the futures foundation
engaging all Australians in creating a better future...

Volume 16, No. 5, October 2016

FUTURE NEWS

TO CONNECT, TO INFORM AND TO INSPIRE

IN THIS EDITION

WOULD A WORK-FREE WORLD BE SO BAD?

Fears of civilization-wide idleness are based too much on the downsides of being unemployed in a society premised on the concept of employment.

by Ilana E. Strauss

A 1567 painting by Pieter Bruegel the Elder depicts a mythical land of plenty, where people grow idle in the absence of work.

People have speculated for centuries about a future without work, and today is no different, with academics, writers, and activists once again warning that technology is replacing human workers. Some imagine that the coming work-free world will be defined by inequality: A few wealthy people will own all the capital, and the masses will struggle in an impoverished wasteland.

A different, less paranoid, and not mutually exclusive prediction holds that the future will be a wasteland of a different sort, one characterized by purposelessness: Without jobs to give their lives meaning, people will simply become lazy and depressed. Indeed, today's unemployed don't seem to be having a great time. One Gallup poll found that 20 percent of Americans who have been unemployed for at least a year report having depression, double the rate for working Americans. Also, some research suggests that the explanation for rising rates of mortality, mental-health problems, and addiction among poorly-educated, middle-aged people is a shortage of well-paid jobs. Another study shows that people are often happier at work than in their free time. Perhaps this is why many worry about the agonizing dullness of a jobless future.

But it doesn't necessarily follow from findings like these that a world without work would be filled with malaise. Such visions are based on the downsides of being unemployed in a society built on the concept of employment. In the absence of work, a society designed with other ends in mind could yield strikingly different circumstances for the future of labor and leisure. Today, the virtue of work may be a bit overblown. "Many jobs are boring, degrading, unhealthy, and a squandering of human potential," says John Danaher, a lecturer at the National University of Ireland in Galway who has written about a world without work. "Global surveys find that the vast majority of people are unhappy at work."

These days, because leisure time is relatively scarce for most workers, people use their free time to counterbalance the intellectual and emotional demands of their jobs.

"When I come home from a hard day's work, I often feel tired," Danaher says, adding, "In a world in which I don't have to work, I might feel rather different"—perhaps different enough to throw himself into a hobby or a passion project with the intensity usually reserved for professional matters.

Having a job can provide a measure of financial stability, but in addition to stressing over how to cover life's necessities, today's jobless are frequently made to feel like social outcasts. "People who avoid work are viewed as parasites and leeches," Danaher says. Perhaps as a result of this cultural attitude, for most people, self-esteem and identity are tied up intricately with their job, or lack of job.

Plus, in many modern-day societies, unemployment can also be downright boring. American towns and cities aren't really built for lots of free time: Public spaces tend to be small islands in seas of private property, and there aren't many places without entry fees where adults can meet new people or come up with ways to entertain one another.

"Work is something that you don't want to do but you have to do."

The roots of this boredom may run even deeper. Peter Gray, a professor of psychology at Boston College who studies the concept of play, thinks that if work disappeared tomorrow, people might be at a loss for things to do, growing bored and depressed because they have forgotten how to play. "We teach children a distinction between play and work," Gray explains. "Work is something that you don't want to do but you have to do." He says this training, which starts in school, eventually "drills the play" out of many children, who grow up to be adults who are aimless when presented with free time.

"Sometimes people retire from their work, and they don't know what to do," Gray says. "They've lost the ability to create their own activities." It's a problem that never seems to plague young children. "There are no three-year-olds that are going to be lazy and depressed because they don't have a structured activity," he says.

But need it be this way? Work-free societies are more than just a thought experiment—they've existed throughout human history. Consider hunter-gatherers, who have no bosses, paychecks, or eight-hour workdays. Ten thousand years ago, all humans were hunter-gatherers, and some still are. Daniel Everett, an anthropologist at Bentley University, in Massachusetts, studied a group of hunter-gathers in the Amazon called the Pirahã for years. According to Everett, while some might consider hunting and

gathering work, hunter-gatherers don't. "They think of it as fun," he says. "They don't have a concept of work the way we do."

