archives, because of frequent institutional changes, was not as significant as it was in subsequent historical periods. However, already by the 13th century there was an awareness that archives played an important role in municipal life and their order and integrity were protected by specific rules and procedures (Bonfiglio-Dosio 2005, 95) even though, as we can see from the example of the Venetian Archives, practices varied widely. At that time archives were described as *loci publici in quibus instrumenta deponentur,* that is, "public places where legal documents are to be deposited" (Duchein 1992, 15; Sandri 1968, 108). Interestingly, and in line with Derrida's presupposition, archival repositories in Hungary were called *loci credibiles,* or "places which give legal credibility to the documents kept within it" (Duchein 1992, 15). This shows how archival sites, rather than their content, had become synonymous with their authority. By being in an established archive, a document gained in credibility and, possibly, believability. At these times archives, of course, were not always public (hence also the Venetian and Vatican archives' reference to secrecy). Until the First World War, and with the exception of France, archives had in fact usually been inaccessible to the majority of the population. Modern archival thinking about archives as a form of *public* heritage can only be traced back to the French Revolution when, in 1790, the French National Archives were created, from various government religious and private records, and made public for the first time. This event marks the beginning of a process of democratization of the archive that, to some extent, is still ongoing.

From the 14th century, archives started to proliferate, acquiring an increasingly prominent role and forming a gradually more significant part of other forms of collection, such as the cabinet of curiosity whose influence over the way we use social media I will discuss in chapter 5. By the 18th century, there were known to be, in Paris alone, 405 treasuries of archives with the overall number in France reaching 10,000 by the end of the ancient régime (Burr 1902, 656). At this point in time, the most common documents in archival repositories were still titles of land property and documents of economic significance. Monasteries were often home to such archives, as were royal chanceries, civil and ecclesiastical courts, and municipalities (Duchein 1992, 16). From the 16th century onward, archives started to be handled by specialist staff. One such archive was the Archivio de Simancas in Spain, created in 1542, which hosted all the records of the councils, courts, chanceries secretaries, treasuries of the Castilian Crown. A significant date, in this respect, is 1610, when James I of England appointed Levinus Monk and Thomas Wilson as "Keepers and Registers of Papers and Records," thus creating the series of State Papers, which is now the core of the Public Record Office. That same year, as we have seen, marked the creation of the Vatican Archives in their modern form. As "administrative monarchies" multiplied over time, the production of records and their preservation practices, the archival machinery, started to grow in significance (p. 16).

For Michael Duchein "an archival science," however, did not emerge till the 17th century when, after the work of Baldassare Bonifacio, who in 1632 wrote the first known thesis on the management of archives, a number of treatises started to appear on the subject in Italy, France, Germany, and Spain, showing conflicting theories about the best methods for the arrangement and description of archives (1992, 16). Already at this stage theories about selection started to emerge, and by 1731, royal instructions were given in the city of Turin to the archivist of the Royal Archives of Sardinia to destroy "useless paper" (Lodolini 1984, 234). Modern archival principles, however, were only articulated in 19th-century France and Germany, in the aftermath of the French Revolution, leading to the publication of major studies by Dutch, English, and Italian archivists, such as the *respect des fonds* principle, and the *Registraturprinzip* (Rabe Barritt 1993, 43). For Duchein, the modern administration of archives in Europe begun when it became clear that archives were no longer just historical repositories but needed to receive continuous updates from administrative centers (1992, 18). One of the most significant studies about archiving, the *Manual for the Arrangement and Description of Archives,* also was published at this time, in 1898, by the Dutch Samuel Muller, Johan Feith, and Robert Fruin, and subsequently translated in French, German, English, Italian, Portuguese, and Chinese, among other languages. This seminal work articulated the principles concerning the nature and treatment of archives, including the fact that archives from different creators must not be mixed or based into artificial arrangements dependent on chronology, geography, or subject, but rather that the arrangement must be based on the original organization of the collection, which may in turn reflect the organization of

the administrative body that produced it. These rules are now known as the principles of provenance and original order.

The introduction to the 2003 re-edition of the *Manual* notes that while this text is regarded by many as a starting point for archival theory and methodology, it drew substantially from the way the Dutch arranged and described archives in the century before its publication. Whereas, traditionally, archives had served to settle legal disputes and support a particular political entity and its bureaucracy, during the 18th-century Dutch administrators started to consider archives as "a source of knowledge about their cities and thus about the heroic acts of their own forefathers" (Horsman et al. in Muller et al. 2002, v). Hence archives became increasingly significant as collections of historical resources "within which the formal documents, as irrefutable evidence of the historical facts, were considered to be the most important" (p. v). This change in perspective led to the appointment of the first "archivist," Hendrik van Wijn, in 1802, followed by others after 1813, the year of the establishment of the kingdom of the Netherlands. These, in collecting pre-1795 archives decided to "put together, as far as possible, *what belonged together*" (p. vi; original emphasis). Differently from the Middle Ages, when archives were created by religious and secular potentates "to prove their claims to power," after the 16th century the administrative activities of princes, lords, and cities became so extensive that "'other legal deeds apart from the charters had become indispensable as evidence and memory" (p. vi). The principle of original order stems from this identification of an archive with a community (i.e., city, province or state) and the growing belief that "archives held by one community" should not "be amalgamated" with the archives of another (p. viii). However, as communities grew, and new acquisitions were gathered, archivists started to sort materials according to agencies and consider these as separate "fonds" (p. xi).

The *Manual* was crucial for articulating these practices into a framework, suggesting that archives from different record creators should not be merged and that files should not be split or broken up. The *Manual,* however, dismissed the idea of a community archive by stating that archives are created by and located with administrations, not communities (p. xviii). Thus the Principle of Provenance ruled that if one administration ceased to exist, archives would be passed on to those replacing it even though this new group may be in a different location. In 1881 the Principle of Provenance was introduced at the Privy State Archive in Berlin, stipulating that archival files were to be accumulated in the place where they originated before being transferred to the archive. The *Manual* indicated that archives needed to be systematically arranged according to an original order, rather than alphabetically, chronologically, or by keyword. In other words, archival materials were not to be considered as "independent of their original relationship" (p. xix). The Principle of Provenance was also acknowledged as "a system of arrangement of public archives whereby every document is traced to the governmental body, administrative office or institution by which it was issued or received and to the files of which it last belonged when these files were still in the process of natural accretion" (Van Laer in Rabe Barritt 1993, 49).

According to the Principle of Provenance, records cannot be arranged according to subject matter and what is important is their organization, which occurred elsewhere, and at a different point in time. It is therefore clear that the records kept in an archive based on the Principle of Provenance "refer their users back to the conditions under which they emerged (in the other place), the media that helped produce them, the business of which once they were a part, the techniques and technologies that were critical for their emergence" (Spieker 2008, 18). The Principle of Provenance thus reminds us that in an archive, it is never just a question of what is being stored, but rather of "what is being stored *where*" (p. 18; original emphasis). In this sense, archival documents are site and time specific to the archive they are in. Moreover the identification of provenance is telling in relation to the identification of the archive as an ordering system. In this context, the interdependence of archival documents is crucial (p. 18). Documents, in consequence, started to be seen as part of a network of relationships, a broader knowledge economy, within a given environment. The archive as a noun (i.e., as site), and its material content, and archive as a verb (or process), Derrida's "*archiving* archive" (Derrida 1995, 16–17; original emphasis) started to be considered as interdependent. It was stipulated that adherence to the Principle of Provenance would reveal a "preexisting organic 'archive body' showing 'single files and records represent the cells of a living body flooded by a life force [*Lebenskraft*]'" (Brenneke 1953, 22). In this sense, as I will discuss in chapter 6, the archive is not only an ordering system that facilitates the live transmission of knowledge, it is an ordering system that has a "live force," that is *(a)live*.

