Information → Knowledge → Wisdom:
Progression of Society in the Age of Computer

Ralph C. Losey[1]

The personal computer revolution started by the [Hacker](#) elite in the 1970s has completely transformed the world. From a historical perspective our current computer-based culture is a relative *new-born*. Yet it is already dominant. The first generation of hackers born in the fifties, epitomized by Steve Jobs and Steve Wozniak, have succeeded beyond everyone's wildest dreams. They have quickly changed our world into an information based society. The dark days of ignorance, misinformation, dogma, and beliefs are receding. Some of the power elite of pre-information, pre-technology societies still try to block free information. But this is a futile, desperate attempt to maintain social control. Eventually even the *Great Firewall of China* will come down.

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http://e-discoveryteam.com/2015/04/05/information-knowledge-wisdom/

The insanely great success of our computational age will continue. Its social impact will evolve and grow even larger. Society will continue to change quickly as the power and sophistication of our computers continues to grow, and as our abilities to use these new computational skills continue to improve.

The old social norms based on superstition, lies, and half-truths are dying. The logical progression I see is from the *Information*-based world spawned by computers - which is where we are now - to the next step of a *Knowledge*-based society, and finally, someday, to a *Wisdom*-based culture.

The rapid rise of personal computers and the World Wide Web of connected computers created an unexpected flood of electronic information. So much so, that many (including me before I this thought process), often refer to our times as the *Information Age*. But that is **wrong**.

A more correct description is that we live in the *Age of Personal Computing*. This is an age where hackers and technology rule. The first large impact of personal computers was an exponential spike in the amount of information, plus the democratization and globalization of information distribution and communication. The first changes of the Computer revolution allowed everyone, everywhere, to be *informed*. Computers not only dramatically increased the amount of information we have, but equalized its distribution on a global scale. The result is a whole new world.

The spike and distribution of online information is just a *first* major consequence of the *New Age of Computation*. It will not be the last. The focus on information alone will soon change, indeed, *must* soon change. The information explosion is nowhere near the final goal. Information alone is dangerous and superficial. Our very survival as a society depends on our quick transition to the next stage of a computer culture, one where *Knowledge* is the focus, not *Information*.

We must now quickly evolve from shallow, merely *informed* people with short attention spans, and superficial, easily manipulated insights, to

thoughtful, *knowledgeable* people. Then ultimately, some day, we must evolve to become truly *wise* people.

Wisdom is the Ultimate Goal of the Personal Computer Revolution - Not Information, Not Knowledge

The first step - *Information* - is just a stepping-stone to a more mature, *Knowledge*-based culture. I predict society will make this transition in the next five to twenty years. As great an achievement as this will be, *Knowledge* alone is also just a dangerous stepping stone. It reminds me of the all-too-true joke of what the PhD acronym *really* means - *piled higher and deeper*. We must not *just* be a society of knowledgeable people, like some sort of world academia.

An academic *knowledge-world* is certainly not what the original hackers, the Steves - Jobs and Wozniak - had in mind when they first envisioned a *New Age of Personal Computers,* and created Apple to help make it happen. The Steves were among the original hackers that started this new age, but they were not alone. There were thousands of other computer enthusiasts like them with similar backgrounds and intent to change the world by computers.

The many trips Steve Jobs took, LSD based, meditation, or physical, such as to India or Kyoto, allowed him to see a *higher purpose* potential to personal computers. That is what made him such a magnetic personality. That was part of his leadership aura. Steve Jobs intensity and *vision* was beyond what the trip-free

Bill Gates could ever imagine. Steve was right at home among the Whole Earth computer tribes of high-tech hippies. They were the first generation of hackers that triggered the *New Age of Personal Computing*. I remember it all very well.

Steve Jobs knew the importance of wisdom first hand. He had probed his inner depths and come to terms with death and the meaning of life. He had channeled his fears of death into action and hard work. His intention, and that of Steve Wozniak, and many others all over the world, including me in my own little way (photo right in 1975), was to promote technology, including personal computer use. We looked at it as a tool, what the Steves called a *bicycle for the mind*. In my case I used this new tool to create simple games and education programs for my kids, and myself, and also for music, and eventually in the practice of law. As a young lawyer I should have been preparing for trial at night, but instead I stayed up late coding. We were all using computers for personal reasons, including especially games and art. Only later did the business components begin to predominate.

The idea behind personal computers in the seventies and eighties was individual empowerment, individual creativity, so that people could be happy, and not just become rich, smart, efficient, and knowledgeable. Knowledge and efficiency alone were never the end-game of the majority Apple branch of the early computer users, *the crazy ones, the misfits*.

