= Agrippa (A Book of the Dead) =

 Agrippa (A Book of the Dead) is a work of art created by science fiction novelist William Gibson , artist Dennis Ashbaugh and publisher Kevin Begos Jr. in 1992 . The work consists of a 300 @-@ line semi @-@ autobiographical electronic poem by Gibson , embedded in an artist 's book by Ashbaugh . Gibson 's text focused on the ethereal nature of memories (the title is taken from a photo album) . Its principal notoriety arose from the fact that the poem , stored on a 3 @.@ 5 " floppy disk , was programmed to encrypt itself after a single use ; similarly , the pages of the artist 's book were treated with photosensitive chemicals , effecting the gradual fading of the words and images from the book 's first exposure to light .

= = Origin and concept = =

 The impetus for the initiation of the project was Kevin Begos Jr . , a publisher of museum @-@ quality manuscripts motivated by disregard for the commercialism of the art world , who suggested to abstract painter Dennis Ashbaugh that they " put out an art book on computer that vanishes " . Ashbaugh ? who despite his " heavy art @-@ world resume " was bored with the abstract impressionist paintings he was doing ? took the suggestion seriously , and developed it further .
 A few years beforehand , Ashbaugh had written a fan letter to cyberpunk novelist William Gibson , whose oeuvre he had admired , and the pair had struck up a telephone friendship . Shortly after the project had germinated in the minds of Begos and Ashbaugh , they contacted and recruited Gibson . The project exemplified Gibson 's deep ambivalence towards technologically advanced futurity , and as The New York Times expressed it , was " designed to challenge conventional notions about books and art while extracting money from collectors of both " .
 Some people have said that they think this is a scam or pure hype ? [m] aybe fun , maybe interesting , but still a scam . But Gibson thinks of it as becoming a memory , which he believes is more real than anything you can actually see .
 The project manifested as a poem written by Gibson incorporated into an artist 's book created by Ashbaugh ; as such it was as much a work of collaborative conceptual art as poetry . Gibson stated that Ashbaugh 's design " eventually included a supposedly self @-@ devouring floppy @-@ disk intended to display the text only once , then eat itself . " Ashbaugh was gleeful at the dilemma this would pose to librarians : in order to register the copyright of the book , he had to send two copies to the United States Library of Congress , who , in order to classify it had to read it , and in the process , necessarily had to destroy it . The creators had initially intended to infect the disks with a computer virus , but declined to after considering the potential damage to the computer systems of innocents .

= = Release and replication = =

 OK , sit down and pay attention . We 're only going to say this once .
 The work was premiered on December 9 , 1992 , at The Kitchen , an art space in Greenwich Village , New York City . The performance ? known as " The Transmission " ? consisted of the public incomplete reading of the poem by illusionist Penn Jillette , recorded and simultaneously transmitted to several other cities . The poem was inscribed on a sculptural magnetic disk which had been vacuum @-@ sealed until the event 's commencement , and was programmed to erase itself upon exposure to air . Contrary to numerous colourful reports , neither this disk nor the diskettes embedded in the artist 's book were ever actually hacked in any strict sense .
 Academic researcher Matthew Kirschenbaum has reported that a pirated text of the poem was released the next day on MindVox , " an edgy New York City @-@ based electronic bulletin board " . Kirschenbaum considers Mindvox , an interface between the dark web and the global Internet , to have been " an ideal initial host " . The text spread rapidly from that point on , first on FTP servers and anonymous mailers and later via USENET and listserv email . Since Gibson did not use email at the time , fans sent copies of the pirated text to his fax machine .