I have already pointed out that Thomas Richards identifies the origins of the archival impulse in the 19th-century Victorian England, with the establishment of institutions like the Royal Geographic Society, the Royal Photographic Society, the British Museum, and the Colonial Office (1993). Imperial Britain was in fact founded on the production of paper and documents, and the Imperial Archive is characterized by its insatiable desire to gather and share knowledge. This led to a series of changes in the ways that archives operated, primarily to do with power. Thus Richards, for example, draws attention to the change in meaning that occurred at this time of the word classification, which at midcentury meant "ordering information into taxonomies," while, by the end of the century, indicated "knowledge placed under the special jurisdiction of the state" (1993, 6). In imperial mythology, the archive was, for Richards, in fact "less a specific institution than an entire epistemological complex for representing a comprehensive knowledge within the domain of Empire" (p. 15). In other words, in late-Victorian England, as Richards shows, the archive became a function of Empire, taking "the form not of a specific institution but of an ideological construction for projecting the epistemological extension of Britain" (p. 16). Herewith, the archive became synonymous with its owner's ideology. Acting as an instrument not only of local, but of global power, the archive became symptomatic of acts of global political "presencing" (Giannachi and Kaye 2011), necessary for the establishment of connections between a subject and their environment as part of a broader (political, cultural, social, market) economy. To be present globally, to be part of a global circulation, required being present in the archive. The impact of this

change in the way archives were conceived brought on what has been described as an archival "impulse" (Foster 2004) or "fever" (Derrida 1995), to do with the tracing of this presence over time. This shift marked the beginning of a mania that saw Derrida's "*archiving* archive" (16–17; original emphasis) become a primary mechanism for the circulation as well as for the control of ideas pertaining to (cultural, national, individual …) identity. The archive hence became an instrument for the global production, storage, and circulation of knowledge. This led to a substantial proliferation of archives, which in turn brought to light the importance of the role of the representation and self-documentation of the point of view within the archive. The use of technology and the acknowledgment of the role played by the user mark the shift from Archive 1.0 to Archive 2.0.

Archives 2.0

I have shown how, over the centuries, archives started to be considered not only as locations or objects but, increasingly, as media, and communication strategies. As a consequence their processes of storage and transmission became more and more the focus of scholarly attention. For Shanks, Archive 2.0 marks a change in archival practice, pointing to the beginning of a phase of "mechanization and digitization of archival databases, with an aim of fast, easy and open access, based upon efficient dendritic classification and retrieval, associated also with statistical analysis performed upon the data" (2008). Archive 2.0 emerged in response to the success of Archive 1.0, not just as a technology but also as an economic practice whose most significant objective was to manage the expansion of archives, in terms of their size, quantity, and hybrid nature so as to facilitate the global production and circulation of knowledge. A crucial shift occurred during this period that saw the emergence of Archive 2.0, from the industrial and bureaucratic era described by Richards (1993), in which the world witnessed the appearance of steamboats, trains, clocks, statistical thinking, national museums and archives, for example, to a digital economy based on computers and database technologies, contingent on human computer interaction. During this era, profound changes took place in the ways archives were built, accessed and shared. New systems of catalogization substituted old ones, with computer files organized "by multifaceted classifications and with an infinitely reconfigurable past" (Bowker 2005, 136). These changes, as I will discuss in the forthcoming chapters, brought on substantial shifts in the ways that archives are understood in the 21st century. One such change was the understanding that archives could entail and produce different, possibly even contrasting and yet coexisting, systems of value.

It was during this period that two of the most influential works on archival theory and practice were produced by Hilary Jenkinson and Theodore Schellenberg. Both were partly in response to the changes brought on by the shift from the scriptural to the digital economy but also, more broadly, a reflection of the changing role of the archive as a global circulation system of the newest and perhaps most valuable "commodity," namely knowledge. The latter had also been commented on by a number of other theorists. Thus, elaborating on Karl

Marx's writings in the *Grundrisse* (1857–58), Jean-François Lyotard captures one of the most distinctive features of this period. For him, knowledge has become "the principle force of production" and will perhaps be "a major—perhaps *the* major—stake in the worldwide competition for power" (1984, 5; original emphasis). Hence the control over the principles of the "*archiving* archive" (Derrida 1995, 16–17; original emphasis), and the control over the generative power of the archive, became timely, as Schellenberg's work shows. So, for Jenkinson, as well as for Schellenberg, archives should be accumulated rather than collected (Stapleton 1983–84, 77). Both Jenkinson and Schellenberg observed respect *pour les fonds* in the arrangement of archives, the principle of provenance, and broke down archives into manageable units, but whereas Jenkinson thought archives were impartial and authentic, and needed to be preserved for their creator, Schellenberg criticized the control of individual documents and suggested that records had both primary and secondary values and that all these values needed to be fostered. For Schellenberg, primary values reflected the importance of records to their original creator and secondary values to subsequent researchers. Secondary values could be evidential (linked to Jenkinson's sense of archives as evidence) and informational (pp. 77–78), in the sense that they could generate further knowledge and thus turn the archive into a formidable force for the production and circulation of knowledge. This subdivision into primary and secondary values resurfaced in Suzanne Briet's "What Is Documentation" (1951), which distinguishes between the functions played by primary, secondary, and auxiliary documents, all of which are, as we will see in chapter 3, of significance within Archive 3.0. What Jenkinson called "the material evidence" of historical cases (2003, 246–47), was later picked up by Elizabeth Diamond who suggested that "archivists, like forensic scientists, become expert witnesses, testifying to the nature of the documents" (1994, 142). Over time, and as we know from Suzanne Keen (2001), novelists then popularized this distinctive feature of archival practice, and writers such as A. S. Byatt, Peter Ackroyd, Julian Barnes, Penelope Lively, Margaret Drabble, P. D. James, Graham Swift, and Kinglsey Amis, as well as postcolonial novelists Salmon Rushdie, Keri Hulme, Amitov Ghosh, Bharati Mukherjee, and Dan Brown, among others, exploited time and again the *topos* of the archive, as did popular films like *Indiana Jones and the Last Crusade* (1989), *The Mummy* (1999), and *Possession* (2002). The burgeoning featuring of archives in fiction, and, later, film, firmed up their role within our popular cultural imaginary as sites of discovery of hitherto unknown pasts and possible futures often associated with the gaining of some form of wealth (economic, personal, etc.) or value (moral, religious, scholarly, and personal).

One more distinction between Jenkinson and Schellenberg's approaches to archives is worth singling out: whereas in the end Jenkinson departed from the idea of *fonds d'archives* and, instead, talked of "archive groups," containing the entirety of records "from the work of an Administration which was an organic whole" (in Cook 1997, 24), Schellenberg believed that archives were the portion of materials or records received that the archivist had chosen to preserve (pp. 28–29). This is significant in that it presumes that only what has continued to form part of the "*archiving* archive" (Derrida 1995, 16–17; original emphasis), what persisted

over time, almost in Darwinian terms, is what constitutes the archive, whatever the actual values of the content, hence the significance of the "papyrus enriched" holy crocodiles in Egyptian Tebtunis (Posner 1972, 5). During this period, archives grew exponentially in size and the problematics associated with this growth often determined archivists' approach to conservation and preservation. For example, when the National Archives in Washington were created in 1934, they inherited a backlog of about one million meters of federal records, with a growth rate of more than sixty-thousand meters annually. By 1943, that growth rate had reached six-hundred-thousand meters annually. This led to the emergence of the North American records management profession to help agencies deal with what was described as a paper "avalanche" (Cook 1997, 26). The problem of how to deal with the ever-growing quantity and size of archives is perhaps what most clearly describes the consequences of the emergence of Archive 2.0. Jenkinson's idea of "archive groups" and, in particular, as I will discuss in the forthcoming chapters, of interrelated archives, springing, almost organically, out of one another, is a defining characteristic of this phase that is still predominant today.

