My purpose in speaking to you today is to share some reflections on what becomes of our past -- or our pasts -- when the conditions of knowing are changed in dramatic and exciting ways. Networked information technology makes it possible to know our present and our pasts in unprecedented ways. But change in the modes of knowing is never simple: changing the way we know things changes what it is we know.

Television, for example, has long since changed the way we know the present. We know the news of our world far more rapidly than we knew it before, and we have "seen" the news with our own eyes -- at least on a TV screen -- where once we depended on the written word alone, or later the written word supplemented by a few still photographs. We know our politicians' faces and voices and gestures better than we know their principles and their policies: and sometimes our judgment of their faces is more important in elections than our judgment of their policies.

My own concern with the future of the past has to do with many pasts, and some of them quite remote. My scholarly work has always focused on the transformation of Mediterranean society in the late antique world, as traditional Roman political, cultural, and linguistic hegemony gave way to a more diverse group of societies that gave birth in turn to modern Europe. We inherit a traditional view of "western civilization". From Greece to Rome to the Middle Ages to the Renaissance to the Enlightenment to Modernity to Post-Modernity runs a linear narrative whose center of gravity gradually shifts further and further west, as now the "west" reaches most of the way around the world. Such a view is always questionable, of course: what part does that "western" past need to play in the life of non-Europeans? And how determinative should the events of two hundred or two thousand years ago be in the lives of contemporaries who happen to tread the same ground? Is now the moment of overthrow of all these old stories? Or will those stories be more convincingly planted in our consciousness than ever? I do not mean to prophesy, but to suggest a few considerations.

Let me start with language, for language is crucial to identity and to social role. The language of Portugal is an offshoot of the Latin spoken here two thousand years ago, differentiated now even from Spanish and certainly from all the other "Romance" descendants of Latin. Though the historically-minded may recall that Latin came to this part of this peninsula as the language of a brutal conqueror, I suspect that few Portuguese today think of their own language as tainted by that origin. Rather, what is remarkable about Latin in all its history (both as Latin itself and as the forebear of the Romance languages) is that it was precisely its imperial success that eventually detached it from the empire that gave it birth. Latin ceased to belong to the Romans a long time ago.

English is the preeminent imperial language of the modern world, and the Internet sometimes seems the latest tool of that empire. But by some reckonings, we already live in a time when a majority of the speakers of English in the world are not "native speakers" -- when the language no longer belongs to Britain and America, but is being torn loose and taken over. Certainly the success of post-colonial writers from around the world writing in English, paralleled by the flourishing of Spanish and Portuguese language writers from the new world, is a sign that old control can slip away.

I start with language because the shaping fact of human community is the ability to communicate. Conquerors have always known their own history and made political capital of it, but neglected the history of those they conquer, not least because the victim's language is often a barrier to his stories. Will the emergence of new lingus francas -- not just English, but over the next decades I suspect as well some variety of Chinese -- extend domination or increase communication -- or both? The question is fundamental.
Once we know how we will speak, you see, we can know the sorts of things we can say and the sorts of things we can talk about. It will be a long time before the perspective of English on other cultures will lose its Anglo-centric nature, but cultures that open themselves to exploit the possibilities of the lingua franca are cultures that will paradoxically make themselves better known and more vividly present to the world than ones that close themselves in around linguistic and cultural isolation.

But whatever we know, we will soon know too much of it -- if we don't already. Through the long history of the written word, it has been our custom to value the written word so highly because it was relatively scarce. Even when mass market printing and publishing became possible, it could seem that the number of copies of any given book was finite and limited. Until just the last generation, nothing was more familiar than the difficulty of finding most of the published literature on any subject. Only great research libraries held collections large enough to offer confidence that one could find what was old, what was unusual, what was not part of the contemporary mainstream. We lived in a world where information was the object of a kind of hunter-gatherer economy, and certainly we taught our students that success beckoned the young Ph.D. who could hunt out and gather up every fragment of information that bore on his topic. Many is the doctoral candidate driven nearly mad, prowling the stacks of libraries to find one more article on his chosen subject.

