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Cultural Accumulation and Modern Reading

Ismail Serageldin

Director of the Bibliotheca Alexandrina



We live in the age of the internet. The digital age, where the traditional boundaries between voice, text, image and data have blurred and are on the verge of disappearing. The traditional view of writing as the supreme means of communication has already for a century been gradually displaced by the role of the image in transferring knowledge and interconnecting generations... But that does not mean that the word will be abolished or that the book will disappear. Rather, our children will have many more options to choose from and an infinitely richer cultural environment to live in.

Indeed we can see this today: Television is very pervasive, mobile telephony is ubiquitous and never have more people been connected to the new media. The internet is everywhere, and youth seem particularly adept at navigating the new fads and fashions, even creating entire new worlds of virtual reality in the realm of cyberspace. But never before in the history of humanity have we had as many print newspapers, magazines and books as we have today. This is true in terms of titles or of individual copies; hence, the two trends – electronic, wireless digital data and old-fashioned print media – can grow hand in hand as it were.

But the explosion of technology that we have witnessed in the last century is nothing compared to the explosion that is about to come in this new century. This is truly the third global revolution that we are living through. I believe that the new information age is transformative on the scale of the two global revolutions of humanity: the agricultural revolution that allowed the emergence of civilizations and the industrial revolution that changed the relationship of worker to product and brought about a major explosion of goods and services. The new information and communication revolution will also bring about real qualitative changes.

In addition, ICT technology is now moving from computer-centric to communication-centric platforms (mobile phones and PDAs) which are much more user friendly. With substantial expansion of broadband wireless, the poor can move to communication-centric platforms immediately. This is significant because massive connectivity

is here: There are billions of mobile phones in the world, with over 400 million in China alone. They can access the Internet, with its enormous positive impacts, despite the variable quality of the information it provides; storage also is becoming easier and cheaper. Technology makes information more portable, more searchable and more accessible. Imagine, one Ipod can store millions of scientific articles. All in all, the density and accessibility of information is increasing dramatically.

Scenarios for the Future

How will we interact with all this material? Will we be living in a fast-paced world of disposable cultural artifacts, jumping from one fashion to the next, dropping hula hoops and pet rocks for Rubik's cubes and video games? Or will we still be able to relate to the more profound aspects of our cultural heritage and build on the cultural accumulations that created this legacy?

I see before us two scenarios:

In one instance, we could become nations of dilettantes, with short attention spans and superficial acquaintance with a number of things; consumers of technology as well as of goods and services, people who, thanks to the internet, know the price of everything, but the value of nothing. Education will have been confused with entertainment in the ever-intensifying search for means to capture the fickle attention span of youngsters.



In that scenario, the libraries and museums of the world are abandoned “antiques” of a bygone era, as people would rather sit in their homes and see the cyber-image (in virtual reality) of an object or artifact, rather than see the real thing in a museum or even in its country of origin, and books are there for those who wish to actually plow through all the words rather than just “see the film version” or enjoy an abstract online. But I do not believe in such a scenario. I believe in another one:

The enormous resources of the revolution in Information and Communication Technologies (ICT) will be mobilized to make available to future generations the most easily accessible and broadest coverage of the accumulated wisdom of all ages. It will be a select part of the vast array of information available to all. The new resources will be mediated by the libraries and museums and other institutions of cultural conservation and expression.

Contrary to the general view that the internet-based future of ICT-driven wonders will see the end of the book as we know it, and that there will be no libraries in the future, I believe that libraries and museums in the future will remain as essential mediators of the accumulated cultural heritage of humanity. They will enable new generations to “read” it, although the act of reading will be somewhat different than it is today. There will be new ways of presenting material, new ways of reading:

This enormous richness of material will require different ways of organization and presentation and will match new ways of reading that will have developed in the population. We already see some early examples of such transformations.

For example, we increasingly present information differently. We do not write long treatises. We write a home page and hyperlink words that each lead to other pages and other materials.

Publishing materials increasingly combines picture, sound and movement in addition to text and data.

Also, the way we prepare material has changed. Wikipedia showed how thousands of people from all over the world could collaborate to produce an enormous collective work that would have been impossible without the new ICT technology. Likewise, a lot of individuals can now publish directly on the Internet without the mediation of traditional publishers or producers by posting directly to the web. The success of such sites as Youtube and Facebook are early precursors of an important trend.

Finally, the new search engines from Alta-Vista to Google have shown how vast amounts of information on the net could be indexed and retrieved in ways that can be incredibly efficient.

However, the Internet is very much like the street; anyone can literally post anything to the web. Only an expert can tell the difference between good-quality information and bad. With the enormous increase in information that is being added every day, the need for means to mediate the organization of this vast information into a usable structure becomes acute. It is here that the libraries of the future come in.

Already, a century ago one poet remarked:

Upon this gifted age, in its dark hour,
Falls from the sky a meteoric shower
Of facts...they lie unquestioned, uncombined.
Wisdom enough to leech us of our ill
Is daily spun; but there exists no loom
To weave it into fabric...

Edna St. Vincent Millay, Huntsman, What Quarry?

We devoted ourselves to building that loom. Libraries will continue to build that loom in the new century using the new technologies just

as fast as the new technologies are becoming available. In the end, it is our vocation to sift and organize data so that it becomes information, to link and interpret it so that we gain knowledge, which hopefully, when refined in the crucible of experience, with insight and reflection, may lead us to wisdom. This is the wisdom to create that better world to which we are all committed.

Future Libraries and the Management of our Heritage

The digital libraries of tomorrow have the potential of archiving an enormous amount of data. Not only will books be available in digital formats, but films, images, video, music and much more. We have a dual responsibility to record and protect our heritage, including folklore, traditional customs and oral traditions, and also to make it available to all.

This will not be the work of one institution. Collaboration and exchange is essential, but will it be on open source formats? How will we deal with technical and physical obsolescence of the material and the formats? Will we keep rerecording this enormous material every few years?

Information and ideas are central for the development of humanity, but there are



A 16th Century Map of the World. From the collection of the World Digital Library. <http://www.wdl.org>

intermediaries between authors and readers: Libraries have a central role to play. Large digital collections of texts, images, voice, music and video recordings open amazing possibilities. There are also hypertext links, even fluid hyperwords, object repositories, and new search engines and gateways that add coherence and credibility. We can find origins, or do associative semantic searching, all unthinkable in the non-digital world.

Specialized collections can add enormous impact. The Brazil-Chile-Argentina initiative of digitizing their journals made available specialized literature on health and agriculture.

In short, the library of the future will not just digitize old books and articles. It will give birth to the new, so much of which resides in the links found in old knowledge. It will give a home to materials that are born digital! The library of the future will truly be the place to find the lasting and the lost.

It will keep pace with the public. The form of consultation and reading will be different, but the book will remain as well as the new electronic media. Some things will be consulted in one way, others in other ways. Skeptics who believe in the imminent demise of the book should be reminded as to how ICT was to produce the paperless office. Today we use more paper with more technology than ever before.

Finally: A Call for New Thinking

More useable real-time data than ever before is now available to the average person, and this is going to increase in both quantity and quality. For example; Google Earth is soon going to come to 30 cm resolution. Can we bring into the public domain information and data that can be used for public purpose, but with respect to the privacy of



Internet Archive – Bibliotheca Alexandrina.

individuals? Can we help establish baselines for understanding our enormously complex societies?

To tackle these questions, we will need new ways of thinking, trans-disciplinary research, and a great deal of imagination. Thinking of the multiplicative effect of the new technologies and how they make an impact on the environment, and how the very nature of human interaction in our societies will change remains a daunting and very exciting challenge.