"It's a pretty laid-back life most of the time," Everett says. He described a typical day for the Pirahã: A man might get up, spend a few hours canoeing and fishing, have a barbecue, go for a swim, bring fish back to his family, and play until the evening. Such subsistence living is surely not without its own set of worries, but the anthropologist Marshall Sahlins argued in a 1968 essay that hunter-gathers belonged to "the original affluent society," seeing as they only "worked" a few hours a day; Everett estimates that Pirahã adults on average work about 20 hours a week (not to mention without bosses peering over their shoulders). Meanwhile,according to the Bureau of Labor Statistics, the average employed American with children works about nine hours a day.

"France had 84 holidays a year in 1700, and weather kept them from farming another 80 or so days a year."

Does this leisurely life lead to the depression and purposelessness seen among so many of today's unemployed? "I've never seen anything remotely like depression there, except people who are physically ill," Everett says. "They have a blast. They play all the time." While many may consider work a staple of human life, work as it exists today is a relatively new invention in the course of thousands of years of human culture. "We think it's bad to just sit around with nothing to do," says Everett. "For the Pirahã, it's quite a desirable state."

Gray likens these aspects of the hunter-gatherer lifestyle to the carefree adventures of many children in developed countries, who at some point in life are expected to put away childish things. But that hasn't always been the case. According to Gary Cross's 1990 book A Social History of Leisure Since 1600, free time in the U.S. looked quite different before the 18th and 19th centuries. Farmers—which was a fair way to describe a huge number of Americans at that time—mixed work and play in their daily lives. There were no managers or overseers, so they would switch fluidly between working, taking breaks, joining in neighborhood games, playing pranks, and spending time with family and friends. Not to mention festivals and other gatherings: France, for instance, had 84 holidays a year in 1700, and weather kept them from farming another 80 or so days a year.

This all changed, writes Cross, during the Industrial Revolution, which replaced farms with factories and farmers with employees. Factory owners created a more rigidly scheduled environment that clearly divided work from play. Meanwhile, clocks—which were becoming widespread at that time—began to give life a quicker pace, and religious leaders, who traditionally endorsed most festivities, started associating leisure with sin and tried to replace rowdy festivals with sermons.

As workers started moving into cities, families no longer spent their days together on the farm. Instead, men worked in factories, women stayed home or worked in factories, and children went to school, stayed home, or worked in factories too. During the workday, families became physically separated, which affected the way people entertained themselves: Adults stopped playing "childish" games and sports, and the streets were mostly wiped clean of fun, as middle- and upper-class families found working-class activities like cockfighting and dice games distasteful. Many such diversions were soon outlawed.

With workers' old outlets for play having disappeared in a haze of factory smoke, many of them turned to new, more urban ones. Bars became a refuge where tired workers drank and watched live shows with singing and dancing. If free time means beer and TV to a lot of Americans, this might be why.

At times, developed societies have, for a privileged few, produced lifestyles that were nearly as play-filled as hunter-gatherers'. Throughout history, aristocrats who earned their income simply by owning land spent only a tiny portion of their time minding financial exigencies. According to Randolph Trumbach, a professor of history at Baruch College, 18th-century English aristocrats spent their days visiting friends, eating elaborate meals, hosting salons, hunting, writing letters, fishing, and going to church. They also spent a good deal of time participating in politics, without pay. Their children would learn to dance, play instruments, speak foreign languages, and read

Latin. Russian nobles frequently became intellectuals, writers, and artists. “As a 17th-century aristocrat said, ‘We sit down to eat and rise up to play, for what is a gentleman but his pleasure?’” Trumbach says.

It’s unlikely that a world without work would be abundant enough to provide everyone with such lavish lifestyles. But Gray insists that injecting any amount of additional play into people’s lives would be a good thing, because, contrary to that 17th-century aristocrat, play is about more than pleasure. Through play, Gray says, children (as well as adults) learn how to strategize, create new mental connections, express their creativity, cooperate, overcome narcissism, and get along with other people. “Male mammals typically have difficulty living in close proximity to each other,” he says, and play’s harmony-promoting properties may explain why it came to be so central to hunter-gatherer societies. While most of today’s adults may have forgotten how to play, Gray doesn’t believe it’s an unrecoverable skill: It’s not uncommon, he says, for grandparents to re-learn the concept of play after spending time with their young grandchildren.

When people ponder the nature of a world without work, they often transpose present-day assumptions about labor and leisure onto a future where they might no longer apply; if automation does end up rendering a good portion of human labor unnecessary, such a society might exist on completely different terms than societies do today.