In the 1970s and early 1980s, debates proliferated over what Terry Cook described as the "first generation" of electronic record archives. There was, in his words, "a strong emphasis on information content over provenancial context, on library cataloguing over archival description, on one-time, one-shot statistical datafiles over continuously and continually altering relational databases and office systems, and on treating electronic datafiles as discrete and isolated items rather than as part of the comprehensive, multimedia information universe of the record creator" (1997, 40). In the mid-1980s, new information technology featuring relational databases became more common, and one of the challenges for archivists became how to translate the old principles into the electronic age. In particular, whereas in the past archival principles were derived from records that originated in "stable, mono-hierarchical institutions," digital records often originated in "unstable institutions," which meant that the focus tended to shift from the individual record to the functions and transactions of the record creator (p. 45). For Cook, this encouraged archivists to stop acting as passive keepers of documents left by creators and become "active shapers of the archival heritage" (p. 46). In the aftermath of this, archivists should perhaps no longer be considered as "custodians of inherited records," but rather, as we will see in chapters 2 and 3, they should be thought of as "active builders of their own houses of memory" (p. 46).

The most significant impediment to the accessibility of electronic records has been technological obsolescence, which means that in some ways the emphasis has shifted from preservation of the information carrier or medium to the facilitation of accessibility over time, something that has been described as "a question of readability, retrievability and intelligibility" (Dollar 1993, 45). Hugh Taylor was an influential analyst of the growing significance of electronic records and the concerns over obsolescence associated with them. For him, electronic records marked "a return to conceptual orality" (in Cook 1997, 34), namely "a return to the medieval framework where words or documents gained meaning only as they were 'closely related to their context and to actions arising from that context.'" For Cook, in

this particular kind of oral tradition, "meaning 'lay not in the records themselves, but [in] the transactions and customs to which they bore witness as *evidences*'" (p. 34). For Taylor too, meaning arose out of the network of contexts, which records capture. This marked a significant change in the way that records and documents were subsequently understood. For Cook, this change showed "a shift away from viewing records as static physical objects," "toward understanding them as dynamic virtual concepts," and a shift away from looking at records as the product of administrative activity and toward considering them as "active agents themselves in the formation of human and organizational memory" (2001, 4). Records, with this, become prompts for stimulating relational thinking, aiding memory formation and facilitating identity reformulation. In turn, archives became the sites where these processes of replay and transformation were seen to be taking place.

We know that archives have always, to some extent, operated as presencing tools. The question then is what exactly did these archives facilitate presencing with. During the phase described as Archive 1.0, archives consisted primarily of papers pertaining to legal and land matters. On the other hand, during the phase described as Archive 2.0, archives became increasingly associated with the archive's role as media, and attention started to be devoted to the role of the archive's creator and, even more important, its interpreter. This change in archival practice is related to the emergence of the information society. As Lyotard noted, with the raking up of grand narratives, people have been increasingly located at "nodal points" of "specific communication circuits," "at a post through which various kinds of message pass" (1984, 15). Archive 2.0 became identified with this network of nodes that could endlessly reconfigure itself, whatever was at the center. Thus Archive 2.0 became a generative tool, capable of programming its own growth and re-position its user within its different configurations. With this, increasingly, Archive 2.0 started to act as a transmitter of more or less subjective knowledge entailing varied and often hybrid documents (primary, secondary, auxiliary) that had different values for different users. Hence Archive 2.0 was no longer necessarily associated with a physical site, nor was it a mark of truthfulness, credibility, or authority, rather it was a database representing an amalgam of materials, of differing, often subjective, values, including, as ever, also obsolete materials and waste, that was capable of somehow augmenting the user's sense of their own presence. It was also the mechanism for its transmission. In fact, increasingly, Archive 2.0 can be described as a plurality of archives that aid the constant flow of knowledge in a global economic market wherein the user is not only a part of, but also, more and more, an instrument in their creation and propagation.

An example of an Archive 2.0 is the September 11 Digital Archive, organized by the American Social History Project at the City University of New York and the Center for History and New Media at George Mason University, now supported by the Library of Congress. The September 11 Digital Archive represents a comprehensive attempt to "collect, preserve and present the history of September 11 attacks" (September 11 Digital Archive). The archive welcomes submissions in multiple and hybrid forms and media, and allows for participation by

anyone who was involved, or was even simply moved by the events of September 11. Users are here positioned as active participants in the unfolding of the history of this day, regardless of their age, nationality, or location on the actual day of the terrorist attacks. Thus the archive consists of firsthand accounts of people directly and variously affected by the events, as well as individual stories of people who do not have any connection to the events but wish to comment on their experience of it. There are, among other things, stories, photos, emails, including individual emails sent and/or received on or shortly after the September 11 event; large collections of emails from institutions, organizations, and other groups such as a collection of over 11,000 emails from the Department of Justice, and from the Madison Area Peace Coalition. There are also posters, letters, cards, brochures, event programs, press releases, announcements, and so forth, collected from the streets of New York; action plans, reports, studies, white papers; newspaper articles (the Independent Press Association collection); various other documents produced by a variety of organizations and journals on a more wide range of topics; and links to other relevant document collections. Additionally, the September 11 Digital Archive gives access to several special collections, like the Ground One: Voices from Post–September 11 Chinatown collection, which preserves interviews with Chinese Americans living and working in the area of Chinatown, the largest residential area affected by the September 11 events; the collection of stories from the National Museum of American History's September 11: Bearing Witness to History exhibition and website; the Here Is New York collection that hosts photographs of the September 11 events by professionals as well as by amateurs; the Sonic Memorial Project collection that holds audio traces of the World Trade Center and its neighborhood collected and submitted by radio and new media producers, artists, historians, and people from all over the world; the Library of Congress Witness and Response exhibition, a collection of stories, images, and emails from the public about the September 11 events and an annotated guide, organized by type and content, to September 11 websites and web resources.

There are differences between the September 11 Digital Archive forms of testimony and more traditional oral or written testimonies. The ones entailed in the September 11 Digital Archive, typically of Archive 2.0, include the fact that their production and dissemination is based on the use of digital and mobile technologies, which means that despite the fact that the original nature of the testimony is personal and private, it underwent "a constant transformation through its exposure and its presentation on the Internet, and it turns out to be collective and public at the same time" (Valatspu 2008, 113). Moreover, in the September 11 Digital Archive, "individual subjects that narrate their stories are simultaneously *producers* and *consumers* of history and the past" (113; added emphasis). No longer are the figures of the archivist and that of the user clearly distinct. The user-archivist generates materials while they are consuming those encountered in the archive. The individual who uses and produces the archive thus starts to experience what has been described as "a feeling of relationality to all the other individuals online, by living a relational digital life" (p. 113). This relationality is a distinctive feature of Archive 2.0 and through this the user not only is able to read

themselves as part of a node in the network but also, increasingly, as part of a history or even community that is present in a multiplicity of archives.