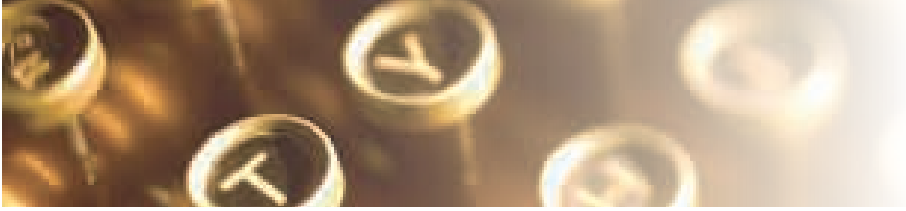
New ways of thinking will help us ensure that the emerging world of the knowledge-based society and the technology-driven economy, will open avenues for talented people everywhere to harness the new knowledge to improve their well-being in a sustainable fashion.

We need a world where the values of science are celebrated: free inquiry, free speech and a healthy skepticism, all coupled with a sense of wonder, a respect for truth and an ability to reason.

We need a world where fairness and cooperation are promoted, innovators are rewarded and society benefits from their innovations as it celebrates diversity and pluralism.

A world where access to knowledge is a fundamental right and the sharing of knowledge is a fundamental duty.

It can be done, it must be done, and it will be done.



The BA Science Supercourse

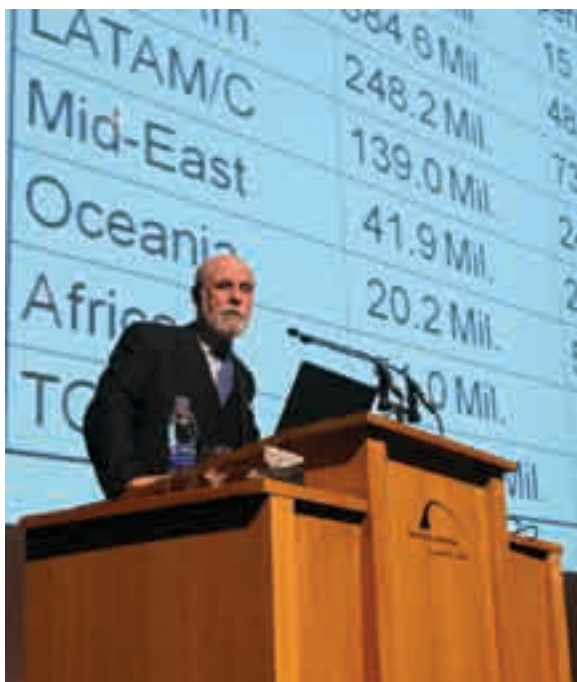
An International Portal for Science Education

Sarah Elhaddad

“One must spend time in gathering knowledge to give it out richly.”

Edward C. Steadman

Over the past decade, the principle of a supercourse has been developed based on the notion of collecting information and providing easy global access to it. The first supercourse of Global Health was established under the leadership of founder Ronald LaPorte and Faina Linkov at the University of Pittsburgh, comprising 3611 lectures, 64,000 users, and an estimated 1 million students in 172 countries.



Professor Vint Cerf

The BA Science Supercourse

The Bibliotheca Alexandrina launched the “Science Supercourse” project in cooperation with the World Health Organization Collaborating Center at Pittsburgh University, USA, out of the vital need to establish communities of practice through gathering and spreading rich contents for the science education process, and with an objective of building a free, sustainable library of lectures in the form of online PowerPoint presentations.

Targeting a collection of one million presentations in three years, the supercourse covers main fields including: public health, agriculture, engineering and environment. The lectures are considered the most updated on the web and are provided by experienced faculty members including twenty Noble Prize winners, the US Surgeon General, and more than 113 academics.

The BA Science Supercourse General committee of Experts includes Dr. Ismail Serageldin, Director of the Library of Alexandria, and Professor Ronald LaPorte, Director of Telecommunications and Disease Monitoring at the WHO Collaborating Centre and Professor of Epidemiology at the University of Pittsburgh, and Professor Gilbert Omen, Professor of Internal Medicine, Human Genetics and Public Health at the University of Michigan, and Professor Vinton Cerf, one of the fathers of the Internet and Vice President and Chief Internet Evangelist of Google.

The Initiative

Speaking of the project, Dr. Ismail Serageldin emphasized the urgent need for scientific education to grow in developing countries. The supercourse, said Serageldin, will allow teachers to stay in touch, in an easy and accessible fashion with the latest in science.



Dr. Ismail Serageldin

The supercourse doesn't target education in developing countries only, but it is considered beneficial for developed countries as well. Professor Ronald LaPorte explained: "The primary reason that science education is poor in developing countries is not because the educators are poor teachers, it's because they don't have good scientific content to teach. The method being produced by the supercourse will help educators in every country to have the best possible materials to use for teaching."



Professor Ronald LaPorte

Professor Gilbert Omen also stressed on the tremendous need for the kind of high-class teaching content that the science supercourse provides to the world. "We have this concept, besides the internet resource, of building communities of practice, so faculties, colleges, universities, students and researchers will have a great deal of benefit by sharing information, keeping up to date and having good graphical and content materials," said Omen.



Professor Gilbert Omen

Out of his belief that economies revolve around information and knowledge, Professor Vinton Cerf said that the only way to contribute to the economy is to have knowledge to make products or services that are of value and interest not only in the domestic economy but also on a global scale, a goal that can only be achieved by an educated population.

"The BA science supercourse highlights the importance of science in our society. There's no question that out of scientific research comes very important technological results, which have a huge impact on the economy, health, environment, and everything we do. The supercourse is intended to spread knowledge in the online electronic media, and to take the best of what we know of science and

technology and make it easily accessible to those who teach and to those who learn.” Affirmed Cerf.

The BA and future of science

Having decided to build a Supercourse, Professor Ronald LaPorte was convinced that the BA is the only place where the supercourse should be inaugurated. “This is the center of knowledge and wisdom for the world, I love the mission of the library and I want to make anything to help the BA continue to succeed.” Said LaPorte.

Omen also considered that there is no better place to have the heart of the operation than at the Bibliotheca Alexandrina. “I think the Library is wonderful, it has a stunning legacy and a spectacular leader. Also, it is like a compass or beacon to the whole world that builds ties and collaboration, increasing quality of capability and interest between the North and the South.”

“I consider the architecture of the BA magnificent, as well as the variety of programs and projects and initiatives from science to arts, historical documents and fully digitalized resources. It’s really one of a kind, and a very special treasure for the world.” Added Omen.

Professor Vinton Cerf also considered holding the science supercourse project in the Library of

Alexandria iconic and wonderful. “This is the modern 21st century incarnation of the library which has a long and distinguished history of accumulating knowledge and making it available to people.” Said Cerf.

He added “I’m an excited proponent of not only the BA but of its current leader Dr. Ismail Serageldin, who’s possibly the most accomplished polymath that I’ve ever met. His interest and enthusiasm for almost everything is amazing, and he’s the perfect incarnation of why we should have the Library of Alexandria, and also why to have the information technologies of the world have to be concentrated here; it’s a perfect place for that to happen.”

Professor Vinton Cerf expressed his admiration for the BA’s Arabic optical character recognition capability that is considered the best in the world, and which he believes to be very important for retrospective capturing of Arabic content.

“In a sense, the Library is establishing a kind of light for the rest of the world like Pharos Lighthouse used to, this is our center of knowledge again. It’s personally rewarding to physically be in a place that has such a distinguished long-term history. But it’s also exciting to know that there’s interest here in contributing so widely to the rest of the world’s knowledge.” Declared Cerf.



Ismail Serageldin and Vint Cerf during the launch of the Supercourse

Functioning in 7 Languages

WDL: an Open Channel of Cultural and Intellectual Understanding

The United Nations Educational, Scientific and Cultural Organization (UNESCO) and 32 partner institutions, including Bibliotheca Alexandrina (BA) launched in April, 2009, the World Digital Library (WDL); a web site that features unique cultural materials from libraries and archives all over the world. The launching took place at the UNESCO Headquarters at an event co-hosted by UNESCO Director-General Koïchiro Matsuura and U.S. Librarian of Congress James H. Billington.



Ismail Serageldin participating in the launch of the WDL

The site www.wdl.org which was developed by a team at the U.S. Library of Congress with technical assistance from the BA, includes manuscripts, maps, rare books, films, sound recordings, prints and photographs. It provides unrestricted, and free-of-charge public access to this material.