Quoting the well-known Stanford commence speech of Steve Jobs in 2005:

> Remembering that I'll be dead soon is the most important tool I've ever encountered to help me make the big choices in life. Because almost everything – all external expectations, all pride, all fear of embarrassment or failure – these things just fall away in the face of death, leaving only what is truly important. Remembering that you are going to

die is the best way I know to avoid the trap of thinking you have something to lose. You are already naked. There is no reason not to follow your heart.

The goal of any advanced civilization is *Wisdom*, not *Knowledge*. Living your life with awareness and understanding of your own mortality. Living your life with joy, with flow. Just ask Socrates, who boasted of knowing Nothing (as he had transcended that and phased into Wisdom), and the ancient Greeks. They still exemplify our understanding of high culture in the West. In the East just ask Buddha or Lao Tzu. In fact, consult any of the great wisdom traditions, the great religions. It is not enough in any wisdom tradition to *know*, we must *use* this knowledge for both personal happiness and the advancement of all Mankind, indeed, for the benefit of all life on Earth.

That is *Wisdom* - knowledge converted to beneficial action. This is essentially the Zen philosophy of Steve Jobs and many others like him. It is not a vision of amassing *knowledge*, which is often just the *dogma* generated by another person. It is the wisdom to follow your own inner voice. Again to quote Job's commencement speech at Stanford in 2005:

> Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma - which is living with the results of other people's thinking. Don't let the noise of other's opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.

Steve Wozniak, the inspired engineer that helped Jobs make things happen, understood these wisdom lessons too. In fact, *Woz* reminds me of the laughing Buddha in Chinese tradition. As he stated in an NPR interview in 2006:

I've been having a lot of fun everyday. You know, pranks, jokes. But it actually started with a lifetime philosophy. When you're about 20 years old, you kind of think out - I figured out that it was better - less good to be successful and better to have a laughing life, laugh more than you frown all through your life. Because on the day you die, which one would you have said had the happier life, the better life? And so I put a lot of humor in my life.

Wisdom in all true cultures, including legal culture, means the freedom to live your own life, to have a laughing life, to be happy, or at least try. As our American founders put it in the *Declaration of Independence*, it means to live in accord with certain *self-evident* truths:
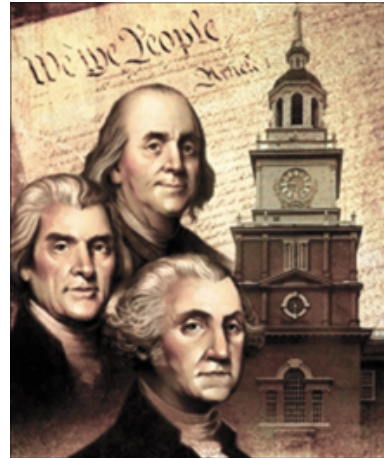
> [T]hat all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.

Hope for the Future

Although these inalienable rights have been enshrined in our constitution and other basic laws for over two hundred years, we are still far from attaining these

goals. We are still far from the wisdom state our forefathers dreamed about. Still, in the U.S., and other civilized societies, we at least all *agree* on these goals. We agree on the principle of the common good, equal justice for all, and the desirability of happiness. We believe these are inalienable rights for all, even if we still lack the collective wisdom to live that way.

Our ideals are not our realities. Freedom, liberty, equality, and *justice for all* are still just goals. But we should not despair. We should keep the faith of the *Founding Fathers of America* and other wisdom ancestors everywhere. They were certainly the misfits, the rebels of their day. They were the ones crazy enough to think that individual liberties for all people were possible. The *Founders of America* saw things very differently from the British establishment of their day. They were also brave enough to take action, to be revolutionary.

Although we are still far from attaining their goals in the U.S., much less the rest of the world, we should not give up hope. Personal computers, and the incredibly fast changes we have already seen them bring, give us all hope.

The information society in which we now live came to pass in just twenty years after the launch of the first Apple computer. I recall having one of the first home computers in town (alas, not an Apple, but a TI-994A), then having one of the first computers on my desk at work (the first issue IBM PC). Now every home and office has more computers than anyone can keep track of. We now carry around, and some even wear, far more computing power than anyone ever dreamed was possible in the seventies and eighties.

We have already transitioned into a global information society, such that all information is now just a *Google* away. Think how incredible that is. This fast

change shows the power of personal computers. If the crazy ones, those who dare to try to put a dent in the Universe, just keep on working hard, then all things are possible. We can keep on changing the world. Again to quote Jobs' Stanford speech:

> Here's to the crazy ones, the misfits, the rebels, the troublemakers, the round pegs in the square holes...the ones who see things differently – they're not fond of rules...You can quote them, disagree with them, glorify them or vilify them, but the only thing you can't do is ignore them because they change things...they push the human race forward, and while some may see them as the crazy ones, we see genius, because the ones who are crazy enough to think that they can change the world are the ones that do.