I have already said that the success of Archive 1.0 led to a proliferation of archives. This, alongside technological advances in the period of Archive 2.0, brought on what Hal Foster described as an "archival impulse" that was particularly manifest in the artistic sector, as it emerged in the aftermath of the invention of photography, which made it possible for artists to use archiving as a mode for the organization of the proliferation of images (2004). For Okwui Enwezor, the introduction of photography then generated a world of practices that were often staged directly for the camera (2008, 22). These flattened the distinction between a work and its documentation, or even between an event and its trace in the archive. This is particularly true for performance pieces that consist of their documentation such as works by Ana Mendieta, Lynn Hershman Leeson, Richard Long, among others, "whose activities of inscription were only possible through the medium of photographic representation" (p. 23). For Foster, the "archival impulse" had in fact started "when the repertoire of sources was extended both politically and technologically (e.g., in the photofiles of Alexander Rodchenko and the photomontages of John Heartfield)" (2004, 3). This mode of work then became prevalent in both the 20th and 21st centuries, so that, increasingly, "appropriated images and serial formats" became "common idioms (e.g., in the pinboard aesthetic of the Independent Group, remediated representations from Robert Rauschenberg through Richard Prince, and the informational structures of Conceptual Art, institutional critique, and feminist art)" (p. 3). For Foster, artists engaging with these kinds of archival practices sought to make historical information, that may have been lost or displaced, "physically present" and to this end their practice, as we will see in chapter 5, often privileged, as had been the case for cabinets of curiosity beforehand, the display of "the found image, object, and text," through the installation or exhibition formats (p. 1). Thus Foster notes, for example, how some of these practitioners, such as Douglas Gordon, "gravitate toward 'time readymades,'" that is, "visual narratives that are sampled in image projections, as in his extreme versions of films by Alfred Hitchcock, Martin Scorsese, and others" (p. 2). These sources, he suggests, can be familiar, "drawn from the archives of mass culture," as well as "obscure, retrieved in a gesture of alternative knowledge or counter-memory." Noticeably, these kinds of works, as well as those deliberately blurring the distinction between an occurrence and its documentation, often pushed notions of "originality and authorship to an extreme" (p. 4), leading to the acknowledgment that archives, and their materials, can be repeatedly re-played and, through this process, may acquire further value. In chapter 4 we will see how these practices, no longer object-, but process-oriented, frequently adopted archival strategies to facilitate engagement. With the adoption of archival practices by leading 20th- and 21st-century artists, the archive, already a good *topos* for the study of power and identity creation, and already part of our evolving cultural imaginary, became an established strategy not only to present artifacts found in everyday life, but to refocus the viewer's attention on their act of viewing and the emergent body of knowledge associated with this act. This feature, which was to become

predominant in archive 4.0, transformed the archive, as I will show in chapter 5, into the interface that we, more and more often, use to frame our encounters with everyday life.

The curator Nicolas Bourriaud championed a number of archival art forms under the rubric of "post-production," which drew attention to how artists often facilitated the production of secondary and auxiliary documents, to use Briet's terms (1951), adding further value to original documents "after the event" (Bourriaud 2009). Interestingly, the term also suggests "a changed status in the work of art in an age of digital information, which is said to follow those of industrial production and mass consumption" (Foster 2004, 4). Thus, as I will show in chapter 5, we can speak of artists-as-archivists, artists-as-curators, artists-as-producers, artists-as-collectors and cabinet makers, and so forth (see also Foster 2004, 5). These artists do not only use archival materials as art, they also draw attention to their arrangement through archival logic, often using a matrix of citation and juxtaposition, strings, files, in other words, adopting technologies of order, what Derrida called the "*archiving* archive" (Derrida 1995, 16–17; original emphasis), to present work within "a quasi-archival architecture, a complex of texts and objects (again, platforms, stations, kiosks …)" (Foster 2004, 5). So, as I will discuss in more detail in chapter 5, Marcel Duchamp, for example, famously miniaturized his entire corpus into an edition of reproductions organized and codified as an archival system entitled *Le boîte-en-valise* (1935–41). These artists, we will see, were interested in the archive as a framing mechanism that could include viewers, thereafter often called participants or users, within the work of art.

To conclude, we can see in Archive 2.0 that no longer is the *topos* of the archive merely associated with a physical site or with a particular set of records and their histories, nor is it purely its content's ability to generate future memories, but rather it is the ordering mechanism that is increasingly adopted to shape the way we interface with and document ourselves in the everyday. Archive 2.0, and more so, Archive 3.0 and Archive 4.0, operate by folding everything back within themselves. Crucially then, as we will see in chapters 2 and 4, what is absent from the archive must always enter the ordering mechanism, the "*archiving* archive" (Derrida 1995, 16–17; original emphasis), precisely so as to be part of what could be described as an expanding social memory apparatus comprising the archive, as well as the museum, the library, and, nowadays, the Internet.

Archives 3.0 and 4.0

The use of archives by artists, critics, and curators in performative contexts has changed the way we understand and work with archives. So, for example, archives, as we have seen, are increasingly utilized as production tools (Osthoff 2009, 11) causing what has been described as a "contamination between artwork and documentation" (p. 11), artworks and archives, archives and found objects, archival practices and everyday life. This changing function of the archive has transformed it from "stable and retroactive" to "generative" (p. 12), which means that the user of the archive also plays a productive part in this process. However,

Archive 3.0 not only brings together physical and digital environments, often also constituting, in Shanks's words, an animated (2008) or a mixed reality archive, it also creates the mechanism that facilitates the creation, dissemination and preservation of different types of values within the digital economy. Thus Archive 3.0, and especially Archive 4.0, have become not only a way to experience the place we inhabit but also, increasingly, the frame through which we interact with it, socially, politically, economically, and, as we will see in chapter 6, even from a medical point of view. Archive 4.0 is therefore not only the ordering system we use to design and act out the different roles we play within the digital economy but also, increasingly, the instrument or apparatus through which our bodies are (re-)programmed inside out.

An early "animated" example of an artwork based on Archive 3.0, and in fact the one that prompted Shanks's writings about Archive 3.0, is Lynn Hershman Leeson's *Life Squared* (2007). Developed with funding from the Langlois Foundation by the Stanford Metamedia Lab, directed by Shanks, Stanford University Libraries, Stanford Humanities Lab, then co-directed by Shanks and Henrik Bennetsen, in collaboration with Linden Lab and Pulse 3D Veepers System, and in conjunction with the AHRC-funded Performing Presence project (2004–2009), *Life Squared* consisted of the "re-production" of two earlier works, the site-specific installation *The Dante Hotel* (1973–74; see figure 1.1) and the performance piece *Roberta Breitmore* (1972–78), in Second Life. This piece, exhibited in 2008 at Montreal Museum of Fine Arts and the San Francisco Museum of Modern Art, re-staged and "re-mediated" these works, investigating how the electronic medium of Second Life may extend and yet depart from the original works. Characteristically of Archive 3.0, the aim of *Life Squared* was to create "an overarching metanarrative and gamespace" within the online world of Second Life, that would integrate real and virtual architectures, character avatars, artifacts, somatic characters, and, in a later phase, situational components such as site tagging and GPS locators. Using content from the Hershman Leeson archive at Stanford Libraries Department of Special Collections, such as the *Fragmented Journal* from 1973, in which Hershman Leeson recorded her preparations for *The Dante Hotel* with artist Eleanor Coppola, but also numerous images, receipts, letters, interviews, and notes, fragments of information embedded within the storyline of a crime scene, the team aimed to "reveal layers of clues, each of which [would] propel a search for lost identity." In conception, the *Life Squared* environment was to be based on the "Private I" theme and motif that recurs through Hershman Leeson's work, and that we know is recurrent in archival literature, except that, in this instance, a "missing person" would be "traced through a trail of artifacts and partial or even erased information." Finally, a new "bot" character was to be created to "incorporate deviance" within three works (Shanks et al. 2009).