Billington first proposed the creation of a World Digital Library (WDL) to UNESCO in 2005, remarking that such a project could “have the salutary effect of bringing people together by celebrating the depth and uniqueness of different cultures in a single global undertaking.” Matsuura welcomed the proposal as a “great initiative that will help bridge the knowledge divide, promote mutual understanding and foster cultural and linguistic diversity.”

In 2007, the Library of the Congress asked for BA’s technical assistance, and an agreement was signed between both parties outlining their collaboration to develop this huge project. Accordingly, they worked together on the design and implementation of the database, search engine and interface for the project. In addition, Bibliotheca Alexandrina contributed its particular expertise in the search and display of Arabic texts.

Moreover, it enriched the content of the WDL with a digitized copy of the valuable, *Description de l’Egypte*, a work of scientific observation carried out by French scholars during Napoleon’s military foray into Egypt in 1798. The whole 20 volumes of text and plates were digitized in 2007 at the BA premises.

“There are other online libraries but this is the first time anything quite so international has been attempted. It is the first digital world library of its kind,” said Dr. Ismail Serageldin, Director of the BA.



Description de l'Égypte

“UNESCO welcomes the creation of the World Digital Library which reflects the values and priorities of our Organization,” Matsuura declared. “WDL offers an invaluable platform for the free flow of information, for international solidarity, for the celebration of cultural diversity and for the building of inclusive knowledge societies. With projects like the Digital Library, the cultural and societal potential of digital technologies come into their own,” he added.

The WDL functions in seven languages – Arabic, Chinese, English, French, Portuguese, Russian, and Spanish – and includes content in more than forty languages. Browse and search features facilitate cross-cultural and cross-temporal exploration on the site. Descriptions of each item as well as videos featuring selected items with expert curators speaking about them, provide context for users and are intended to spark curiosity and encourage both students and the general public to learn more about the cultural heritage of all countries.

“We are honored to be working with so many great libraries in this venture,” said Billington, “and (are) thankful for the strong support that UNESCO has given this project. What we launched today is a first step. We look forward to seeing this project realize its ambition to bring people together, deepen our understanding of each other, and help electronically oriented young people enjoy what is best in traditional culture, using the new media.

Partners of this tremendous venture have all confirmed the important role that the World Digital Library plays in acknowledging other cultures and nations and in bringing together different countries and peoples in mutual understanding and enrichment. They believe that the creation of the WDL has emphasized the spirit of equality and open understanding between nations.

Institutions contributing to the WDL include national libraries and cultural and educational institutions in Brazil, Egypt, China, France, Iraq, Israel, Japan, Mali, Mexico, Morocco, the Netherlands, Qatar, the Russian Federation, Saudi Arabia, Serbia, Slovakia, South Africa, Sweden, Uganda, the United Kingdom, and the United States.

The World Digital Library showcases cultural treasures from all over the world that include; Arabic scientific manuscripts from the Egyptian National Library and Archives; early photographs of Latin America from the National Library of Brazil; the *Hyakumanto darani*, a publication from the year 764 from the National Diet Library of Japan; the famous 13th century “Devil’s Bible” from the National Library of Sweden; and works of Arabic, Persian, and Turkish calligraphy from the collections of the U.S. Library of Congress. This project is considered an open channel of cultural and intellectual understanding between peoples of the world in today’s language – the Internet.



Jimmy Wales

The Founder of Wikipedia

@ the BA

Jimmy Wales: Any Forecast that the Book is Dead is Mistaken

Ayman Elsherbiny

“Wikipedia, the free encyclopedia that anyone can edit”. This is the slogan that appears on the top of the Wikipedia homepage on the Internet. It is identified as a multilingual, web-based, free-content encyclopedia project. The name “Wikipedia” is a combination of portions of two words and their meanings: wiki (a type of collaborative website) and encyclopedia. Its articles provide links to guide the user to related pages with additional information, and it is written collaboratively by volunteers from all around the world, so that anyone with Internet access can make changes to articles.

English-language Wikipedia, the flagship project of Wikimedia Foundation, ranks among the top ten most-visited websites worldwide. Wikimedia is a non-profit charitable organization headquartered in San Francisco, California, USA. It operates several online collaborative wiki projects including: Wikipedia, Wiktionary, Wikiquote, Wikibooks (including Wikijunior), Wikisource, Wikimedia Commons, Wikispecies, Wikinews, Wikiversity, Wikimedia Incubator and Meta-Wiki. The BA's Newsletter had the privilege to interview Jimmy Wales, the founder of Wikipedia and the Chairman Emeritus of Wikimedia Foundation, while he was in Egypt to attend the Wikimedia 4th Annual Conference (Wikimania 2008). The BA won the bid to host the Conference following a tough competition with Atlanta and Cape Town. Alexandria is the first Arab and African city hosting this annual conference.



Jimmy Wales

How did Wikipedia, and its sister projects, sprout into being?

Wikipedia grew out of an earlier project that I created called Nupedia which was the same vision to create a free encyclopedia for everyone in all the languages of the world. Nupedia was very old fashioned in its design, very top-down structured, and it was not fun for the volunteers. So, Wikipedia was our reaction against that model that was not popular and its idea was to open everything up, make it really easy to contribute and participate, and that was really the birth of everything.

The liability and integrity of the quest of information on Wikipedia as anyone can edit it, and it can be biased to a certain point of view; how do you encounter that?

Take a serious look at the quality in Wikipedia, you will realize that it is pretty good. This quality has been ensured by different studies conducted in different parts of the world. There are of course unique properties to Wikipedia, which give rights to unique problems and there is no question about that. Overall, the checks and balances that are built in the editorial process within the community do a good job, but it is always something we are working on to improve.

Can you shed more light on the checks and balances?

People sometimes imagine Wikipedia as 10 million people editing one sentence; which is actually not the way it works. It is far more traditional than most people realize; there is a core, very active community, who create and enforce editorial policies and rules. They have the tools that need to make that happen. For example, people who are causing trouble can be blocked from editing, either temporarily or for a longer period of time. We insist on having good sources and neutral perspective. We try to incorporate all legitimate points of view, and describe them rather than advocate for them. All what you really would like to see in an encyclopedia is what the community is very engaged on enforcing and promoting.

Do you think the collection of all knowledge is realistically more possible with Wikipedia and its related projects than before?

The interesting thing about encyclopedias is that they are not the collection of knowledge, they are the sum of all knowledge; and what I mean by that is an encyclopedia entry should be a condensed summary of what is known. Obviously there is an enormous amount of information and knowledge

in many different kinds of cultural products that do not belong in an encyclopedia and should not be there.

Wikipedia tends to be incredibly comprehensive compared to a traditional encyclopedia. Whatever our weaknesses are, this is not one of them. This is a radical step forward in terms of the share quantity of topics that we are able to maintain, and have a decent quality article.

What is your take on the rejection of Wikipedia as reliable source in academic circles?

I think it is absolutely correct. I think that, in general, the notion that an encyclopedia should be something you can cite in an academic paper is badly mistaken, this is not what an encyclopedia is, and certainly most universities will say you cannot cite the encyclopedia Britannica for example, that is not the appropriate thing for you to do. An encyclopedia is a summary of knowledge and as such it is a starting point for research not an end point. In general, it is something that does not concern me except for the misperception that this is a negative reflection of the quality of the Wikipedia.

You have witnessed the flourishing of Wiki communities in many parts of the world. What are your thoughts on the current condition and future of the Arabic-language Wikipedia?

The Arabic-language Wikipedia is smaller than I would like it to be, but I think on a positive note one of the reasons that it is smaller is that it started later. In other words, because of some issues, very technical ones, it took about two years before we solved those issues, and therefore Arabic Wikipedia started two years later than many other languages. As a result, if you start two years late then of course you will be a little bit behind. We

have a healthy strong community, it is something that we are pushing to get more people involved, I think it is a tremendous opportunity, as a language, because it is a very large one with many speakers. So, there is no question in my mind that Arabic Wikipedia in maybe another three years will be a similar size to say the German Wikipedia, and I think that is going to be phenomenal.