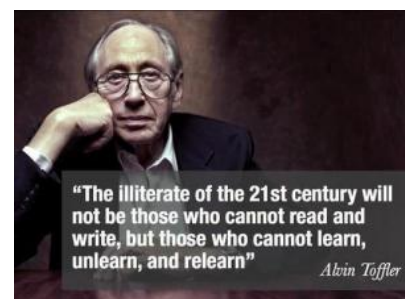[Click here](#) to see the whole Stanford speech.

Jobs and Wozniak saw technology as a way to wisdom, to happiness. They were hardly alone. There have been many, many true believers in the computer revolution and its impact on Art, Science, and Culture. They have been at the side of the Steves all along, both literally and figuratively. There were thousands, even in the early days. Then tens of thousands, then millions, and now most of the world are Apple consumers and at least wannabe *different-thinkers*.

Our generation, every one alive today, must *continue* to *seize the moment*. We must use the new computer technologies to escape the first stage information deluge. We must use the latest personal computer systems to create a new Knowledge Society, with the aim of launching a Wisdom World after that.

From Information to Knowledge

Personal computers transformed our society to an information culture in just a few years. The dominance of information as the key catalyst of our society was not a surprise, although the extent of

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn"
Alvin Toffler

the deluge was unexpected. American writer and futurist Alvin Toffler coined the phrase *Information Overload* in 1970 in his book *Future Shock*. He could see the problem coming. Toffler also predicted the need for lifelong learning, for knowledge, in order to cope with information overload.

The problem of *too much informatio*n and not enough *knowledge,* is a perennial problem that human kind has faced for thousands of years. *See eg. [If You Can Know It All, How Come You Don't?](#): Why the Internet provides a mountain of knowledge, but people only take a molehill,* (*NY Times*, March 20, 2015), where J. Peder Zane wrote:

> At least since the heyday of ancient Greece and Rome, each generation has confronted the overwhelming struggle to search, sift and sort growing piles of information to make what is known useful. "Papyrus, print or petabyte — the history of feeling overwhelmed by information always seems to go back further than the latest technology." said Seth Rudy, a professor of English literature at Rhodes College who explores this phenomenon in his new book, "*Literature and Encyclopedism in Enlightenment Britain: The Pursuit of Complete Knowledge.*" "The sense that there is too much to know has been felt for hundreds, even thousands, of years."

Although *too much information* is a perennial problem, ours is the first generation where it has become the focal point of society. Our is the first generation where unlimited information about everything is in the hands of everyone, not just a few isolated scholars. I believe that the current flood of information, where, as the NY Times article observed, more information is created *every two days than had existed in the entire world from the dawn of time to 2003,* has led us to a tipping point. This flood, this shock, empowers us to take the next stage; indeed, it *forces* us to do so.

Just as information volume quickly exploded into exabytes by the advent of personal computing power, the next stage of a knowledge society can come quickly too. I am optimistic about that.

We can use the next generation of computers and other advanced technologies to make this transition before we get too addicted to mere information. We see early signs of this already with things like *TED*, the *Khan Academy* and other free or nearly free online education; the new popularity of opinion and analysis blogs; thinking and

Salman Khan

knowledge oriented social media sites, such as *Quora*; and also with analytics, active machine learning, and other forms of artificial intelligence. *Also see: 5 Signs That Science Is Taking Over the World*, Huff Post, 03/03/2015.

The transition from information to knowledge is archetypal. So too is the transition from knowledge to wisdom. This is beautifully, albeit pessimistically imaged by the great Twentieth Century poet, T.S. Eliot:

Opening Stanza from Choruses from "The Rock"

The Eagle soars in the summit of Heaven,

The Hunter with his dogs pursues his circuit.

O perpetual revolution of configured stars,
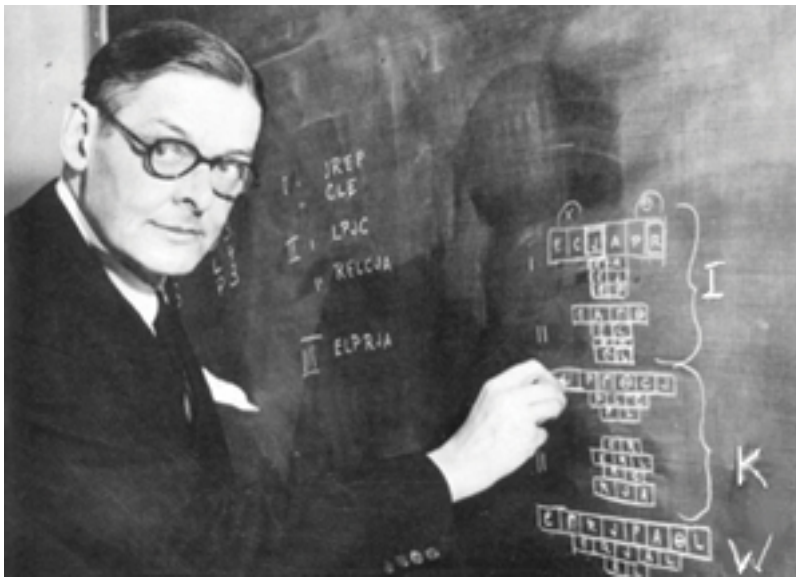
O perpetual recurrence of determined seasons,