The precise manner in which the text was obtained for MindVox is unclear , although the initial custodian of the text , known only as " Templar " attached to it an introductory note in which he claimed credit . Begos claimed that a troupe of New York University students representing themselves as documentarians attended The Transmission and made a videotape recording of the screen as it displayed the text as an accompaniment of Jillette 's reading . Kirschenbaum speculates that this group included the offline persona of Templar or one of his associates . According to this account , ostensibly endorsed by Templar in a post to Slashdot in February 2000 , the students then transcribed the poem from the tape and within hours had uploaded it to MindVox . However , according to a dissenting account by hacktivist and MindVox co @-@ founder Patrick K. Kroupa , subterfuge prior to The Transmission elicited a betrayal of trust which yielded the uploaders the text . Kirschenbaum declined to elaborate on the specifics of the Kroupa conjecture , which he declared himself " not at liberty to disclose " .

Agrippa owes its transmission and continuing availability to a complex network of individuals , communities , ideologies , markets , technologies , and motives . Only in the most heroic reading of the events ? is Agrippa saved for posterity solely by virtue of the knight Templar . ? Today , the 404 File Not Found messages that Web browsing readers of Agrippa inevitably encounter ? are more than just false leads ; they are latent affirmations of the work 's original act of erasure that allow the text to stage anew all of its essential points about artifacts , memory , and technology . " Because the struggle for the text is the text . "

On December 9 , 2008 (the sixteenth anniversary of the original Transmission) , " The Agrippa Files " , working with a scholarly team at the University of Maryland , released an emulated run of the entire poem (derived from an original diskette loaned by a collector) and an hour 's worth of " bootleg " footage shot covertly at the Americas Society (the source of the text that was posted on MindVox) .

= = = Cryptography = = =

Since its debut in 1992 , the mystery of Agrippa remained hidden for 20 years . Although many had tried to hack the code and decrypt the program , the uncompiled source code was lost long ago . Alan Liu and his team at " The Agrippa Files " created an extensive website with tools and resources to crack the Agrippa Code . They collaborated with Matthew Kirschenbaum at the Maryland Institute for Technology in the Humanities and the Digital Forensics Lab , and Quinn DuPont , a PhD student of cryptography from the University of Toronto , in calling for the aid of cryptographers to figure out how the program works by creating " Cracking the Agrippa Code : The Challenge " , which enlisted participants to solve the intentional scrambling of the poem in exchange for prizes . The code was successfully cracked by Robert Xiao in late July 2012 .

There is no encryption algorithm present in the Agrippa binary ; consequently , the visual encryption effect that displays when the poem has finished is a ruse . The visual effect is the result of running the decrypted ciphertext (in memory) through the re @-@ purposed bit @-@ scrambling decryption algorithm , and then abandoning the text in memory . Only the fake genetic code is written back to disk .

The encryption resembles the RSA algorithm . This algorithm encodes data in 3 @-@ byte blocks . First , the each byte is permuted through an 8 @-@ position permutation , then the bits are split into two 12 @-@ bit integers (by taking the low 4 bits of the second byte and the 8 bits of the first byte as the first 12 @-@ bit integer , and the 8 bits of the third byte and the 4 high bits of the second integer as the second 12 @-@ bit integer) . Each is individually encrypted by taking them to the 3491st power , mod 4097 ; the bits are then reassembled into 3 bytes . The encrypted text is then stored in a string variable as part of the program . To shroud the would be visible and noticeable text it is compressed with the simple Lzw before final storage . As the Macintosh Common Lisp compiler compresses the main program code into the executable , this was not that necessary .

In order to prevent a second running of the program it corrupts itself when run . The program simply overwrites itself with a 6000 byte long DNA @-@ like code at a certain position . Archival documents suggest that the original plan was to use a series of ASCII 1 's to corrupt the binary , but at some

point in development a change was made to use fake genetic code , in keeping with the visual motifs in the book . The genetic code has a codon entropy of 5 @.@ 97 bits / codon , much higher than any natural DNA sequence known . However , the ciphertext was not overwritten .