What are the financial sources of Wikimedia?

The Wikimedia foundation is a charity, nonprofit organization. We rely on donations from the general public, the vast majority of the money received is from small donations, US\$5050 ,100- to 100 Euros, and in the year 2007 we received donations from over 70 countries all around the world; so, it is a grassroots funding mechanism. In addition to this, we received donations from some wealthy donors.

We try to have a diversity of funding sources. We have to think about the independence of the community, in other words we do not want to become dependent on any one major donor, foundation, or company, because that could lead to a crisis at some point if that donor stops supporting us. We want to have a lot of different donors at a lot of different levels. It is an ongoing job.

Some people will ask why not have any ads on Wikipedia as a source of funding

Basically what we are trying to do is something that is not commercial, it is a public service for everyone. There are several reasons why we do not want to have ads on the website; one of the reasons has to deal with the perception of the independence of Wikipedia; in other words if you read an encyclopedia article about Microsoft

and you see an advertisement for Windows Vista right next to the content, you may wonder if the advertisement influences the content and that would feel odd. The other thing is that we do not need it.

How do you place Wikipedia in the long tradition of the encyclopedia?

Wikipedia is the newest in the major encyclopedia and it is significantly different from the originals. However, we achieved the dream of the encyclopedic movement, which is to bring universal knowledge that is inexpensive and compact and accessible to everyone so that if you want to learn about a particular topic you do not have to spend one month becoming a specialist, you can just obtain the quick summary you need. Wikipedia is achieving this in a much larger scale than ever possible before. So, I think we are just a part of an ongoing trend that we see in all kinds of media, you have greater accessibility, greater participation and broader reach.

Tell us about the “Wiki is not paper” concept and how it makes the content of Wikipedia, and other similar projects different to traditional “dead-wood” encyclopedias?

We have always stated Wiki is not paper, and what we mean by that is that any question about whether a topic is important or not enough to be in an encyclopedia should never be decided based on space consideration, there is an infinite amount of space and there is no reason why you do not have room for everything. That does not mean there is no limitation to what you can have on Wikipedia, there are many limitations but they are not of physical or economic reason of space. So what it means is that we are able to be much

more broad than a traditional encyclopedia, we can cover topics only a handful of people care about, and we do not have to make tradeoffs in the same way anyway.

How does Wikipedia and the culture that supports it encounter the general perception of the stateliness and grandeur of the good, old leather-bound encyclopedia set? It may not be very practical, but it is a much cherished cultural artifact and may have a place in the culture for a long time to come

I love old encyclopedias, I love the physical volume of a leather book. If someone would produce Wikipedia in a nice leather edition, I am sure I would like to have a copy of that. I might not actually read it because I want to get the most updated one, but I will certainly put it on the shelf and admire it.

I think some of these points are going to change dramatically, and yet there are elements that we will keep. I actually do think that if we look at many technological inventions, such as the invention of the electric light versus the candle, we will realize that we still use a candle on a romantic dinner table. So, there is always a place for that. Actually any forecast that the book is out is mistaken, I mean the book, may not be the big heavy leather book that is actually a little bit impractical, but the small compact book is technologically perfect, you can take it to the beach and it does not get ruined and the batteries never die, and certainly, I think we will see print-on-demand technology where you can just get a book produced very quickly by a machine, will be used to let people obtain portions of Wikipedia in a format that is more usable. Imagine if you are planning to travel to London and you would love to read about the

city and have some information about it, maybe not a travel guide but an encyclopedic companion to the city, maybe the ideal thing is to have a group of Wikipedia articles bunched together pre-selected by the community you just click and have it printed and sent to you, to have it in the train or bus and while you are walking around. So, I think books are still very important and can be cherished. Economically it does not make sense to produce those big heavy leather books anymore.

How do you foresee the day when Wikipedia becomes the “Old Medium”?

I do not know, it is a good question. Obviously, at some point, something new will come along, but actually with the Internet technologies, something important has changed that probably will not change again for quite some time. You went from a point where in order to have an encyclopedia, to do a project like this, it had to be top down, and to be a broadcast medium; in other words a small group of people create it and then broadcast it.

As technology improves, as more people come online, and we develop new social structures that go far beyond what we think of today’s encyclopedia. We will see what people invent.

What is your feedback after visiting the Library?

The idea of producing and disseminating knowledge and making it accessible to everyone is incredibly important, and even actually I did not know it until I got here that the design of the building with the different alphabetical characters on its outside wall is so similar to Wikipedia’s logo with all characters from around the world. I consider the Library our spiritual home.



“From Camp Caesar to Cleopatra’s Pool” A Swiss Childhood in Alexandria 1934 -1950

Sarah Elhaddad



From Greek statues to modern architecture, walking down the streets of Alexandria, gives an insight on the astonishing evolution of an old cosmopolitan city into the modern and contemporary Alexandria of today.

But with facts less-known to the world, Esther Zimmerli Hardam, still a young girl at heart, shares today a life shaped by the history of the city of Alexander the Great, by retrieving what she describes as the happiest days of her life.

“From Camp Caesar to Cleopatra’s Pool- A Swiss Childhood in Alexandria 1934 -1950”, recently published by The Alexandria and Mediterranean Research Center, is the sheer memoirs of Esther Zimmerli Hardam, a woman from Switzerland who was born and raised in Alexandria in the early 1930’s.

Having left Alexandria to Switzerland in 1950, Hardam returns in the late 1980’s to the city of her birth that bears all her childhood memories, to find that the traces of time have given Alexandria new features.

Foreign Life in old Alexandria

Following various local and international historical events starting with Bonaparte’s expedition of 1798, Alexandria was defined by a strong presence of European nationals in the first half of the twentieth century.

“The Christian and Jewish cemeteries bear witness the cosmopolitan nature of the city’s inhabitants”. The author goes on listing the various communities that collectively formed the many faces of Alexandria.

One third of the population of Jews living in Egypt was located in Alexandria, building their society that included merchants, tradesmen, intellectuals, craftsmen and office workers.



The Grand Bal Masqué held at The Swiss Club of Alexandria in 1936

The Greek community was the largest in Alexandria, followed by the Italian, the German and the Armenian community.

Swiss nationals have managed to create their own presence which was celebrated by establishing the Swiss Community of Alexandria in 1856. This community was built by powers that played a prominent role in the cotton trade in Egypt. The same community that was to create the events and activities of young Esther and her family's life in Alexandria.



Esther Zimmerli Hardam

Esther owes what she calls a relatively restless existence to her father, Erich Zimmerli, who has worked as a doctor in Montana and Arosa, then given the opportunity to work as director of the Fouad Sanatorium in Helwan, Egypt.

Zimmerli decided to establish his own practice in Alexandria and was then joined from Switzerland by his wife to be. The couple welcomed Esther to the world in January 1934.

The childhood of Esther

As the Swiss community grew, The Ecole Suisse d'Alexandrie was inaugurated as a private institution financed by a Swiss cotton magnate. The school enabled Swiss nationals including Esther to get an education in French, German, and Arabic. A comprehensive education that is yet another aspect that highlights diversity in old Alexandria.

Esther gives an example by drawing to the readers a scene of what the market in Alexandria was like: "From one window would come the sound of the Corsican cooner Tino Rossi singing one of his hits, whereas in front of one of the rundown buildings a group of young women would be squabbling and insulting each other in Arabic, Greek and Italian, whilst the old Syrian woman nearby was following each and every word, splitting her sides with laughter".

Tuberculosis breakout in Alexandria had a direct impact on the career of Erich Zimmerli, being one of the very few chest specialists in Alexandria. Esther mentions that her father's practice grew rapidly, and the patients of his practice included all social classes. Although the gap between the ruling classes and the common people was huge, Erich Zimmerli's practice attracted patients of every kind. From simple local working-class people, to the mother of young king Faisal of Iraq.