O world of spring and autumn, birth and dying

The endless cycle of idea and action,
Endless invention, endless experiment,
Brings knowledge of motion, but not of stillness;
Knowledge of speech, but not of silence;
Knowledge of words, and ignorance of the Word.
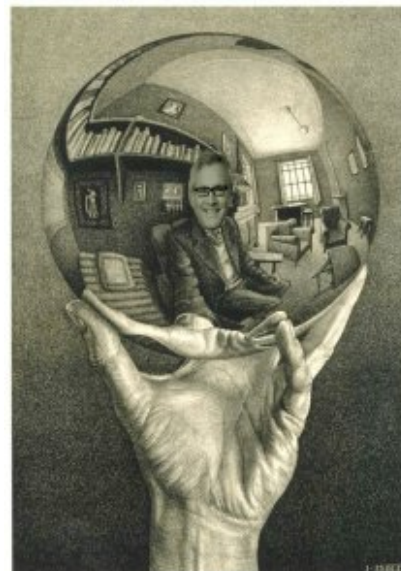All our knowledge brings us nearer to our ignorance,

All our ignorance brings us nearer to death,
But nearness to death no nearer to GOD.
Where is the Life we have lost in living?
Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?
The cycles of Heaven in twenty centuries
Bring us farther from GOD and nearer to the Dust.

T. S. Eliot (1888-1965),
The Rock (1934)

Some Specific Predictions of How Society Will Evolve

This transition from information to knowledge is the next natural step. There seems to be widespread agreement on that. It is part of the natural learning process. But the *time frame,* and the *how* we get there as a society, is the subject of much contention. On the time issue, some say it will *never* happen. That is too pessimistic in my view. Some say it will happen in the next year or two. That is too optimistic.
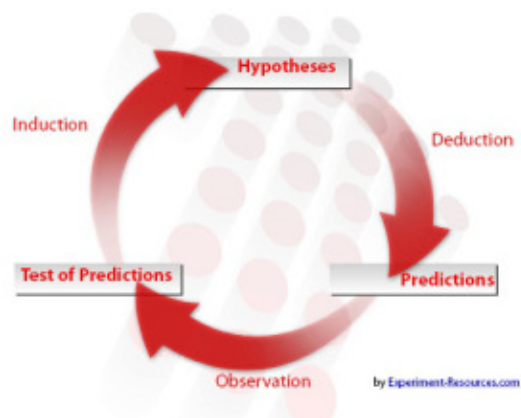
Most do not put a time frame on it at all, seeing the safety in vagueness.

As to exactly *how* to progress as a society, the information is even more scarce. I am building the bridge in this essay based on my own observations and general processing. If others have opined on *how* they think it will happen, I have not read it. Truth be told, I have not really searched hard for such information either, as I wanted my thoughts to be my own, and not be overly influenced by others. There may well be others that have predicted *how* such transformation to a knowledge society may come about, but I am unaware of their predictions. It seems to me that such hypothesis testing predictions are generally avoided, as all they can do is prove your analysis to be wrong. Vanity.

It is safer to avoid expressing your opinion on the two topics of *when* and *how*. They are possible to verify as either wrong or right, after the fact, that is, unless your prediction date is beyond your probable remaining life-span. By that time no one will remember if you were wrong (or right) anyway. If you must put your analysis to the test and make predictions to see if they come true, then the smart thing is to make the predictions general. The vaguer the predictions, the more likely that one or more will seem to come true, thus proving your analysis. If not come true, at least not be so wrong as to make it obvious that your reasoning was incorrect.