So what might a work-free U.S. look like? Gray has some ideas. School, for one thing, would be very different. “I think our system of schooling would completely fall by the wayside,” says Gray. “The primary purpose of the educational system is to teach people to work. I don’t think anybody would want to put our kids through what we put our kids through now.” Instead, Gray suggests that teachers could build lessons around what students are most curious about. Or, perhaps, formal schooling would disappear altogether.

“The primary purpose of the educational system is to teach people to work.”

Trumbach, meanwhile, wonders if schooling would become more about teaching children to be leaders, rather than workers, through subjects like philosophy and rhetoric. He also thinks that people might participate in political and public life more, like aristocrats of yore. “If greater numbers of people were using their leisure to run the country, that would give people a sense of purpose,” says Trumbach.

Social life might look a lot different too. Since the Industrial Revolution, mothers, fathers, and children have spent most of their waking hours apart. In a work-free world, people of different ages might come together again. “We would become much less isolated from each other,” Gray imagines, perhaps a little optimistically. “When a mom is having a baby, everybody in the neighborhood would want to help that mom.” Researchers have found that having close relationships is the number-one predictor of happiness, and the social connections that a work-free world might enable could well displace the aimlessness that so many futurists predict.

In general, without work, Gray thinks people would be more likely to pursue their passions, get involved in the arts, and visit friends. Perhaps leisure would cease to be about unwinding after a period of hard work, and would instead become a more colorful, varied thing. “We wouldn’t have to be as self-oriented as we think we have to be now,” he says. “I believe we would become more human.”

The original article appeared in the Atlantic magazine, and is reproduced with permission.

FUTURISTS IN ACTION

SCENARIOS FOR THE FUTURE OF WORK

The Copenhagen Institute for Future Studies is one of a number of similar organisations around the world that work with private enterprise and governments to create the future. Below is an edited article from their "Scenarios" magazine in which the authors explore potential scenarios for the future of work.

Lead author Klaus Morgensen introduces the article by saying: "We are witnessing a new wave of automation. Computers and robots are becoming both cheaper and more advanced year by year, and they take over more and more work that used to be done by humans. We look at four scenarios for what role human beings may play in the highly automated society of the future."

"Half of US jobs face replacement by computers and robots over the next 20 years."

HOW WILL WE MAKE A LIVING?

In 2013, Oxford Martin School of Economics caused a stir with a report which estimated that roughly half of US jobs faced replacement by computers and robots over the next 20 years. More precisely, it was estimated that 47 percent of American job types faced a great risk of being automated, while another 19 percent faced a medium risk of being automated. According to the analysis, only 33 percent face little or no risk of automation. Among the 'safe' jobs, the authors Carl Benedikt Frey and Michael Osborne count work in health, law, finance, media and education. However, if we look at the automation that already is happening in these fields, with e.g. IBM's self-learning supercomputer Watson, it seems naïve to imagine that these fields will remain 'protected'. Few job types in the listed fields are likely to be entirely replaced by computers and robots, but new technology will make it possible for a few to do things that today are the work of many. Hence, unless there is a need for handling far more tasks, even these fields will be subject to increased unemployment due to automation.

In a more recent report from 2015, Frey and Osborne take a closer look at the issue. A recurring point is that automation generally increases inequality in a society. Since 1980, productivity in developed economies, measured as GDP per hour worked, has increased an average of 1.7 percent a year, but work wages, including employer-paid benefits and insurances, have only increased 1.1 percent a year. The difference has gone to the people who own the machines or speculate in securities – a result that reflects economist Thomas Piketty's conclusion that income from capital investments generally grows faster than income from work. The Gini coefficient (a measure of income inequality) in developed economies has since 1980 grown from less than 28 to more than 33, and this reflects that the very richest in our societies experience enormous income increases while the majority experiences stagnating or even declining real wages. Frey and Osborne think that the sweeping automation wave we will see in the coming decades will increase inequality further by particularly benefiting those who own the machines, directly or indirectly through capital investments.

TWO CENTRAL UNCERTAINTIES

The question is if it has to be this way. The future isn't set in stone. Social developments aren't shaped solely by large, unstoppable trends, but also very much by the decisions we collectively make. Hence, we need to think in terms of scenarios – visions of different, possible futures – to get the full picture of the challenges and, not least, opportunities that the changes will bring.