The early works mentioned above are crucial in the way *Life Squared* was conceived of, so more attention needs to be devoted to them here. In her first site-specific and performance work, *The Dante Hotel* (1973–74), visitors to a "real" run-down hotel in San Francisco encountered "evidence" evoking fictional guests and events in the form of personal belongings

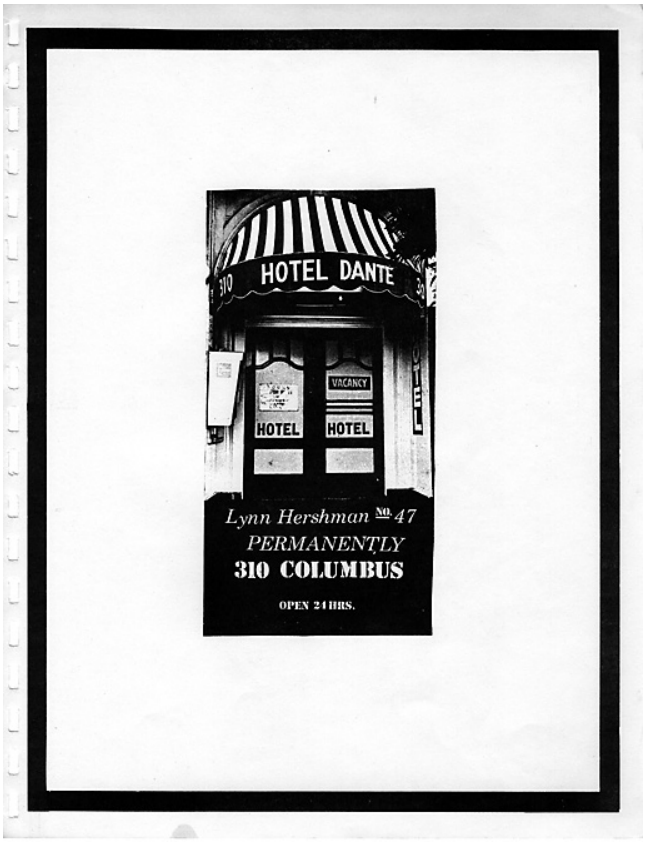

Figure 1.1
Lynn Hershman, *The Dante Hotel* (1973–74). Courtesy Lynn Hershman Leeson.

abandoned in two rooms. Thus *The Dante Hotel* begun on entry to the Hotel Dante, when visitors, Hershman Leeson notes, "signed in at the desk, and received keys," then walked up the stairs to the designated rooms. Through this initial interaction visitors and even residents, unwittingly, "became part of the exhibition" (Tromble and Hershman Leeson 2005, 23) as their "real" activity became the object of *The Dante Hotel*'s installation. For Hershman Leeson the character of Roberta, protagonist of the other work that was significant for *Life Squared*, *Roberta Breitmore*, was "bred out of" or "born" when "she arrived in San Francisco on a Greyhound bus" (Hershman Leeson in Tromble and Hershman Leeson 2005, 25), reputedly checking into the first hotel she saw, the Hotel Dante, because, she reported, "she likes the name" (Roth). This, of course, marks a connection between the two works *The Dante Hotel* and *Roberta Breitmore*. Carrying with her $1,800, her entire life savings, Roberta then

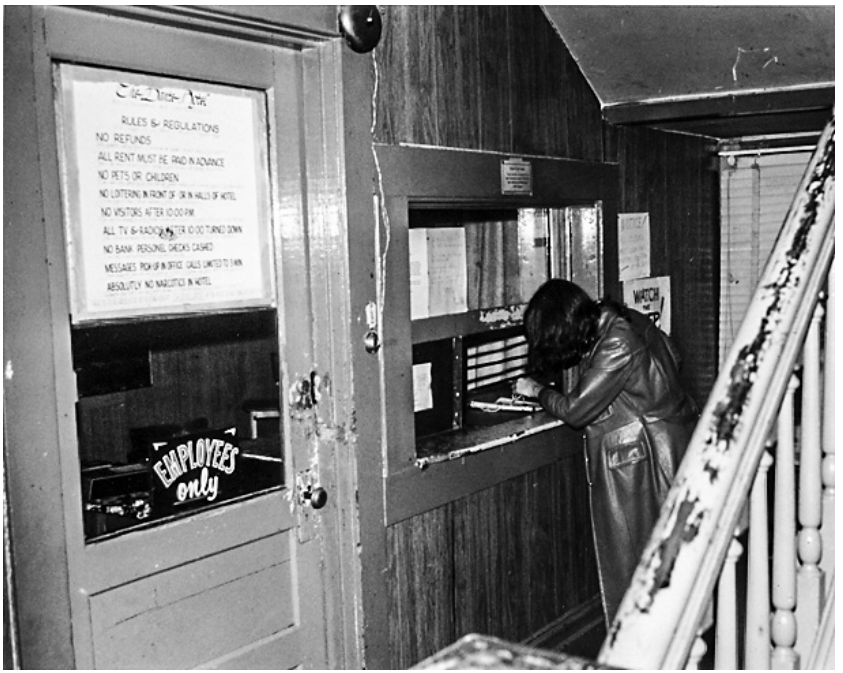

Figure 1.2
Roberta Breitmore at *The Dante Hotel*, San Francisco, November 1973. Courtesy Lynn Hershman Leeson.

became involved in a series of social interactions: she picked up two credit cards, a driver's license, rented an apartment, placed an advert in the *San Francisco Progress* to advertise for a roommate, and met with each respondent to the advert three times in an implicit play between a "proof" and persistence of Roberta's presence to the applicant and the repetition staged by "performance." Meetings were documented photographically and each event was tape-recorded so that the people who replied to the advert became part of her "fiction" (Hershman Leeson 1996, 330). The semi-autobiographical persona of *Roberta Breitmore*, was therefore, subsequently, met primarily in "documentation"; hence Hershman Leeson's largely "unseen" and, arguably, archival performances, conducted and recorded over a six-year period were made available through their documents, namely exhibitions and publication that included correspondences, newspaper announcements, dental records, psychiatric assessments, and receipts of financial transactions.

Life Squared was modeled on the floor plan of Hotel Dante, in a re-staging of the site-specificity and interactivity of Hershman Leeson's "original." Visitors were thus invited to sign in a blue box to enter the project and a red one to enter the room, in which documentations

Figure 1.3
An early demonstration of *Life Squared* (then called *Life to the Second Power*) to the project team and other invited guests. Photo Gabriella Giannachi.

from room 47 at *The Dante Hotel* were reproduced. In place of a clerk, visitors would encounter a bot, named "Dante," who would guide them through a door. They would then climb a staircase and walk down a narrow corridor from which they could enter room 47 (see figure 1.3). Bennetsen points out: "each object had its function. The scrapbook, which was populated with scanned images of the original scrapbook … was a vehicle for transporting knowledge" (in Giannachi and Kaye 2011, 58). Hershman Leeson describes the resultant piece as "a remix of original photographs from the archive of *The Dante Hotel* with virtual avatars trespassing, changing things, and leaving their trail" (2009, 14). Just as the visitors to the "historical" work, *The Dante Hotel*, frequently left traces of their presence in the rooms, here visitors to Second Life could impact on aspects of the installation. More broadly, too, and typically of Archive 3.0, *Life Squared* consisted of a series of interrelated and in part practiced or even performed sites, including a gallery space, a Roberta bot as well as the re-enactment of *The Dante Hotel*, all in Second Life, and as a whole the piece encompassed a display of virtual representations of materials from the Hershman Leeson archives.