Never fear, I will not play it safe. Better to have the courage of your convictions and adopt a scientific approach. I will now make several, very specific predictions as to *how* we will transition from an information society to a knowledge society. I will also make a prediction as to *when*. These predictions will serve as a test
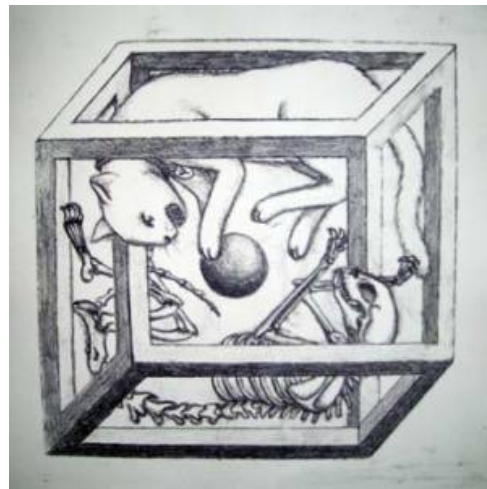
of my current theories and hypotheses. If my predictions come true, then this will be evidence of the accuracy of my analysis. If not, well better think again and adjust the hypothesis based on the observations.

Steve Jobs said you can only *connect the dots* .... in your life by looking backwards, that you cannot predict an individual's destiny with any certainty. I agree this is somewhat true when it comes to individuals, but not necessarily true at all when dealing with large groups of people. There I think you *can* connect the dots .... going forward. You can forecast the immediate future based on analysis and logical projections of current trends.

My Predictions as of April 5, 2015.

As to **when** society will transition from information to knowledge, I predict **5-20 years**, which is very optimistic.

As to **how** this change will take place, I will go out on a limb and make several specific predictions. The predictions are based on my analysis and estimates of certain probable events. In five to twenty years my analysis will either be vindicated, or shown to be embarrassingly wrong. Oh well. It is worth the risk because there is a chance that by making these positive predictions I will trigger a self-fulfilling prophecy. Maybe the alleged future vision will be the *observation* that makes [Schrodinger's Cat](#) live.

Here are twelve future predictions, followed by a few more general trend analysis projections concerning *crowd-sourcing* and *crowd-wisdom*. All seem to have an AI element and multiple kinds of ideal computer administrators. The AI Admins protect our human interests in the cyber world and facilitate the transition to the Knowledge Age. I was a little surprised by this, but that is where my thinking led.

1. **Several inventions, primarily in *insanely great* new computer hardware and software, will allow for the creation of many new types of cyber and physical interconnectivity environments. There will be many more places that will help people to go beyond information to knowledge. They will be both *virtual realities*, for you or your avatars to hang out, and real-world meeting places for you and your friends to go to. They will not be all fun and games (and sex), although that will be a part of it. Many will focus exclusively on learning and knowledge. The new multidimensional, holographic, 3D, virtual realities will use wearables of all kinds, including *Oculus-like* glasses (shown above), *iWatches*, and the like. [Implant](#) technology will also arise, including some brain implants, and may even be common in twenty years. Many of the environments, both real and VR, will take education and knowledge to a new level. *Total emersion* in a learning environment will take on new meaning. The TED of the future will be totally mind-blowing.**

2. **Some of the new types of social media sites will be environments where subject matter experts (SME) are featured, avatars and real, cyber and in-person, shifted and real-time. There will also be links to other sites or rooms that are primarily information sources.**

3. **The new SME environment will include *products* and *services*, with both *free* and *billed* aspects.**

4. **The *knowledge nest* environments will be *both online and in-person*. The real life, real world, interactions will be in safe public environments with direct connections with cyberspaces. It will be like stepping out of your computer into a Starbucks or laid-back health spa.**

5. **The knowledge focused cyberspaces, both those with and without actual real-words SMEs, will look and feel something like a good social media site of today, but with multimedia of various kinds. Some will have *Oculus* type VR enhancements like the [StarTrek holodeck](). All will have system administrators and other staff who are tireless, knowledgeable, and fair; *but most will not be human.***

6. **The admins, operators and other staff in these cyberspaces will be advanced AI, like cyber-robots. Humans will still be involved too, but will delegate where appropriate, which will be most of the time. This is one of my key predictions.**

7. **The presence of AIs will spread and become ubiquitous. They will be a key part of the IOT - *Internet of Things*. Even your refrigerator will have an AI, one that you program to fit your current dietary mood and supply orientation.**

8. **The knowledge products and services will come in a number of different forms, many of which do not exist in the present time, but will be made possible by other new inventions, especially in the area of communications, medical implants, brain-mind research, wearables, and multidimensional video games and conferences.**

9. **All subject areas will be covered, somewhat like *Wikipedia*, but with super-intelligent cyber robots to test, validate and edit each area. The AI robots will serve most of the administrator**

and other cyber-staffing functions, but not all.