However, the gap had its own impact on Esther, represented by the domestic help that her family got around the house. She remembers Amina the laundress, Maria Manoukian the Armenian seamstress, and Nubian Khairi and Fatma, who later became Esther's link to understanding the background and struggles of the working class in Alexandria at that time, in addition to Egyptian and Muslim traditions that Esther only got to grasp through her everyday contact with Khairi and Fatma.



Esther and Fatma

The author remembers how she got to know about the Holy month of Ramadan by watching Khairi fast everyday for a whole month from sunrise to sunset. “We admired his strength of will which enabled him to resist the temptation to swallow a little water”.

Places and Memories

This chapter of Esther’s life starts paving the road for readers to relate the Alexandria they know now, to the exotic city that Esther once lived in.

Esther’s first recollection of her life as an Alexandrian starts at the age of four when she moved with her family to an isolated house away from town center in Camp Cesar district.

Her childhood memories were formed by numerous locations and people, including her new school, the English Girl’s School (EGC) which still stands today as one of the most popular schools in Alexandria, the Alexandria Sporting Club founded in 1890, the Royal Yacht Club, the Ibrahimieh Market that she describes as an oriental bazaar, and the center of town where all European-like stores were located, “We would usually go to the Confiserie-Glacier Baudrot, where the Greek waiter would serve us a delicious ice-cream on the covered terrace, then we would walk to Rue Cherif Pasha to the reputed old England”, says Hardam.

But what Esther remembers the most, and chose to represent the end of her journey that started in Camp Caesar, is a small pool surrounded by a rock at Sidi Bishr No.3 beach, where it is said that Cleopatra had bathed before returning up the Nile with Julius Caesar.

Esther’s stay in Alexandria was interrupted by the years of the second world war, she describes the circumstances to be critical, changing the city’s atmosphere and appearance. It was during those

war years that Esther's father started considering -for many reasons- returning to Switzerland for good, and after passing her higher school certificate, Esther returned with her family to Switzerland on September 3, 1950.

Alexandria... Today

"In Alexandria it is said that whoever drinks of the waters of the Nile will without fail return sooner or later to the ancient land of the pyramids" recalls Esther.

Despite being warned that Alexandria now had little in common with the city of her birth, Esther returns to Alexandria with a friend in 1987 and again in 1991 with a great difficulty to point the places of her childhood. Esther was overwhelmed by strange street names, tall building covered with television antennas and Arabic signs above shop windows and entrances. Disappointments followed as Esther was not able to locate Sidi Bishr No.3 beach.

But in the folds of the city, Esther found her way back to the Swiss Club and found that its layout had hardly changed in the past 35 years, the road also took her back to the EGC which did not seem to have changed much since the spring of 1950.

"The way Alexandria has grown is quite extraordinary, I finally understood that I was in a totally Arab City, which over the last few decades had taken on an oriental character", says Hardam.

As personal as memoirs may seem, not only does the recollection of Esther's childhood in Alexandria explain the development of Alexandria throughout the years, but it takes readers back to one of the finest years in the history of the city of Alexandria, and brings to the minds of Alexandrians of today how this tolerant city once embraced plentiful diverse nationalities, religions, languages, and social classes.



A photo of the Faculty of Engineering in Alexandria taken by Esther's father in 1950, and the same site in 2006



They were all Alexandrians...*

Kholoud Said



The Statue of Alexander the Great in Alexandria

Alexander the Great arrived to Egypt as a young man with a dream to Hellenize the world; to spread Hellenistic civilization and culture, and to make of the world one big nation. He realized his dream by building a new city to be the center of the world. For that, he ordered the foundation of Alexandria in around 332 B.C. “No city has had such a glorious entry into history”, wrote E. M. Forster. Hence, since its very foundation, Alexandria was at once the capital of the world, and has always been a symbol of cosmopolitanism.

Deborah A. Starr drove from the foundational narrative of Alexandria, stated in Plutarch’s *Life of Alexander the Great*, a significant myth. Flour

was used to mark the boundaries of the city, but a large number of birds from different kinds ate it. The oracle interpreted the omen to mean that the city “would... be the nurse and feeder of many nations” (“Recuperating Cosmopolitan Alexandria”). And it was. The Ancient Library of Alexandria, the largest library in the ancient world, with its Mouseion and the Lighthouse (one of the seven wonders of the ancient world), are emblems of enlightenment. Alexandria in fact enlightened the ancient world both physically and metaphorically. And from the beginning of the tale, Alexandria has always been a melting pot, a multi-cultural, multi-ethnic, multi-religious and multi-dimensional city. In ancient times, it was home to Greeks, Jews as well as Egyptians.

For nearly a thousand years, Alexandria has been the capital of Egypt until the Arabs took over and saw that it was inconvenient to have a capital overlooking the sea. Fustat was thus founded by Amr ibn El-A’s (which was later included in Cairo), and this chapter of the tale was concluded.

The revival was to come by another Macedonian (but from Albanian origins) – Mohamed Ali. Ruling from 1805 until 1849, the Founder of Modern Egypt had a special eye on the forgotten city. He ordered the foundation of Mahmudiyya canal (setting of many scenes in the novels of the Alexandrian Egyptian Author Ibrahim Abdel-Majid) to provide Alexandria with fresh water supply. But Mohamed Ali’s most important contribution was the reopening of the Harbor. This not only fostered trade, but also brought

*The title is from the Prologue of Farwell to Alexandria by Harry Tzalas

about wealth. Vast opportunities were available and large numbers of Greeks, Italians, Armenians, Lebanese, besides of course the English and the French, began to relocate in the city.



Mohamed Ali Square

Thus, by 1850, Alexandria had regained part of its former glory. That period, until 1956, was the golden age of Cosmopolitan Alexandria, *La Belle Époque*. By all means, it was a cosmopolis, a mosaic rich, full and colorful. It was not very odd for members of the same family to carry different nationalities. Eugenie Sinano Horwitz, an Alexandrian, reveals: “My grandfather, of Syrian origins, living in Egypt, with an Italian passport, was consul of Portugal. His brother was the Danish consul. I never discovered why those countries chose them or how they came into the family’s sphere of influence” (*The Birth of the Seventh Art in Alexandria*, p. 3).

In these good old days, life was very simple. Commerce had attracted foreign investors and traders. Wars, revolutions and political and religious discrimination that took place in some parts of Europe and the world, contributed to the wave of migration to Alexandria at that time. All borders were open. No passports, visas or stamps were required, and one’s nationality was of little importance. (The Egyptian nationality only came into action in 1929. Before that date, Egypt was

part of the Ottoman Empire.) Statistics tells us that at one point 80% of inhabitants of Alexandria were non-Egyptians, and in 1879 foreigners living in Alexandria made 61% of the total foreign population in Egypt.

Hence, it was an open city that, no wonder, nourished creativity and innovation. A list of firsts thus began to evolve, thanks to this environment of diversity and inclusiveness: first screening of the Lumière Brothers’ film in Toussoun Bourse—the first projection of motion picture in Egypt (1896); first cinematograph (cinema hall) in Egypt (1897); first studio in Egypt established by Aziz Bandarli and Umberto Dorés (1907); and the list goes on. *Le Petit Paris*, as it was called, also witnessed the first Board of Health and Board of Workers in Egypt, chaired by Consuls of foreign communities, the beginnings of theatrical performances (first by foreign, then by local troops), as well as the beginning of the press in Egypt. (*The Birth of the Seventh Art in Alexandria*).

It was in Alexandria too that the first tramway in Africa ever existed. And the names of the tram stops (more often than not also the name of the neighborhood) have each a story of a great person to tell: Zizinia, Rushdy, Bulkeley, Stanley, Gianaclis, Laurens, Sidi Gaber, Sidi Bisher, Saba Basha, Cleopatra, Camp Caesar... (*Farwell to Alexandria and The Birth of the Seventh Art in Alexandria*). These were all Alexandrians who enjoyed an atmosphere of interaction and tolerance, way before all the talk about alliance of civilizations, dialogue of religion and conflict resolution theories.