In a further elaboration and multiplication of its sites, when the piece was exhibited at the Montreal Museum of Fine Art and San Francisco Museum of Modern Art in 2008, physical

archival and documentary materials were displayed alongside terminals allowing access to the Second Life installation, while the virtual counterparts of these objects were also displayed in the navigable Second Life environment. Finally, the traces left by the visitors in the virtual installation were captured over time by machinima and as still images. For Hershman Leeson this meant being able to "manipulate time," "looking at the past as a context to reconsider the present," reviving an earlier exploration of space, and "migrating this into a more contemporary form" (Giannachi and Kaye 2011, 54). In its presentation at the Montreal Museum of Fine Art, a two-way mirror was integrated into the work to produce a further multiplication of perspectives and spaces to be traversed by the visitor. For this installation, a large monitor was hung on the wall in both the Museum and in Second Life. The museum monitor permitted a view from the physical space into the contained space in Second Life, and vice versa, the Second Life monitor mediated the physical space into Second Life via a web cam. Visitors could thus explore Hershman Leeson's documentations displayed in the Museum and then re-explore them in their digitized form as displayed in Second Life, potentially being "present," and being able to document their presence, twice, in both sites (see figure 1.4).

Life Squared shows a series of characteristics that are distinctive of Archive 3.0. First, this kind of archive is an object and a process, but often also an artwork, a monument, an

Figure 1.4
Lys Ware (a.k.a. Henrik Bennetsen) taking a photo of Henrik Bennetsen taking a photograph of Lys Ware in *Life Squared*. Photo Henrik Bennetsen.

autobiography, a platform, and so forth. Second, it is often performative, and it could be more or less interactive, immersive, and pervasive. Third, it is not only deriving from (being born out of) another archive, but it is also frequently aware of the problematics of its own documentation. Fourth, the archive offers a multiplicity of viewing platforms to replay or even rewrite the past (sometimes through crowdsourcing), and capture the present through both old and new technologies. In this sense in Archive 3.0 we may have multiple identities, not only as users and producers of knowledge but also as performers or spectators, subjects, or objects. Fifth, as Shanks points out (2008), the Archive 3.0 entails new, often prosthetic, architectures and thus becomes akin to a cybernetic system wherein, in Wolfgang Ernst's words, "the aesthetics of fixed order is being replaced by permanent reconfigurability" (2013, 99), hence the increasing popularity of terms and practices such as reframing or re-loading. This marks the transformation of the archive into an adaptable re-playable set of interrelated platforms that interface with our everyday lives. Sixth, Archive 3.0 is therefore no longer just an "impulse" (Foster 2004) or a "fever" (Derrida 1995), it is the lens or interface through which we perceive, interact, and often extract value from our environment and, increasingly, the apparatus through which the latter can, quite literally, (in)form us.

We have seen that digital archives are often built so as to facilitate regeneration and co-production by users (Ernst 2013, 97). This explains the growing popularity of crowdsourcing, through which users are made directly responsible for producing new knowledge that may be useful to a particular organization. One such example is *ArtMaps,* which was developed as part of an interdisciplinary collaborative project between three departments at Tate (Tate Learning, Tate Online and Tate Research) and researchers in Computer Science (University of Nottingham) and Performance and New Media (University of Exeter), funded by RCUK Horizon Digital Economy (2009–15). Technically, *ArtMaps* consists of a web app optimized for mobile that allows users to explore over 70,000 artworks in the Tate collection through a Google Map interface (see figure 1.5), which facilitates their analysis in relation to the places, sites, landscapes, and environments that informed or led to their geotagging through their association with a specific location. The app can locate their users and bring up works in the Tate collection that are geotagged in relation to places near them.

Users can then look at these works on the map and/or explore them in situ (see figure 1.6), reflecting on how what they see in the works relates to their surroundings. Alternatively, through a search function (by artist and by location), they can explore works in any locality. They may then change the location of an artwork and add a comment reflecting on the reasons behind this change and/or what they think may be the relationship between a place and a work. *ArtMaps* constitutes a typical example of an Archive 4.0, attempting to engage users by bridging between or even overlaying physical and digital spaces, and prompting relational thinking in allowing users to juxtapose one with the other and so perceive one through the other while also producing new knowledge that may be of use for the organization hosting the archive.

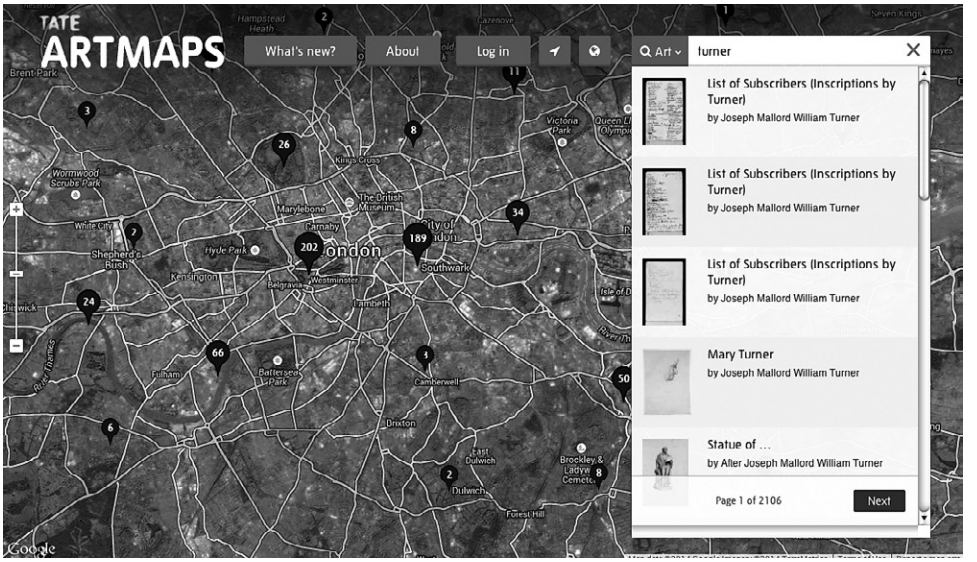

Figure 1.5
ArtMaps interface

Figure 1.6
ArtMaps used at Tate. Photo Ana Escobar. ©Tate Photography 2013.

Distinctively, with such archives, there is, in principle, no more delay between the present and the creation of its memory in the archive but rather the technical option of immediate feedback, particularly visible through the use of social media, turns all present data into instantly accessible archival entries and, vice versa, facilitates the re-interpretation and re-writing of canonic entries by users. In this context, "s*treaming media* and storage become increasingly intertwined" and, because of this, Archives 4.0 could be described as "adaptive" and "transitive to their respective media (formats), meta*dating* (temporally, rather than static 'data'), flexible" (Ernst 2013, 98; original emphasis). For Ernst, this marks the "supremacy of selection over storage, addressability over sorting." With this, the archive becomes "a function of *transfer* processes" (p. 98; original emphasis). Archives, Ernst notes, "once online, are no longer separated from the actual infrastructure of Web-based data circulation," rather, they dissolve "into electronic circuits, data flow" (p. 100). Archives 4.0, while maintaining distinctive features of Archives 1.0, 2.0, and 3.0, can no longer be easily told apart from the environments that produce them. In fact Archives 4.0 become our environment.