In the years following the financial crisis, most developed countries have experienced major unemployment. In recent years, economic growth has started to resume, but

employment hasn't increased as much as it was hoped. The general interpretation is that the renewed growth is due to a combination of increased automation and rapidly growing tech companies that don't need many employees. The three biggest companies in Silicon Valley were in 2014 estimated to have a combined market capitalisation in excess of a trillion dollars. Distributed among their only 137,000 employees, this was about USD 7.3 billion per employee.

There is no doubt that automation will make a lot of labour obsolete. What is uncertain is whether the economic growth generated by automation, with some delay, will create as many workplaces as are lost. This has actually been the way of things since the dawn of the industrial age, in spite of the massive automation that followed the invention of the steam engine. When farming was industrialised, new jobs were created in manufacturing, and as manufacturing has become automated, new jobs have cropped up in the service and knowledge industries. Economic growth gives people more money to spend, which means that they can pay for products they couldn't afford before, or have others do tasks that they used to have to do on their own. Automation generates economic growth, and economic growth generates jobs.

"Increased polarisation as a result of automation is no law of nature; it is a result of the priorities and decisions of our governments."

However, several scientists believe that the situation is different this time. As mentioned, half of current jobs are expected to be automated over the next 20 years, and there is no reason to believe that the pace will decrease in the decades after that. This is generally a result of the development of artificial intelligence that makes computers and robots able to handle increasingly complex tasks. According to extrapolations of computer capacity, an inexpensive computer which you can get for USD 1,000 may already by 2023 have a capacity corresponding to the human brain. This capacity is expected to increase a hundredfold every decade after that if advances are made at the past and current pace. This means that a growing group of people will become unable to perform any kind of job – mental or physical – that it won't make more sense having robots or computers do. I will argue that this in fact is a development that has been underway for a long time. There are people permanently outside the labour market today who would have had no problem getting a job fifty or a hundred years ago.

The first central uncertainty for the coming automation wave is hence: Will as many new jobs be created over time as disappear, or will automation take over more jobs than are created and hence lead to increased unemployment?

The other central uncertainty is the risk of increased economic polarisation that Frey and Osborne mention: Will the economic growth only benefit a small elite, while the majority experiences declining wages or is thrown into unemployment, or will the increased wealth come to benefit all? Increased polarisation as a result of automation is no law of nature; it is a result of the priorities and decisions of our governments (and hence our voters). A real political effort to combat inequality – something that the UN in 2015 set as one of the most important goals for the future – could mean that everybody, or at least most, will benefit from the global increase in wealth generated by automation. The question is if political commitment can be mustered globally for such an effort.

FOUR SCENARIOS FOR HUMAN WORK IN THE FUTURE

These two uncertainties frame a range of outcomes in two dimensions. One dimension represents the uncertainty new jobs versus unemployment (to put it simply); the other the uncertainty economic polarisation versus economic equalisation (put equally simply). In order to illustrate the breadth of this range of outcomes as best possible, I outline four scenarios below which represent situations near the extremes of the two uncertainties. The scenarios are hence not predictions of the future, but rather illustrations of how differently the future may turn out as a result of the decisions we collectively make today. They can be compared to street signs at a crossroads: If you turn east, you come to Easthaven; if you turn north, you come to Northcastle, and so on. Which destination you find most desirable will likely depend on who you are and how well you think you will do in the different scenarios.

The four scenarios are based on the following combinations of uncertainties:

- New feudalism: new jobs and economic polarisation
- Creative society: new jobs and economic equalisation
- Superstar economy: unemployment and economic polarisation
- The hobby age: unemployment and economic equalisation

Once you have read the scenarios, you might consider which scenario you believe is most likely to come true. Then you might consider which scenario you would prefer to live in. If your favourite scenario isn't the scenario you believe in the most – what are you going to do about it?

"Educated academics see their jobs disappear and are forced to take whatever work they can find, no matter how humble."

NEW FEUDALISM

As automation gathers momentum, wages on the labour market will be put under increased pressure. Many skilled workers as well as well-educated academics see their jobs disappear and are forced to take whatever work they can find, no matter how humble. The few who become richer because of automation are willing to pay for all sorts of labour – as long as it doesn't cost too much. The middle class is squeezed, and society has been split into an upper class of 0.1-1 percent of the population, a 'middle' class of 10-20 percent, with the rest making up a 'precariat'. This 'precariat' is the poorest segment in society, living with constant uncertainty in their everyday lives. Job security is an unobtainable pipedream, and even when working full time, it is difficult for most people to make ends meet due to low wages.