Moreover, the different religious and national community contributed to the development of the city, for they competed in building houses of worship, schools, hospitals and so on. This is one reason why architecture in Alexandria is



Collège Saint Marc

outstanding; it reflects this atmosphere. Buildings varied in style from the neo-classical to the Islamic, yet another evidence of the diversity of the city.

Alexandrians lived happily, but unfortunately, not ever after. Several things changed the course of events that was prevailing. In 1937, the Montreaux Conference ended Capitulation, a system that granted foreign residents in Egypt special privileges such as consular protection and the Mixed Courts. The Second World War broke out, and Alexandrians began to be categorized and divided according to their origins. There was also increasing fear from the continuous raids, and a considerable number of residents began to leave, especially towards the end of the war. On the other hand, Germans and Italians felt unsecure in a British ally, and many of them chose to leave too.

The 1952 July Revolution brought about a yet more significant factor. With the rise of nationalization, Alexandrians of non-Egyptian nationalities began to be regarded as foreigners in the full sense of the word, and the public opinion began to think of cosmopolitanism as foreign influence. Ironically, it was from Manshiyah square in Alexandria, formerly known as Mohamed Ali square and earlier as Place des Consuls, i.e. itself an emblem of cosmopolitanism, that President Gamal Abdel Nasser declared the nationalization of the Suez Canal Company in 1956. This initiated the wave of nationalization that later prevailed. It was

also this very incident that shortly brought about the Triple Attack (Suez Crisis) that led to clearly considering foreigners as imperialists and enemies. Alexandrian Egyptian Director Asma El-Bakri recalls how her school class began to become more and more empty, for all her foreign colleagues left with their families for good (*Voices from Cosmopolitan Alexandria*). By the first half of the 1960s, the city has lost its cosmopolitan flavor.

However, since the second half of the 1990s, Alexandria began to regain this position. For one, the rebuilding of the Library of Alexandria made all the difference. Its establishment is very significant by its own, for it was a result of an international collaboration. The Bibliotheca Alexandrina took upon itself a mission of being the window of Egypt on the world and the window of the world on Egypt, just as the ancient one. This also brought about an air of refreshment to other bodies in Alexandria, starting to reclaim their cultural and enlightening role.

Whether this spirit of renovation lasts for a long or a short while, evidence of a great cosmopolis will always be there to remind us of the glorious times of the “City of Memory” as nostalgic literature refers to it. But we do not necessarily have to resort to grand things to remember; the mundane ones will do.

We cannot relive the past, but we can definitely invest in the future.



Bibliotheca Alexandrina



The Journey of Printing

From Woodblock to 3D Prints

Sarah Elhaddad

“It is the interaction between technological history and intellectual history which makes the study of early printing history so fascinating.”

Stephan Füssel

Considered the greatest contributor to the development of modern civilization; the invention of printing was not created overnight. Over the past twenty centuries, printing has evolved from the most ancient ways to the recent techniques of the Digital World, passing great civilizations, and inspired by many causes.

The Early Days

The oldest printing techniques evolved in the Far East, following the demand for spreading Buddhist writings. During the Tang Dynasty (618–907 CE), the Chinese invented the first form of printing known as the Woodblock printing process. It was based on writing the text on a thin piece of paper, and gluing it face down onto a wooden plate. Then, characters were carved out to make a wood-block printing plate, which was used to print the text. The technique required carving a new block for every page in a book, which took a very long time.

Printed in the year 868, the “Diamond Sutra” book is considered the earliest woodcut illustration in a printed book, which was discovered by Sir Aurel Stein at the Dunhuang Cave in China, and is currently displayed in the British Museum. However, historians believe that the Chinese

printed other transcripts prior to the Diamond Sutra, but in more primitive ways.



Diamond Sutra- The British Museum

Movable letter printing, which dates back to 1045 CE during the time of Song Dynasty, was also invented in China by Bi Sheng. It used reusable blocks of Chinese characters made of clay, that could be moved around on a page. Each page of text was printed after characters were placed into an iron frame. This method was much faster than the woodblock, as it involved using two iron boards, one for printing and the other for arranging characters.

The Korean writing systems were taken from China; influenced by their trade, culture, science, and Buddhism that spread in the Korean Peninsula by the end of the Fourth century CE. A woodblock paper scroll print of the “Dharani sutra” dated 704751- CE was found at Bulguksa, South Korea, in 1966; its Buddhist text was printed in the early Korean Kingdom of Unified Silla. The scroll was

originally 6.5 cm wide and 7 meters long, and exists today at the National Museum of Korea.

The Arab World

It is believed that a new method of printing called Block printing or “tarsh” in Arabic, was created and developed in Egypt. Blocks were made from metal, wood and other materials, mostly for religious purposes.

In his paper “Medieval Arabic tarsh: A forgotten chapter in the history of printing” Richard W. Bulliet, suggests that Arabic block printing began in the ninth or tenth century, and persisted until the fourteenth century, judging from Paleography and the Eighth century, the date of introduction of paper in the Islamic world. He also concluded that tarsh was independently invented in the Arab world, and did not come from China.



Arabic Block Printing

Bulliet proposes that the tarsh-engraver carefully flattened a moist clay tablet and engraved his minute text into the tablet, which was then dried hard in the sun or baked; a thin sheet of tin was applied to the tablet, and metal was used to force the grooves of letters. The technique had very little influence outside the Islamic world, and gradually disappeared, especially after movable-type printing was introduced from China.

Life-changing Inventions

By the 1430s, Intaglio engraving was introduced in Germany as a method of making prints. It was widely used by goldsmiths to decorate metalwork; including armors, musical instruments and religious objects. An intaglio print is made from a plate, usually a metal one, which has lines drawn into its surface trapping ink as it is rolled across the surface of the plate. By wiping the surface with a cloth, the lines retain the ink. A piece of damp paper is placed on the plate, and the two are run through a press, forcing them together and transferring the ink from the plate to the paper.

In Germany, during 1436, professional goldsmith Johannes Gutenberg started working on the printing press with his student Andreas Dritzehn and Andreas Heilmann, owner of a paper mill. A printing press is a mechanical device for applying pressure to an inked surface resting upon a piece of paper or cloth, thereby transferring an image.

Gutenberg's breakthrough was shaped by the new ideas that he introduced. He was the first to make a type from an alloy of lead, tin, and antimony, which was critical for producing durable types that produced high-quality printed books. Also, to create these lead types, he used a special matrix enabling the quick and precise molding of new type blocks from a uniform template. He also introduced an oil-based ink which was more

consistent than the water-based inks that were used before.

The first thing ever printed by Gutenberg was a Latin Bible, produced in Germany, in 1455. It was hand-illuminated with many images and decorations, which is considered by many a magnificent work of art.



The Gutenberg Bible

Gutenberg's invention was the starting point for the commercial mass production of books, leading to the development of research and the desire to attain knowledge. The Printing Press is also considered the first invention that allowed the European civilization to compete, for the first time, with the civilization of China.

Stephen Füssel explains in his book "Gutenberg and the impact of printing", that

the effect of Gutenberg's invention was witnessed in the incredible speed with which it spread throughout Europe and the world; from Italy to England, Sweden, Turkey, India and Japan, in 1556; adding that the technical essentials of the invention remained unchanged for 350 years, but the communication revolution associated with Gutenberg's name continues on its way.

In 1796, Bavarian author Alois Senefelder, invented Lithography, a method for printing using Limestone or a metal plate with a completely smooth surface. Using oil or fat and gum Arabic to divide the smooth surface into regions which accept the ink, and regions which reject it forming the background. In 1818, Senefelder successfully introduced colored lithography (Chromolithography), the first method for making multi-color prints which replaced coloring prints by hand.

Beneficial Mistake

Coincidence also played an important role in the development of printing. While American Ira Washington Rubel was operating his lithographic press, in 1903, he noticed that if he failed to insert paper, the stone plate would transfer its image onto the rubber impression cylinder. When he then placed paper into the machine it would have the image on two sides, one from the stone plate and the other from the rubber impression cylinder. Rubel noticed that the image from the rubber impression cylinder was much clearer; the soft rubber was able to give a sharper look than the hard stone litho plate. From what was originally an error, Rubel created a machine for the "Offset printing".