While the responsibility for creating and sharing Archives 2.0, 3.0, and 4.0 is increasingly resting with users, their preservation remains a problem that is almost exclusively dealt with by organizations. Nowadays, an increasing number of documents are born digital, and thus crucially, archivists have become more and more concerned in defining the documentation, preservation, and archivization of such forms, not only as objects but also increasingly as processes. This includes the documentation of the user experience. Born digital works are ones that are "produced—and in some cases presented—using digital tools" (Dekker 2012, 65). Annet Dekker thus notes that in the case of artworks, it is important to maintain the authenticity and integrity of these works. For example, she points out, converting a text document into another format could introduce changes in the latter, but this does not usually have an effect on the content of the document and is therefore not a problem for an archive. Converting an artwork into another format, however, does have serious consequences for the aesthetics of the work (p. 65). At a symposium organized by her through Virtueel Platform in the Netherlands called *Archiving 2020,* the complexities of preserving born-digital artworks were discussed and different approaches were assessed, including "Jack the Wrapper" which "would involve putting all the software in a box ad describing and documenting the entire artwork so that it could be cloned in the future" (Dekker 2010, 6). Interestingly, this is, increasingly, the approach of a number of libraries to the problem of archiving the everyday (e.g., in Google Street View) or even of archiving the Internet, which means that data pertaining to our lives, including data that we may think may have been permanently deleted, have started to form part of various privately owned archives. To address the fact that not all born digital materials are worth preserving, or can easily be preserved and documented, however, "Darwinistic archiving" was considered, referring again to the "survival of the best documented artworks" (p. 6). Crucially, there was a call to change the term "digital preservation" to "permanent access," drawing attention to the fact that aging formats are likely to cause increasing problems in terms of accessibility (p. 7). Such studies show the burgeoning

importance that the digital is acquiring within cultural, economic, and, as I have shown elsewhere (Giannachi 2007), political contexts. At the same time they draw attention to the vulnerability of digital formats. In this sense digital archives are pervasive and yet porous, cannibalistic and yet fragile.

Caitlin Jones's study, which forms part of Dekker's edited collection, points out the approaches taken to address these problematics by a number of institutions whose practices have shaped the field of archiving digital media and born digital materials thus far. Particularly significant in this context, she notes, have been Matters in Media Art, a large-scale inter-organizational effort by MoMA (New York), SFMOMA (San Francisco), the Tate (London), and the New Art Trust (San Francisco) dedicated to the preservation and documentation of a range of media artworks. Likewise the Variable Media Network, with partners including the Guggenheim Museum, the Berkeley Art Museum/Pacific Film Archives, Rhizome.org, and a number of other smaller independent arts organizations, sought to develop new inter-organizational strategies for preserving works of variable media. In the realm of the Internet, a number of organizations have attempted to document the ephemeral history of Internet art. In 2003, V2_'s Capturing Unstable Media laid out a structure that allowed the DEAF Festival organizers to "capture" details about works of art rather than be obligated to preserve the works themselves. Typically for Archive 3.0, Rhizome.org's ArtBase accepts voluntary contributions to its archive of Internet art, and the Langlois Foundation, the major underwriter of both the Variable Media Network and V2_'s Capturing Unstable Media, proposed in their most recent project DOCAM (Documentation and Conservation of Media Arts Heritage) a wealth of tools and resources. A number of these projects are not only inter-organizational but also decentralized. Richard Rinehart and Jon Ippolito (both founding members of the Variable Media Network) have long suggested that the responsibility for preservation of media art should not be trusted to institutes but should be decentralized and distributed (2014), an approach that, in all likelihood, will be prevailing in the future among diverse organizations. Their proposed concept of The Open Museum is that of a self-archiving archive in which artists deposit their work at a central locale where the source code and files can be copied and downloaded by other users. Similar aims are at the heart of the Gateway to Archives of Media Art (GAMA) project. Based on the library model of "union lists" (which provides access to numerous library collection catalogs from one central access point), GAMA is a consortium of media art archives in Europe allowing access to their distributed and hybrid collections from one central point, thus promoting collaboration between archives with similar collections and mandates (see Jones in Dekker 2010, 41–48). Thus Archive 4.0 shows yet a further distinctive feature in comparison with Archive 3.0, which is that this kind of archive operates as a protective and authoritative gateway linking various types of archives to databases, physical and human environments, often globally, so that they may form an integral part of the digital economy. In fact Archive 4.0 frequently consists of a number interconnected platforms, which, as we will see in the forthcoming chapters, can adapt to different formats and host diverse contents so that they can be at once an exhibition space, a social media

tool, a teaching tool, a lens through which to experience the everyday, a memory theater, a media-archeological dig, a tool for the re-writing of history, an artwork, an object, life itself. Part of a larger, future-oriented social memory apparatus continuously folding the present into the past, and vice versa, reading the present through its past, the archive, the museum, the library, have become increasingly interchangeable.

In conclusion, throughout the ages, we have seen changes in what archives have collected that reflect the different roles played by archives in society (Schwartz and Cook 2002, 6). We have seen how, over time, archives have acted "as dynamic technologies of rule" that "create the histories and social realities they ostensibly only describe" (p. 7). As we know, archives always produce and disseminate the events they record and collect. This is why Joan Schwartz and Terry Cook call for an examination of archives against the backdrop of identity politics (p. 16) and, increasingly, the whole issue of ontology, as we will see in chapter 4, is growing in significance in the context of archiving.

In this excursus, we traveled from one era to another, tracking salient changes in archival practices, technologies, and methodologies. I have used Shanks's distinction for Archive 1.0, Archive 2.0, and Archive 3.0, and expanded it to include Archive 0.0 and Archive 4.0, to explain some of the fundamental changes in archival practice, showing the emergence of different archiving technologies, from the papyrus, to the card index, the typewriter, the database, born digital materials and virtual and mixed reality architectures, to hybrid, interrelated and generative meta-archives that act as portals to the digital economy. We have looked into how and why we have become increasingly obsessed not only with our presence in the archive but also with our ability to record this presence in the now and to fold it within the archive, so much so that our everyday lives have started to be continuously integrated within the archive as part of what we call the digital economy. Through this excursus into the history of archival practices, we have seen that archives have never been just "passive storehouses of old stuff," but rather that they have operated as 'active sites where social power is negotiated, contested, confirmed" (Schwartz and Cook 2002, 1). We have seen how archives, libraries, museums, the Internet, have become more and more interchangeable, forming part of a broader social memory apparatus. Finally, we have seen that archives have always been at the very heart of the way we live. By studying how we build ourselves in the efficacious and pervasive apparatus that is the archive, and so augment our daily life through the archive, and its interchangeable faces (the museum, the library, the Internet), we therefore can learn not only about who we are, how we wish to read our past, and what we hope to be in our future, and then again, how we increasingly use the archive to augment life itself and how therefore we literally re-create ourselves through the archive.

2 Archives as Archaeological Sites

> When you are a woman it's hard to tell you are being censored when you are not in a museum to begin with.
>
> Hannah Wike in *!Women Art Revolution*

> Nobody who is ignorant will ever make change.
>
> Judi Chicago in *!Women Art Revolution*

In *The Archaeology of Knowledge* (1969) Michael Foucault compares the study of archives to archeological practice. We learn about the past thorough its remains. In this chapter, I argue that archives should be read as "material" archeological sites. Everything that is found within them should be treated as an index of something else. Drawing from literature on media archeology, site specificity, hybrid site curation and orchestration, this chapter discusses a number of archeological methods, such as survey; excavation (including deep mapping and cultural stratigraphy); Michael Shanks's practice of archaeography, the documentation of "the past in the present" (2005); media archeology (Shanks 2007); and the concept of remediation (Bolter and Grusin 2000) to look at how materials are informed by the media (e.g., photography, video, text, box, blog) that document and archive them. The chapter then moves on to conduct an "archeology" of a particular "archival" work by Lynn Hershman Leeson composed by: a film, *!Women Art Revolution* (2010), which chronicles and documents forty years of the feminist movement in the United States recorded at different points in time and through different media; *!W.A.R.*, the archive of the raw footage, including also some transcripts and biographies, located at Stanford University Libraries; an annotated bibliography which forms part of a graphic novel; and the emergent living blog RAW/WAR, a user-generated archive, and an installation. Analyses of the various components of this hybrid work are complemented by original interviews to Hershman Leeson, the new media developer Gian Pablo Villamil, who worked with her on the user-generated archive, and Henry Lowood and Hannah Frost, the curators from Stanford University Libraries who generated the archive of the raw footage.