10. **The AI admins will monitor, analyze, and screen out alleged SMEs who do not meet certain quality standards. The AI admins will thus serve as a truth screen and quality assurance. An SME's continued participation in an AI certified site will be like a *Good Housekeeping Seal of Approval.***

11. **The AI admins will also monitor and police the SME services and opinions for fraud and other unacceptable use, and for general cybersecurity. The friendly management AIs will even be involved in system design, billing, collection, and dispute resolution.**

12. **Environments hosted by such friendly, fair, patient, sometimes funny, polite (per your specified level, which may include *insult mode)*, high IQ intelligence, both human and robot, will be generally considered to be reliable, bona fide, effective, safe, fun, enriching, and beautiful. They will provide a comforting alternative to information overload environments filled with conflicting information, including its lowest form, data. These alternative *knowledge nests* will become a refuge of music in a sea of noise. Some will become next generation *Disney World* vacation paradises.**

In addition to this vision of SME *knowledge nests*, I can reasonably foresee the development of many other types of safe AI hosted enterprises. Some important ones will focus on the *wisdom of the crowd,* some on *crowdsourcing,* and some

on both. Others will focus on other things entirely, including schools and crafts, shopping, charities, recreations, hobbies, games, travel, business lines, legal disciplines, special interests, products, services lines, political parties, policy focus groups, governments, police, health, hospital, rehabilitation, sex, drugs, and other quasi-legal activities,

For some early examples of this already, see *Craig's List*, your favorite forum or Internet Relay Chat ([IRC](#)), Facebook pages, Twitters, [YouTube Channels](#), inter-active blogs and the like. Think what they would be like with super-smart admins, operators and other staff, and the best content in the world. When this happens new types of interest groups and social collectives will arise that are based on other new inventions. They will accelerate the development of many new kinds of social groups and communication methods. Many will easily spill over into the real world. They will first take the form of restaurants, shops, cafes, spas and then later branch out into stores, offices and hotels. The group interactions of all types could quickly take us to a knowledge society.

This prediction on *crowd sourcing* and *crowd wisdom* is to a large extent based on Steve Job's favorite guide, ***intuition***. So I cannot be very specific. But my sense is that it will all again tie into AI. When these new kind of clubs or environments, or whatever the next generation social media sites end up being called, reach a certain threshold of participation, something new and unexpected will emerge. It will arise from these new collective groups and the Big Data of knowledge they generate. We are just beginning to tap the enormous potential of the *wisdom of the crowd*, and the power, both economic and political, of *crowdsourcing*. The AIs could make them happen in a big way. The impact on politics and policy could be especially powerful.

Many Have Already Transitioned from Information to Knowledge

Media seems to be the chief villain of the superficial information society, but it can quickly change as people change. Say what you will about Twitter, blogs, and modern media, the attention spans of *many* are, nevertheless, lengthening. Almost all my tweets, and that of many others, link to longer articles. I am reading more books than ever, on a Kindle, with millions of books just seconds away from search and download. There are many like me who are now focused primarily on knowledge, not information. More and more of us are taking time to think things through for ourselves.

Many of us are following the natural learning stages and moving from information to knowledge. We are *not* doing so by simply *piling-on* more and more information, or by researching endless facts. We do so by trying to understand what all the data means, by looking for the hidden patterns and structure underlying the mountains of data.

The new monthly version of this blog, indeed, this very essay, is another example of the transition. If you want a blog that focuses on e-Discovery information, go to a good one like K&L Gates' *eDiscoveryLaw.com*. It has the latest news of case law and other current events, which is the way this blog used to be when it was weekly. Now at the e-Discovery Team you will find analysis, not news. You will find how I make sense of all of this information.

Here is a chart I prepared of some examples of the differences as we progress to version 2.0 of the Computer Age. Here you see a transition from **active, independent *search***, to **responsive, collective *judgment***.
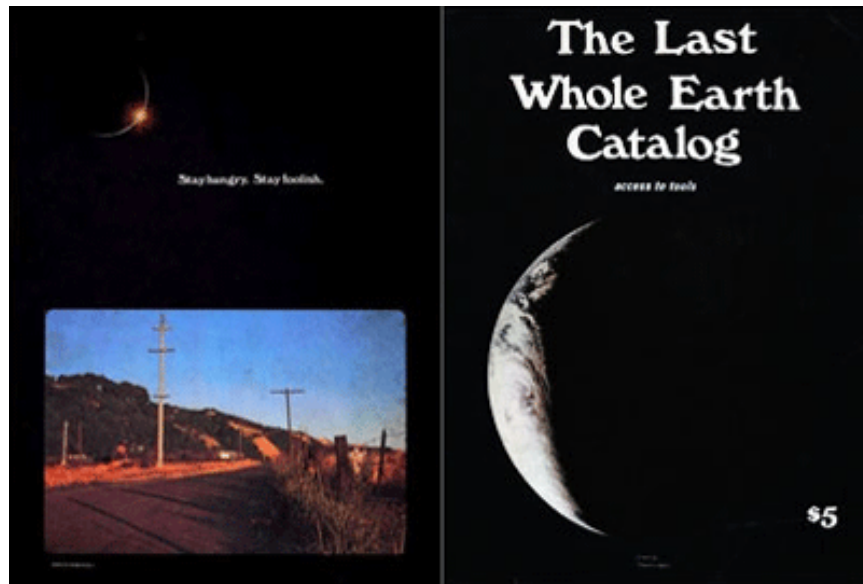
Information	Knowledge
Store	Process
Flood	Reservoir
Search	Learn
Google	Wikipedia
Algebraic	Geometric
Static Webs	Changing Environments
TV	Video Games
Religion	Philosophy
Tradition	Inventions
CNN	PBS
Newspapers	Blogs
eDiscoveryLaw Blog	*e-DiscoveryTeam*
Computational	Advanced Computational