Offset printing today is the most common form of high-volume commercial printing, for its consistent high image quality, quick and easy production of printing plates, longer printing

plate life and for being the cheapest method to produce high quality printing in commercial printing quantities.

The Road to Modern Printing

The late 1930s marked the first steps towards modern printing techniques. Phototypesetting was introduced as a method that applies a photographic process to generate columns of type on a scroll of photographic paper. It uses a machine that quickly projects light through a film negative image of an individual character in a font, through a lens that would magnify or reduce the size of the character onto film, which would collect on a canister. The film would then be fed into a processor, a machine that would pull the film through two or three baths of chemicals, where it would emerge ready for pasting.

The year 1937, marked the biggest breakthrough in printing following the invention of Gutenberg, Xerography, from the Greek word for “dry writing”, was invented by American law student Chester Carlson, a copying process based on electrostatic energy.

According to David Owen in his book “Copies in Seconds”, Carlson found by experience that the process of making a large number of copies of papers was painful and tedious, as it had to be made by an external company that owned a Photostat or Rectigraph machine, and it took half-a-day or even twenty-four hours to get it back. Carlson recognized a very great need for a machine that could be right in an office, where a person could bring a document to it, push it in a slot, push a button, and get a copy.

Xerography became commercially available in 1950, by the Xerox Corporation, and is now widely used in business, education and other fields. In 1969, Gary Starkweather, Researcher at

Xerox, invented the laser printer, a common type of computer printer that rapidly produces high quality text and graphics on plain paper. As colored toners became available, the first electrostatic color copier was released by Canon, in 1973.

In the 1990s, 3D technology provided the possibility of turning the digital data from CAD programs, 3D graphics and animation software into physical models. The 3D printers have the ability to print parts and assemblies made of several materials with different mechanical and physical properties in a single process.



3D Printing. www.wikipedia.org

The 3D printers were large and expensive devices found in design departments of major corporations, but they recently became affordable by small-and medium-sized businesses. The printing process is also considered very time-consuming because in many cases thousands of layers are required to complete an object.

Surpassing time and cost obstacles, 3D printing technology is still developing. Scientists hope to create in the coming years a 3D printer that will be able to print the exact 3D model of almost anything, such as cell phones and MP3 players.

The journey of printing does not stop here!



End of the World

The Climate Change and its Impacts

Ayman Elsherbiny

“The majority of climate scientists agree that the global climate is warming, largely as a result of the impacts of human activities. Climate change is already having clear detrimental impacts on biodiversity. Even apparently small increases in global mean temperature of 13°-C and associated changes in rainfall will have substantial impacts on the environment, most of which will be detrimental. Greater changes may lead to irreversible impacts.” United Nations Environment Program (UNEP)

Terminology

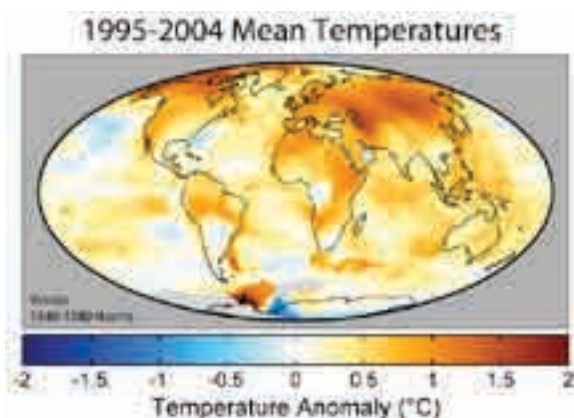
Climate change is any long-term significant change in the “average weather” that a given region experiences. Average weather may include average temperature, precipitation and wind patterns. In recent usage, especially in the context of environmental policy, the term *climate change*

often refers to changes in modern/current climate - global warming.

In this regard, it is important to mention that the average global air temperature near the Earth’s surface increased 0.74 ± 0.18 °C (1.33 ± 0.32 °F) during the hundred years ending in 2005. The Intergovernmental Panel on Climate Change (IPCC) concludes that “most of the observed increase in globally averaged temperatures since the mid-twentieth century is very likely due to the observed increase in anthropogenic (man-made) greenhouse gas concentrations” via an enhanced greenhouse effect. Natural phenomena such as solar variation combined with volcanoes probably had a small warming effect from pre-industrial times to 1950 and a small cooling effect from 1950 onward.

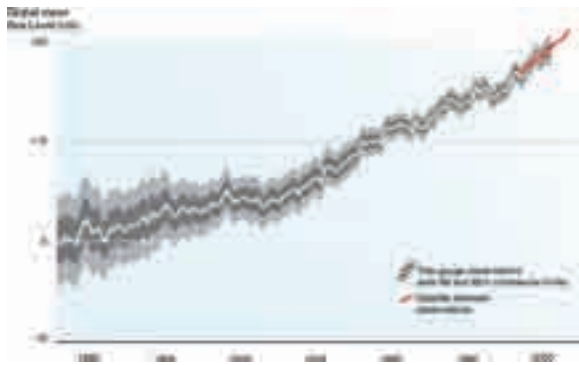
These basic conclusions have been endorsed by at least thirty scientific societies and academies, including all of the national academies of science in the major industrialized countries. While individual scientists have voiced disagreement with some findings of the IPCC, the overwhelming majority of scientists working on climate change agree with the IPCC’s main conclusions.

Climate model projections summarized by the IPCC indicate that average global surface temperature will likely rise a further 1.1 to 6.4 °C (2.0 to 11.5 °F) during the twenty-first century. This range of values results from the use of differing scenarios of future greenhouse



Mean surface temperature anomalies during the period 1995 to 2004 with respect to the average temperatures from 1940 to 1980.

gas emissions, as well as models with differing climate sensitivity. Although most studies focus on the period up to 2100, global warming and sea level rise are expected to continue for more than a thousand years, even if greenhouse gas levels are stabilized. The delay in reaching equilibrium is a result of the large heat capacity of the oceans.



Trends in sea level, 1870 -2006

Impacts

Increasing global temperature will cause sea level to rise, and is expected to increase the intensity of extreme weather events and to change the amount and pattern of precipitation. Other effects of global warming include changes in agricultural yields, trade routes, glacier retreat, species extinctions and increases in the range of disease vectors.

In mid 2008, the National Snow and Ice Data Center (NSIDC) in Boulder, Colorado, released data showing that the Arctic sea ice is melting even faster than in the year 2007, despite a cold winter.

The BBC also reported “NSIDC scientists say that much of the ice is so thin that it melts easily, and the Arctic may be ice-free in summer within 5 to 10 years.”

Richard Black, the Environment Correspondent of BBC, stated that a few years ago scientists were predicting ice-free Arctic summers by about 2080, then computer models started projecting earlier

dates, around 2030 to 2050. Later came the 2007 summer that saw Arctic sea ice shrink to the smallest extent ever recorded, down to 4.2 million sq km from 7.8 million sq km in 1980.

“I think we are going to beat last year’s record melt, though I would love to be wrong,” said Julianne Stroeve from NSIDC.

Moreover, the IPCC stressed in a press release dated back to April 2008, that “observational records and climate projections provide abundant evidence that freshwater resources are vulnerable and have the potential to be strongly impacted by climate change, with wide-ranging consequences on human societies and ecosystems.”

According to the UNEP, economic sectors likely to face difficulties related to climate change include banks, agriculture, transport and others. Developing countries dependent upon agriculture will be particularly harmed by global warming.

Remaining scientific uncertainties include the amount of warming expected in the future, and how warming and related changes will vary from region to region around the globe.

UN Concern

Ban Ki-Moon, the United Nations (UN) Secretary General, stated in an address to the IPCC meeting, that took place in Spain in November 2007, upon the release of the Fourth Assessment Synthesis Report: “I come to you humbled after seeing some of the most precious treasures of our planet -- treasures that are being threatened by humanity’s own hand.”