= = = = Weakness = = = =

 A memory dump of Mini vMac can be obtained with Linux ckpt or a similar tool after the Agrippa program has been loaded . The executable code could be reverse engineered .
 The encryption itself due to the block cipher exhibited a regular pattern due to repeated text in the original plaintext .
 The LZW compression itself does not hide the letter frequencies .
 The scramble display has exactly the same letter frequencies as the underlying plaintext .

= = Content and editions = =

 The book was published in 1992 in two limited editions ? Deluxe and Small ? by Kevin Begos Jr . Publishing , New York City . The deluxe edition came in a 16 by 21 ½ -inch (41 cm × 55 cm) metal mesh case sheathed in Kevlar (a polymer used to make bulletproof vests) and designed to look like a buried relic . Inside is a book of 93 ragged and charred pages sewn by hand and bound in stained and singed linen by Karl Foulkes ; the book gives the impression of having survived a fire ; it was described by Peter Schwenger as " a black box recovered from some unspecified disaster . " The edition includes pages of DNA sequences set in double columns of 42 lines each like the Gutenberg Bible , and copperplate aquatint etchings by Ashbaugh editioned by Peter Pettingill on Fabriano Tiepolo paper . The monochromatic etchings depict stylised chromosomes , a hallmark of Ashbaugh 's work , accompanied by imagery of a pistol , camera or in some instances simple line drawings ? all allusions to Gibson 's contribution .
 The deluxe edition was set in Monotype Gill Sans at Golgonooza Letter Foundry , and printed on Rives heavyweight text by Begos and the Sun Hill Press . The final 60 pages of the book were then fused together , with a hollowed @-@ out section cut into the centre , containing the self @-@ erasing diskette on which the text of Gibson 's poem was encrypted . The encryption was the work of a pseudonymous computer programmer , " BRASH " , assisted by Electronic Frontier Foundation founders John Perry Barlow and John Gilmore . The deluxe edition was originally priced at US $ 1500 (later $ 2000) , and each copy is unique to some degree because of handmade or hand @-@ finished elements .
 The small edition was sold for $ 450 ; like the deluxe edition , it was set in Monotype Gill Sans , but in single columns . It was printed on Mohawk Superfine text by the Sun Hill Press , with the reproduction of the etchings printed on a Canon laser printer . The edition was then Smythe sewn at Spectrum Bindery and enclosed in a solander box . A bronze @-@ boxed collectors ' copy was also released , and retailed at $ 7 @,@ 500 .
 Fewer than 95 deluxe editions of Agrippa are extant , although the exact number is unknown and is the source of considerable mystery . The Victoria and Albert Museum possesses a deluxe edition , numbered 4 of 10 . A publicly accessible copy of the deluxe edition is available at the Rare Books Division of the New York Public Library and a small copy resides at Western Michigan University in Kalamazoo , Michigan , while the Frances Mulhall Achilles Library at the Whitney Museum of American Art in New York City hosts a promotional prospectus . The Victoria and Albert Museum 's copy was first exhibited in a display entitled The Book and Beyond , held in the Museum 's 20th Century Gallery from April to October 1995 . The same copy was subsequently also included in a V & A display entitled Digital Pioneers , from 2009 ? 2010 . Another copy of the book was exhibited in the 2003 ? 2004 exhibition Ninety from the Nineties at the New York Public Library . Gibson at one point claimed never to have seen a copy of the printed book , spurring speculation that no copies had actually been made . Many copies have since been documented , and Gibson 's signature was noted on the copy held by the New York Public Library . In 2011 , the Bodleian Library 's Special Collections Department at the University of Oxford acquired Kevin Begos ' copy of Agrippa , as well

as the archive of Begos ' papers related to the work .

== Poem ==

The construction of the book and the subject matter of the poem within it share a metaphorical connection in the decay of memory . In this light , critic Peter Schwenger asserts that Agrippa can be understood as organized by two ideas : the death of Gibson 's father , and the disappearance or absence of the book itself . In this sense , it instantiates the ephemeral nature of all text .