The situation isn't unlike the Middle Ages, when a small elite of feudal lords ruled over large populations of vassals and serfs, with a modest middle class of merchants, guilded craftsmen, and priests. All serve the 'feudal lords', but some may, due to fortunate circumstances, create decent lives for themselves. Social mobility is low, as neither the upper class nor the middle class is interested in giving the 'riff-raff' any opportunity to challenge their position.

THE CREATIVE SOCIETY

Certain types of work aren't easily automated. This is particularly true for creative work in a broad sense – research, development, design, communication, coaching, management, strategy, entertainment and art – since computers can't be programmed to be creative, let alone innovative. As more routine jobs in production, services and knowledge work become automated, labour is liberated for creative work, and it turns out that there actually are enough jobs in the creative industries. All people are born creative – just observe children at play – and even though many have unlearned their creativity in the performance-oriented industrial and knowledge societies, most are able to rediscover it.

It was said jokingly about the service society that everybody would make a living cutting each other's hair, and in the creative society we could say that everybody makes a living entertaining, inspiring, inventing and designing for each other – we have machines to do all the dull, routine work. Material wealth is taken for granted,

since automation means that products aren't much more expensive than the raw materials they are made from. This means that the focus increasingly is shifted towards immaterial, emotional and cultural wealth. They who own the machines do not become particularly rich, since the work that machines can do in reality becomes worth less and less. What's valuable is the special and unique, and that's all the things that only people can do.

SUPERSTAR ECONOMY

The automation of manufacturing has shown that a few people, with the help of advanced machines, can produce far more than a lot of people without such help. It turns out that the same is true for the creative industry. We have long seen this in the music industry, where a few superstars dominate the hit lists and the music shows in radio and TV. Why settle for second best when everybody can have the best? In the old days, a lot of people had to slave for years to make an animated movie; today a single person with the right software can do it alone. Architects and designers can handle far more projects in half the time by having computers do the laborious parts of the work. In the knowledge industry, advanced expert systems take over a lot of work that used to be handled by doctors, lawyers, economists, and other specialists. This has created a superstar economy, where the elite in all industries take all the customers without leaving any for the many under the top layer. The winner takes it all.

"We should do away with the notion that everybody must work in order to justify their right to exist."

The result is that it becomes increasingly difficult for most people to find work, even though neither ability nor willingness is lacking. More and more end up on public benefits, which keep getting reduced as more and more need support. Because the unemployed with their almost negligible income stop being interesting as consumers, the elite basically only create products for themselves, apart from cheap fast food and mass-produced entertainment to keep the masses from rebelling.Panem et circenses. If the elite want people to do various things, no matter how demeaning, it is not difficult for them to find volunteers – if there is even the tiniest chance that it can lift those people out of poverty. Private reality shows have become a popular pastime among the elite.

THE HOBBY AGE

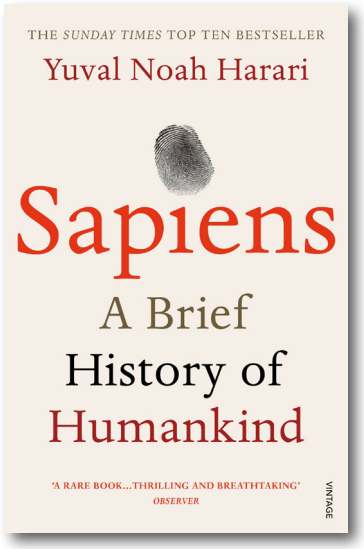
Automation takes over more and more jobs, but since automation also creates economic growth, this is not seen as a problem. It doesn't make sense to force people to work when the machines can do the work better and more cheaply. Hence, society has chosen to make sure that everybody has a good life, where machines provide not just the bare necessities, but basically all that a heart could desire. Some communities introduce basic income; in others, all sorts of services are made free for people that don't have an income. Why should people suffer in a rich society?

Nobody has to work, but few choose to lean back and do nothing. Voluntary social work is common, and many throw themselves at hobby projects, creating art or inventing stuff. This makes society richer in social and cultural capital, and in this way, citizens earn the rights to their free benefits. A few still manage to create enormous value and thereby amass enormous fortunes, but it is ensured that everybody will benefit from the development. As Buckminster Fuller said already in the 1950s: A few can create breakthroughs that can support everybody else; hence we should do away with the notion that everybody must work in order to justify their right to exist.