“In Antarctica, the message was chillingly simple: the continent’s glaciers are melting. I saw the heart-bursting beauty of ice shelves that have already started to break up. I was told that if large quantities of Antarctica’s ice were to melt, sea levels could rise catastrophically.”



On the left, a photograph of Muir Glacier taken on 13 August 1941, by glaciologist William O. Field; on the right, a photograph taken from the same vantage on August 31, 2004, by geologist Bruce F. Molnia of the United States Geological Survey (USGS).

“In the Amazon,” he added, “I saw how the rainforest is being suffocated. Brazil is making serious strides in fighting deforestation and promoting sustainable forest management, but the Government fears that global warming is already undercutting these efforts. If the Panel’s most severe projection comes true, much of the Amazon rainforest will transform into Savannah.”

Ban Ki-Moon then referred to Punta Arenas in Chile where children were obliged to wear protective clothing against ultraviolet radiation, and even there are days when their parents do not allow them to play outdoors, or go to school. “These scenes are as frightening as a science fiction movie. But they are even more terrifying, because they are real,” he concluded.

Polar bears are threatened too by the Global Warming Phenomena. The International Union for Conservation of Nature, Arctic Climate Impact Assessment, United States Geological Survey and many leading polar bear biologists have expressed grave concerns about the impact of global warming, including the belief that the current warming trend imperils the survival of the species.

The key danger posed by global warming is malnutrition or starvation due to habitat loss. Polar bears hunt seals from a platform of sea ice.

Rising temperatures cause the sea ice to melt earlier in the year, driving the bears to shore before they have built sufficient fat reserves to survive the period of scarce food in the late summer and early fall. Reduction in sea-ice cover also forces bears to swim longer distances, which further depletes their energy stores and occasionally leads to drowning.

“Two-thirds of the world’s polar bears will disappear by 2050, based on moderate projections for the shrinking of summer sea ice caused by global warming,” the US Geological Survey predicted.

Any Hope?!

The broad agreement among climate scientists that global temperatures will continue to increase has led some nations, states, corporations and individuals to implement actions to try to curtail global warming or adjust to it. Many environmental groups encourage individual action against global warming, often by the consumer, but also by community and regional organizations. Others have suggested a quota on worldwide fossil fuel production, citing a direct link between fossil fuel production and CO₂ emissions.

The world’s primary international agreement on combating global warming is the Kyoto Protocol, an amendment to the United Nations Framework

Convention on Climate Change (UNFCCC) negotiated in 1997.

As of February 2009, 183 countries have signed and ratified the protocol. The United States, although a signatory to the Kyoto Protocol, has neither ratified nor withdrawn from it, with the US historically being the world's largest emitter of greenhouse gas. It was, as of at least 2005, the largest per capita emitter of carbon dioxide from the burning of fossil fuels.

Triggering an alert, Rob D. van den Berg, president of the International Steering Committee for the Global Environment Facility (GEF), claimed that on the mitigation side, the successes and results reported are just a drop in the ocean. "This is the main problem that we are facing. Yes, our efforts to reduce green house gas emissions are effective, they bring results, but they are minute as compared to what is needed."

He also pointed out in his speech in the *International Conference on Evaluating Climate Change and Development* held in the Bibliotheca Alexandrina in May 2008, that monitoring and evaluation can help in coping with the uncertainties, the risks and sudden and long term changes associated with climate change.

The closing session of the conference, which was devoted to a discussion between experts, public, and media, started with screening the American documentary film *The Inconvenient Truth* by Al Gore, the Former United States Vice President. Gore was awarded the Nobel Peace Prize in 2007, jointly with the IPCC, for his efforts to build up and disseminate greater knowledge about man-made climate change.

The 2007 IPCC Assessment Report, concluded that no one technology or sector can be completely responsible for mitigating future warming. It

found there are key practices and technologies in various sectors, such as energy supply, transportation, industry, and agriculture, that should be implemented to reduce global emissions.

Surprisingly, UN figures suggest that meat production puts more greenhouse gases into the atmosphere than transport. "People should consider eating less meat as a way of combating global warming," said Rajendra Pachauri, chairman of the IPCC in a speech last September.

Fatma Denton; policy analyst and project coordinator for ENDA Tiers Monde in Dakar, Senegal, indicated that the battle to reduce greenhouse effects is not fought only by science and scientists; it should also involve civil society, media, decision makers and people at large. "*The Inconvenient Truth* is a good example, since Gore was able to raise people's awareness on the issue of climate change," she affirmed.



Words To Remember

“People keep asking me what I think of the web now that it’s done. Hence my protest: The Web is not done!”

Tim Berners-Lee

“I’d like to know what the Internet is going to look like in 2050. Thinking about it makes me wish I were eight years old.”

Vinton Cerf

“The Internet is like a gold-rush; the only people making money are those who sell the pans.”

Will Hobbs

“Getting information off the Internet is like taking a drink from a fire hydrant.”

Mitch Kapor

“When I took office, only high energy physicists had ever heard of what is called the Worldwide Web.... Now even my cat has its own page.”

President Clinton

“The Internet is the first thing that humanity has built that humanity doesn’t understand, the largest experiment in anarchy that we have ever had.”

Eric Schmidt

“The Internet is becoming the town square for the global village of tomorrow.”

Bill Gates

“One of the Internet’s strengths is its ability to help consumers find the right needle in a digital haystack of data.”

Jared Sandberg

“The Internet is just a world passing around notes in a classroom.”

Jon Stewart

“National borders aren’t even speed bumps on the information superhighway.”

Tim May

“The Net treats censorship as a defect and routes around it.”

John Gilmore

“There are three kinds of death in this world. There’s heart death, there’s brain death, and there’s being off the network.”

Guy Almes

Bibliotheca Alexandrina Calendar of Events

Selected Events in July – August 2009

12 – 15 July

Workshop

Closed Meeting

Arabic Calligraphy for
Children and Young
People

Location: BACC

Contact Person:
Mohamed.Hasan@
bibalex.org

15 July

Conference

Closed Meeting

Building National
Medical Research Council

Location: BACC

Contact Person: marwa.
abdelrassoul@bibalex.org

18 - 20 July

Cinema

Summer festival Film
Program

Location: Meeting Room
C - BACC

Time: 19:00

Contact Person: ahmed.
nabil@bibalex.org

20 – 30 July

Education course –

Registration

Conflict Resolution

Location: BACC

Contact Person: Nadine.
Elsarrag@bibalex.org

22 July

Lecture

The Hiding Place of
Monuments in Ancient
Egypt

Location: Auditorium -
Main Library

Time: 12:00 - 14:00

Contact Person: Mouhab.
Darwish@bibalex.org

25 July

Lecture

Darwin and the Evolution
Theory

Location: Lectures Hall

Time: 19:00 pm

Contact Person:
Shaymaa.Elsherif@
bibalex.org

28 July – 13 August

Workshop

Registration Movie Making

Location: Alexandria
Atelier

Time: 11:00 - 4:00

Contact Person: kamal.
eltazi@bibalex.org

30 July

Lecture

Translation of “To Kill a
Mockingbird” into Arabic

Location: Lectures Hall

Time: 17:00 - 21:00

Contact Person: infobib@
bibalex.org

1 August

Education course

Registration

Mediation & Negotiation

Location: BACC

Contact Person: Nadine.
Elsarrag@bibalex.org

2 – 30 August

Exhibition

From Earth to the
Universe

Location: BACC West
Exhibition Hall

Time: 9:00 - 19:00

Contact Person: Soha.
Badry@bibalex.org

4 August

Lecture

Sunken Archaeological
Finds in Alexandria

Location: Auditorium -
Main Library

Time: 12:00 - 14:00

Contact Person: Mouhab.
Darwish@bibalex.org

4 – 15 August

Exhibition

The Big Read – the Photo
Exhibition

Location: BACC

Contact Person: infobib@
bibalex.org