=== Theme and form ===

The poem is a detailed description of several objects , including a photo album and the camera that took the pictures in it , and is essentially about the nostalgia that the speaker , presumably Gibson himself , feels towards the details of his family 's history : the painstaking descriptions of the houses they lived in , the cars they drove , and even their pets .
It starts around 1919 and moves up to today , or possibly beyond . If it works , it makes the reader uncomfortably aware of how much we tend to accept the contemporary media version of the past . You can see it in Westerns , the way the ' mise @-@ en @-@ scene ' and the collars on cowboys change through time . It 's never really the past ; it 's always a version of your own time .
In its original form , the text of the poem was supposed to fade from the page and , in Gibson 's own words , " eat itself " off of the diskette enclosed with the book . The reader would , then , be left with only the memory of the text , much like the speaker is left with only the memory of his home town and his family after moving to Canada from South Carolina , in the course of the poem (as Gibson himself did during the Vietnam War) .

=== " The mechanism " ===

The poem contains a motif of " the mechanism " , described as " Forever / Dividing that from this " , and which can take the form of the camera or of the ancient gun that misfires in the speaker 's hands . Technology , " the mechanism " , is the agent of memory , which transforms subjective experience into allegedly objective records (photography) . It is also the agent of life and death , one moment dispensing lethal bullets , but also likened to the life @-@ giving qualities of sex . Shooting the gun is " [l] ike the first time you put your mouth / on a woman " .
The poem is , then , not merely about memory , but how memories are formed from subjective experience , and how those memories compare to mechanically @-@ reproduced recordings . In the poem , " the mechanism " is strongly associated with recording , which can replace subjective experience . Insomuch as memories constitute our identities , " the mechanism " thus represents the destruction of the self via recordings . Hence both cameras , as devices of recording , and guns , as instruments of destruction , are part of the same mechanism ? dividing that (memory , identity , life) from this (recordings , anonymity , death) .

== Critical reception and influence ==

Agrippa was extremely influential ? as a sigil for the artistic community to appreciate the potential of electronic media ? for the extent to which it entered public consciousness . It caused a fierce controversy in the art world , among museums and among libraries . It challenged established notions of permanence of art and literature , and , as Ashbaugh intended , raised significant problems for archivists seeking to preserve it for the benefit of future generations . Agrippa was also used as the key of a book cipher in the Cicada 3301 mystery .
Agrippa was particularly well received by critics , with digital media theorist Peter Lunenfeld describing it in 2001 as " one of the most evocative hypertexts published in the 1990s " . Professor of English literature John Johnson has claimed that the importance of Agrippa stems not only from its " foregrounding of mediality in an assemblage of texts " , but also from the fact that " media in this

work are explicitly as passageways to the realm of the dead " . English Professor Raymond Malewitz argues that " the poem 's stanzas form a metaphorical DNA fingerprint that reveals Gibson 's life to be , paradoxically , a novel repetition of his father 's and grandfather 's lives . " The Cambridge History of Twentieth @-@ Century English Literature , which described the poem as " a mournful text " , praised Agrippa 's inventive use of digital format . However , academic Joseph Tabbi remarked in a 2008 paper that Agrippa was among those works that are " canonized before they have been read , resisted , and reconsidered among fellow authors within an institutional environment that persists in time and finds outlets in many media " .

In a lecture at the exhibition of Agrippa at the Center for Book Arts in New York City , semiotician Marshall Blonsky of New York University drew an allusion between the project and the work of two French literary figures ? philosopher Maurice Blanchot (author of " The Absence of the Book ") , and poet Stéphane Mallarmé , a 19th @-@ century forerunner of semiotics and deconstruction . In response to Blonsky 's analysis that " [t] he collaborators in Agrippa are responding to a historical condition of language , a modern skepticism about it " , Gibson disparagingly commented " Honest to God , these academics who think it 's all some sort of big @-@ time French philosophy ? that 's a scam . Those guys worship Jerry Lewis , they get our pop culture all wrong . "