But already in the last hundred years, we have begun to suspect that we finally had almost enough information in print form to drown all of us. If tens of thousands of new books are published each year, and if millions of books pile up in our libraries, then it is certain that none of us can master more than a fragment of the whole, a tiny fragment at that. That we do achieve as much mastery as we do and do send out the tentacles of learning through such diverse branches of knowledge are miracles for which we must be grateful: but we must understand that they are miracles.

Networked electronic information now threatens to change both reality and our consciousness of reality.

It will change reality first by increasing dramatically the quantity and quality of information that is at the fingertips of the individual. It is not only the few, the metropolitan, the wealthy about whom we will know: the Internet today is already a gold mine of information (some of it formerly quite private!) about millions of individuals around the world, their lives, and their thoughts. And the better known individual is now known so well as to make it impossible to grasp the totality.

In the United States, the late Professor Arthur Link of Princeton University spent a career collecting the letters and papers of President Woodrow Wilson and bringing them to publication. It was a heroic effort and has been all but completed now in 68 volumes published since 1966. That is probably the last significant historical figure for whose works a single historian can achieve that kind of mastery. Think of the poor historian whose task it will be to chronicle the history of the presidency of Bill Clinton. If only a tiny fraction of the electronic information generated by and about this president survives, it will still be orders of magnitude greater in quantity than what survives about Wilson.

Two consequences are to be drawn from this fact.

First, the age of the hunter-gatherer is over, to be transformed into the age of the surfer and the sampler. Faced with too much information, the researcher will need to create and deploy tools that let him comprehend the information without reading or knowing it. Sampling tools, artificial-intelligence tools, search engines far more powerful than what we have now -- all will need to be brought to bear in order for the student of our recent past to know what there is to know.

Second, this superabundance of information will inevitably make the politicians, the public figures, and even the private figures of our time known and knowable in different ways than has ever been possible before. There is an interesting literature on the emergence of the distinction between "history" and "prehistory" in modern usage. "Pre-history" proves, on examination, to be the time from which no written record survives, and that is an important fact: but it has been shown that once that line between "prehistory" and "history" is drawn, many additional prejudices are given strength.
"Pre-historic man" is thought to be less intelligent, less civil, less resourceful than "historic man" even when the available evidence suggests that one "pre-historic" culture may be very similar in technology, economy, and social order to one about which we happen to have "historic" information.

Now think forward two hundred years from today. Just as a sharp, bright line separates "pre-history" and "history", I suggest that another line will be drawn in the twentieth century. Hitler and Roosevelt in one way, but John Kennedy and Nikita Khrushchev in another, and Ronald Reagan and Mikhail Gorbachev in another, will emerge as the first modern politicians. And this will happen for no better reason than that our descendants in that future age will be able to see and hear these figures, to know them in some way as people, while Napoleon and Wellington will have faded into quiet stillness in the texts and paintings that memorialize them. Let that future history roll further and further forward and the age of the over-knowable will differentiate itself more and more sharply from the ages that went before.

What becomes of the ancient past in such a world? What becomes of a world that can only be known accurately if you have a fluent command of extraordinarily difficult languages (Greek and Latin)? What becomes of a world known only in fragments, whose heroes will grow paler and thinner as successive generations of humankind are known in rich and vivid detail? I suggest that a considered perspective of this kind suggests that we live in a vitally important age for the preservation of the past. I do not mean the preservation in material terms, but preserving the remains we have is obviously a necessary condition of knowledge. I mean rather preservation of the social forms of knowing.

How to do that? Resourcefulness is all. Let me cast your minds back to an earlier time of transition in antiquity, when the traditional papyrus roll was giving way to the codex book -- the bound collection of pages with which we are all so familiar today. If you were a book in those days and you wanted people to read you 2000 years later (wanted us to read you), the best thing you could do was make sure that someone copied your text over from the roll format to the codex format. If you did not succeed in doing that, your chances of being read today grew considerably worse -- in fact your best second chance was to move to Egypt, bury yourself in the sand, and hope that an archaeologist would make a lucky discovery. It is clear what the preferred method of self-preservation had to be.

But the ancient model was relatively simple. Physical transfer to a new medium and reasonable hope of preservation of that medium was sufficient. There are abundant cases in the history of the recovery of antiquity where books that had gone physically neglected and unnoticed for centuries could be rediscovered and put to use immediately. In one case, in Verona in 1712, the scholar Scipio Maffei found a collection of manuscripts, some as old as 1200 years, on top of a cabinet in a monastery library. No one knew how long they had been neglected, but it had been at least several centuries. But the moment he found them, he could read them.