I Do Not See a Way at This Time to Transition to a Third Stage Wisdom Society

When as a new global society we make this collective transition from information to knowledge, we will, I trust, at *that point* see a clear way to the final destination of wisdom. At the current time, I *do not see any way, clear or murky,* to collective wisdom. We are still far from a wisdom-based society. It will, I admit, take decades of knowledge building for a wisdom-based society to be possible. Such a society may never be attained, but my intuition tells me that it

will. It depends in large part on the whole earth having the right computer tools.

In a wisdom-based society people will not only be rational, but also intuitive and emphatic. People will not be *imprisoned* by their own thinking. Although this fate does entrap many who focus solely on information and knowledge. Despite the Star Trek *myth of Spock*, you can have *both* logic and emotion, and many other traits as well, including intuition, spirituality, humor, aesthetics, and sense of beauty and design.

The common law legal tradition that is my professional home embraces such a holistic model. You might think of it as rational and knowledge based only, but it is not. It is based on both law (the rational part) and *equity*. It is based on fundamental human perceptions and feelings of fairness and justice. To see this you have only to look at the *Declaration of Independence, Constitution*, and *Bill of Rights*. Call us lawyers dreamers if you wish, but that is the higher calling of all people - *Truth and Justice for all*, just as our fundamental legal documents declare is our inalienable right.

Although I do not see a way to a wisdom society in our times, I do know one thing - *information alone will not get us there*. That much is obvious from the superficial, short-attention-span world in which we live. Also, a society, like a person, cannot just leapfrog from information to wisdom. There has to be an intermediary step. A knowledge-based society must come next, and *then* we will know what to do.

Although We Cannot Get to a Wisdom Based Society Now, We Can Get to a Society Based on Knowledge
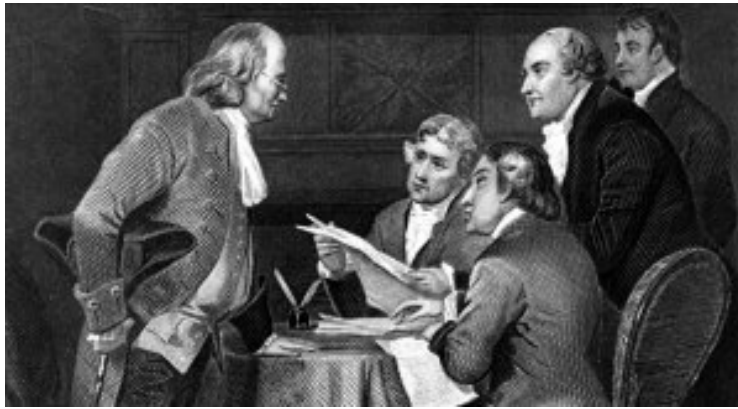
The transition from information to knowledge is a big step, but it is attainable. The transition of society from wide-spread ignorance and information shortages, to an over-abundance of information, came very fast. This gives us hope to think the next step to knowledge can come quickly too. It could happen in the next five to twenty years, maybe less. I hope to live long enough to see that, and will take whatever action I can to *make it so*.

The little slice of the pie that I see now is that a knowledge based society can come as we develop new technologies to *analyze* the information generated, to process it to knowledge, and to teach on a deep level. It can happen once large numbers of people are not just informed, but knowledgeable. I think this is a natural progression. People very quickly get sick of a constant flood of too much information. There is a natural yearning for real knowledge. There is an innate human desire to make sense of the world, to understand. It is, after all, a basic survival skill. This transition from information to knowledge can happen as education grows. It will very soon become *cool* to really know and understand, not just spout off the latest fad facts.

The Next Generations Will Figure Out a Way

This next stage knowledge-based society will have a good chance of taking us to the end game, the wise society. Surely the next level society will *know* how to do it. They will know enough not to get trapped into mere knowledge, just as we are currently informed enough not to get trapped into mere information. Eventually the goals and wise dreams of the *Declaration of Independence* will be attained. There is a way. It is built on embracing technology, not opposing it, but being very careful what you kiss.