Digging up the Archive

We saw in chapter 1 that according to some researchers, the origins of the "archival impulse" that characterizes the late 20th and early 21st century stems from 19th-century Victorian England. During this period, imperialism induced a knowledge-gathering mania aiming at synchronizing and unifying information at a global level, which integrated practices of writing with mapping and colonization, archiving and information gathering, leading to the creation of museums and nation states (Richards 1993). For others, it stems further back in time, from the Enlightenment period, when it emerged as part of a "scriptural economy" (de Certeau 1984, 131–53). I showed in chapter 1 that even before the Enlightenment, archives played a substantial role in memorialization, law enforcement, the administration of bureaucracy, and the management and transmission of power. To understand the role currently played by the apparatus of the archive in the digital economy, particularly in terms of its ability to remediate past practices and world views, it is therefore necessary to revisit the strategic functions played by the archive in the scriptural economy.

The two theorists that offer the most influential analyses of the role played by archiving in the scriptural economy are Michael de Certeau and Michel Foucault. De Certeau argues that the scriptural economy operated via two principles that had to do with accumulation and conformism. He states that the scriptural economy "transforms or retains within itself what it receives from its outside and creates internally the mechanisms for an appropriation of the external space," both "*accumulating* the past" *and* "making the alterity of the universe *conform* to its models" (1984, 135; original emphasis). For de Certeau, archival practice satisfies both these operational principles by serving to accumulate "internally" relics from the past *and* to conform what was other from itself. Just as bodies were inscripted—formed—by the laws that ruled over them (p. 139), books became "metaphors of the body" (p. 140), and archives accumulated histories of inscriptions, documenting practices of (in-)formation (see also chapter 6). For de Certeau only revolutions could subvert the dynamics of the scriptural economy in that they addressed "the scriptural problem at the level of an entire society seeking to *constitute itself* as a blank page with respect to the past, to write itself by itself" (p. 135; original emphasis). In de Certeau's view, revolutions represent crucial agents of change encompassing novel, multiple and self-constituted scriptural operations. He states: "the important thing is neither *what was said* (a content), nor the *saying* itself (an act), but rather the *transformation*, and the invention of still unsuspected mechanisms that will allow us to multiply the transformations" (p. 152; original emphasis). In other words, the scriptural economy, for de Certeau, operates by appropriating and absorbing what is other to it. A revolution, in this context, is the constitution of novel "internal" mechanisms that can transform the social sphere and propagate the transformation. The archive thus functions as the *modus operandi* of the scriptural economy but also, as we will see in chapter 4, as the very mechanism that could be used for the subversion of world views and world orders.

If for de Certeau the archive became the tool that satisfied the scriptural economy's operational principles of accumulation and conformism, for Foucault it constitutes its ordering system. We know that archives entail normative features from Foucault's writings about the archive as the "law of what can be said" (2011, 145), or "the system that governs the appearance of statements as unique events" (p. 145). For Foucault the archive is "that which determined that all these things said do not accumulate endlessly in an amorphous mass, nor are they inscribed in an unbroken linearity, nor do they disappear at the mercy of chance external accidents; but they are grouped together in distinct figures, composed together in accordance with multiple relations, maintained or blurred in accordance with specific regularities" (pp. 145–46). His vision of the archive is that of an ordering structure or tool, and the politics and power (as well as biopolitics and biopower) that are a consequence of it. Thus he famously suggests, the archive is "*the general system of the formation and transformation of statements*" (p. 146; original emphasis)—a knowledge-generating system, or, more accurately, a system of enunciation (p. 129). In identifying a discrepancy between what he calls "present existence" and the archive, he states: "at once close to us, and different from our present existence, it is the border of time that surrounds our presence, which overhangs it, and which indicates it in its otherness; it is that which outside ourselves, delimits us" (p. 147).

In some ways for Foucault too the archive becomes a presencing tool, although he does not use this term, that is utilized to generate order in that which is other from us, precisely so that our presence may be constructed temporally (i.e., historically) and spatially (i.e., geographically). I have argued elsewhere, with Nick Kaye, that presence always remains in advance of or before itself, "always in emergence" (2011, 237). As what is in front of or before us changes constantly, the construction of presence requires a continuous repositioning (or reframing) of the self in relation to what is other to it. We have seen how for de Certeau the archive can be used to accumulate and conform to what constitutes the scriptural economy. In this sense, the archive is a knowledge-generating apparatus that not only facilitates the understanding of our presence (in the sense of what is before the self), by defining, and hence including within discourse what emerges in front of or before us, but in effect the archive is used to produce our presence. We have also seen that Foucault considers archiving an ordering act. He describes it as a "border of time," surrounding but also overhanging our presence. We know that presence is a network of phenomena rather than a stable entity (Giannachi and Kaye 2011). The archive, which is the tool that is used toward the production of our presence, then must also be emergent, relational, in flux. Hence, on the one hand, while the archive forms order out of chaos, by accumulating and conforming, ordering and informing, on the other, it must subject itself to constant change, precisely so as to redefine our presence from what is other to it. No archive is ever completely stable, closed. Rather, archives, as we saw in chapter 1, are unstable, open to re-interpretation, re-ordering, re-enouncing.

To sum up, the archive is where our presence and identity are generated and transmitted. In this sense, the archive is about the production of our permanence, but to produce this permanence, the archive must remain in a state of unrest. This condition allows it to capture

and transmit the changes that occur around us. How quickly and through what methods societies feel they need to archive themselves, and hence capture the changes that occur around them, and what they do to generate archives that are capable of remaining in a state of unrest, that are capable of changing, is therefore not only a symptom of how societies wish to conceive of and transmit the memory of their "present" over time but also an indicator of how societies deal with their own histories and the possibility of change.

Foucault, Archeological Method, the *Punctum* and the Archive

The Enlightenment's fascination with the past that constituted one of the motors of the scriptural economy prompted the foundation of what is known as contemporary archeology, the discipline that, according to Foucault best "describes discourses as practices specified in the element of the archive" (2011, 148). For Foucault, archeology does not so much refer to a search for a beginning or a method for an excavation (p. 148), but rather "it designates the general theme of a description that questions the already-said at the level of its existence" (p. 148). Archaeology, for Foucault, has a regional field of analysis (p. 175), aiming to uncover "the play of analogies and differences *as they appear* at the level of rules of formation" (p. 178; added emphasis), revealing "relations between discoursive formations and non-discoursive domains" (p. 179). It is the latter relationship between the discoursive and the non-discoursive that is most interesting in the context of an analysis of the archive as an archeological site. We are, after all, here engaging with emergence, as archeology deals with articulation rather than hermeneutics (p. 180). For Foucault, "the phenomena of expression, reflexions, and symbolization are for it [archeology] merely the effects of an overall reading in search of formal analogies or translations of meaning" (p. 180). Archaeology, in this sense, constitutes itself as a relational practice, proposing relationships between history, discourse, historicity and "a whole set of various historicities" (p. 182).

Since Foucault wrote *The Archaeology of Knowledge* in 1969, the discipline of archeology underwent a series of substantial changes. From the 1970s, contemporary archeology started considering artifacts no longer as "temporal indices and cultural markers," but "as means to understand past society" (Shanks in Pearson and Shanks 2001, xv). Thus archeologist Michael Shanks points out that new archeological thinking started to draw attention to the fact that "an artifact—a work of art, for example—must be set in the context of the society that produced it, rather than allowed to simply stand on its own and speak for itself" (pp. xv–xvi). Moving away from positioning artifacts on a temporal continuum, outside of discourse, the discipline of archeology started to interpret objects in the context that generated them, understanding temporality not as separate from the past, but "as *actuality*, the return of the past in the present" (p. xvii; original emphasis). While Foucault's theorization is crucial to understanding how the archive operates in discourse, archeological method, as seen below, is fundamental to understand how the archive operates as a material object.