What can we learn from this history for our present moment? First, that moving information from old formats to new is of great importance. As the old formats lose their automatic prestige and significance, they will be less and less commonly read and thus less commonly preserved. No one can predict what physical disasters will befall our present libraries, but over centuries of future time, some disasters surely will.

But even the material preservation of books is a social act. It did have to be a monastery library in which Maffei found his old books, and this was in an age when monasteries still had high prestige and substantial economic and social resources behind them. This will be all the more true of electronic materials.

For if you leave electronic information neglected -- lying, say, on top of a cabinet in your office -- not for two centuries but for two decades, it will be very nearly utterly unreadable. If I went back two decades today, I would find large reels of tape meant for use on the tape drives of a "minicomputer" of the late 1970s. I could not tell you where to find a machine that could read those tapes.

But on the laptop on which I write this talk, on the other hand, information from 1983 lives side by side with information from 2001. It lives there because my living intelligence has at every stage cared for the information and made sure that it migrated forward from one generation to another.
And even there, there are problems. I used to use "WordPerfect" for my word processing. When I first began to use "Microsoft Word" in 1997, the program I had could read all my 10 year old "WordPerfect" files easily. But then I got this laptop and a newer, better version of "Microsoft Word". And suddenly I found that the new program could not read the oldest of my "WordPerfect" files, and in the five years or so of transition, I had never taken the time to select each and every one of my old files, open it in Word, save it in a new format, and secure its continuation. So I have had to buy a new copy of "WordPerfect" only to read my old files -- and I am soberly aware that this is only a stopgap.

That plight of the individual scholar is a warning for all of us. Digital information ages and is dependent on a thousand features of hardware and software for its intelligibility. Only the information we cherish and manage consciously will survive the ruthlessness of time now.

My prescription then is simple: the future of the past will depend not on the technologies of the future, but on the social organization and management of the past. The study and teaching of the past must be made the object of the most sophisticated and imaginative attention, to assure that we think wisely and deeply about what we wish to preserve and what steps we may actively take to ensure its preservation.

For here is the final paradox of the abundance of information in our new age. We now have, and will continue to have, more information than we have ever had before. But in that abundance, we will also lose more information than we have ever lost before. In a paradoxical way, "knowing" will be less important than ever: but "knowing about knowing" will be more important than ever.

One final reflection: I have spoken throughout as though it were obvious that we are moving into a world of transparent and ubiquitous and abundantly available information for all. If you look around us now, you can see that future happening -- and not happening. On the one hand, miracles of comprehension and accessibility surround us on all sides; and on the other, it is clear that the so-called "digital divide" continues to separate nations and peoples along discouragingly familiar lines of wealth and privilege. Does the new age bring relief, or reinforcement of bad old habits?

Here again I think it helps to make some historical comparisons. Other powerful new technologies in the last century have brought great possibilities into the world, but at great cost. I do not speak just of the cost of the technologies themselves, but of the social costs of their use. The internal combustion engine is a miracle, in some ways more a miracle when it powers a motor boat on a river in Thailand than when it powers a Rolls Royce in the West End of London. For all that vehicles and engines and fuel have all brought huge costs with them, it is remarkable how widely in the world those costs have been borne, even in places that one would scarcely have expected them. Time after time new technologies have found ways to get paid for in places that might least have welcomed substantial new costs.

And at the same time there have been indirect costs. No one could put a dollar figure on the cost of the internal combustion engine if you include the costs of highways, of depletion of resources, of pollution of the environment and of measures to prevent or remedy that pollution, or finally the costs of human life itself -- the millions of people killed in traffic accidents since the automobile was invented.

My lesson from this is that powerful technologies will have their way. We will learn to pay for them and they will be more abundantly available than we could ever have dreamed, and they will impose costs that we do not now suspect. For human beings act in accord with their own self-interests at least as often as they act unselfishly, and they act for short-term benefit more often than for the remote future. The function of the individual intellectual and the cultural institution is to challenge us all to take a longer, larger, and wider view.