I do not delude myself into thinking that I will live to see that day. The day when large numbers of people are not just knowledgeable, but wise. The day when society treasures wisdom above all else. The day when this collective wisdom finally allows our Founding Fathers' *Declaration of Independence* dreams to come true.

Although I do not think I will live that long, I do have faith and confidence that the next generations of computer born people will find a way. Perhaps our children, or children's children, will live to see that day. They will not get stuck with knowledge alone. They will hold true to the dreams of our ancestors. The future generation will find a way to transition from a mere knowledge based society, to one where *all* of Mankind can enjoy freedom, equality and liberty, not just a privileged few.

Transition Beyond an Information Society is a Survival Imperative

This journey, this progress of our technology culture, is not an idle dream. It is a survival imperative. **Information alone, unprocessed, and not yet converted to knowledge, is dangerous.** I imagine that some planets in this enormous Universe of ours get stuck and never make it to the next step. These other worlds destroy themselves with *too much information* and not enough knowledge. They self-destruct in various new technology scenarios, from nuclear holocaust, to climate destruction, to *Big Brother* dictatorships, to self-obsessed, stagnating, shallow, greedy, short attention span news-junkie people. All of these cultural disasters could well await our own planet.

There are so many ways that a culture based on Information, not Knowledge, can go wrong and either destroy itself, or stagnate, and never make it to the end game of freedom and justice for all. The transformation from an Information society to a Knowledge society must happen quickly if we are to survive and prosper.

Personal computers got us into the Information society and out of the past age of ignorance. It connected the world and brought down many barriers. There has been tremendous progress. But even with all of the technology now at hand, we are still in a very precarious position. We must continue to invent and advance our technologies to transition to knowledge. Our answer lies in part in analytics, in processing information so that we discern the underlying patterns, so that we can understand what all of the information means. The computer technologies that advance such analytics are part of our way forward. Companies that develop and sell such products and services would be good investment opportunities.

It is not enough, for instance, to have *heard* of global warming, to have *seen* the information. This information must be *understood*. We as a society

must *know* what it means. That is the difference between information and knowledge. Everyone today in our Information based society has at least *heard* of global warming, but, for most, it is just information. It is remote, abstract. It is just redundant information. We do not really *know* what it means. That is consistent with an information-based culture. It demonstrates the danger of groups having advanced technologies without knowledge of how to use them.

Information alone does not drive corrective action or hard choices. Information may be right, it may be wrong. It seldom drives actions. But once we *know and understand*, then action becomes easy, becomes natural. We seem to be hard-wired that way as humans.

It is one thing to read a news report that a tiger may be around, to be informed of the tiger spotting. It is quite another to *know* that a tiger is nearby, to hear it, to see the tiger for yourself. That instantly puts you in *fight or flight* mode. If you are connected to a group, and they all scream a *tiger* warning, then you would move. But if you just hear the news, just receive abstract information, you may just say to yourself, *hmm interesting, tigers are around you say,* and then go back to your daily chores. The next minute, when you are off-guard, you are eaten by a tiger.

Conclusion

We have to *know* to act, and so we need to go beyond an information society, and we have to do it *fast*. If we do not, the dark side of technology could soon overwhelm us. Stop *just reading*. Stop *just being informed*. It is not enough. Think. Process. Analyze. Cross-check. Verify. Take action. Create. Share. Teach. Teamwork.

Let us all work together to take our computer based culture to the next stage of social development, the knowledge stage. Stay focused on knowledge, not information. Of course, stay informed too. I am not saying to wall yourself off and stop taking in new information so that you can just study and think. I am saying not to focus *solely* on information. I am saying to balance your information input with your internal processing.

Never be satisfied with just being informed, push yourself to become knowledgeable. Go to the next step to thoroughly process and analyze. Invest both your time and money on technology that will help you to transform information into knowledge.

Do not fear the new analytics and AI, ride these new technologies to gain real knowledge. For instance, if you are a lawyer who needs to find evidence, do not just read about predictive coding. Do it. Action and testing are the way to personal understanding. Become knowledgeable about what is important to you, not just informed.

The new analytic inventions, and others that allow for knowledge, not just information, can be our Ark. They can allow us to survive the flood of information and arrive safely on the other side. They can lead to a more mature society based on knowledge. From the new world of global knowledge, another path will surely appear, one leading to Wisdom. Our children, or children's children, may then finally attain a global society based on wisdom, on *truth, liberty and justice for all.* We may not live to see it, but to try anyway, to care, is an important part of what makes us human.