Sapiens:
A Brief History of Humankind
by Yuval Noah Harari

Book Review

by Charles Brass – Chair, futures foundation



Yuval Harari is an academic historian whose on-line course developed around this book has attracted nearly 100,000 students.

It is easy to see why.

In just 462 pages Harari manages to summarise the 70,000 year history of Homo Sapiens on Planet Earth in a very engaging and readable way. It isn't clear until very near the end why he does this, but that doesn't matter at all. His story is very much worth reading in its own right.

Harari's intention is to make his readers think about the future of Homo Sapiens, and anyone who gets to the last chapter can't help wondering just what sort of future we are creating – because Harari is very clear that human beings are, for better or worse, in charge of our own destiny and that of much of the other life on the planet. I am tempted to quote from his afterword – entitled: "The Animal that became a God"- but I recommend reading the book first so his conclusion makes more sense.

"The Agricultural Revolution was the greatest fraud perpetrated on human beings in history."

The journey to the conclusion is fascinating and challenges a number of myths about human history.

For example, Harari argues persuasively that the Agricultural Revolution was the greatest fraud perpetrated on human beings in history. Conventionally it is argued that the period around 10,000BCE was a time of great human flourishing. Harari argues that on most fronts settling into cities was a huge step backwards for those alive at the time. But it did allow the overall number of human beings on the planet to explode, and it did the same for domesticated animals and crops. So, perhaps the real beneficiaries of the agricultural revolution were our genes, and the genes of the animals and plants we brought along with us. Probably the human species overall benefited, but only at great cost to individual members.

Harari senses echoes of the same outcome in the industrial revolution as well.

He also looks in detail at the impact Homo Sapiens have had on the species with whom we share the planet, and concludes that we have not only ruthlessly exterminated many plant and animal species, we have done the same to the perhaps six other homo- species within whom we once cohabited. He also notes that we have created a culture that is distinctly human and that separates us from all other species on the planet. Harari is in awe of this culture, but questions its costs:

"Millions of years of evolution have designed us to live and think as community members. Within a mere two centuries we have become alienated individuals. Nothing testifies better to the awesome power of culture."(p403)

To demonstrate this power, Harari notes: "Among today's elites, assertions about the contrasting merits of diverse human groups are almost always couched in terms of historical differences between cultures rather than biological differences between races. We no longer say, 'It's in their blood.' We say, 'It's in their culture."

Book Review

Sapiens: A Brief History of Humankind
by Yuval Noah Harari

"It is an iron rule of history that what looks inevitable in hindsight was far from obvious at the time."

After examining human history up to the creation of the global world we now inhabit, Harari pauses to ask why homo-sapiens has been so successful. In doing so, he makes a point that resonates with all futurists, that hindsight can be dangerous. Historians, he says, can point out how things happened but they struggle to explain why. "It is an iron rule of history that what looks inevitable in hindsight was far from obvious at the time." (p266). "We study history not to know the future but to widen our horizons, to understand that our present situation is neither natural nor inevitable, and that we consequently have many more possibilities before us than we can imagine." (p269). "History has a very wide horizon of possibilities, and many possibilities are never realised." (p272)

Nonetheless, "Humankind has taken over the world" (p392) and despite growing "increasingly impervious to the whims of nature, they have become ever more subject to the dictates of modern industry and government" (p394).

Harari calls this a permanent revolution (p392) and he devotes the last quarter of his book to exploring how (and where he can why) this revolution has occurred, placing particular emphasis on those elements that are unambiguously within human control.

His Chapter 19 asks to what extent the changes that have taken place since the Industrial Revolution have made us happier, noting that this is a little asked question.

I won't attempt to summarise 50 pages of analysis here, but it is sufficient to say that Harari concludes that history has "much to tell about the weaving and unravelling of social structures, about the rise and fall of empires, about the discovery and spread of technologies. Yet (it says) nothing about how all this influenced the happiness and suffering of individuals. This is the biggest lacuna in our understanding of history. We had better start filling it" (p444).

And his reason for this assertion is that, in various ways, the era of homo sapiens as we have known ourselves is coming to an end. Humans are increasingly taking charge of natural selection (getting mice to grow ears on their backs that can then be transplanted into humans), gene technology potentially allows extinct animals (and other homo species) to be regenerated, and artificial technology is increasingly being introduced into human bodies.

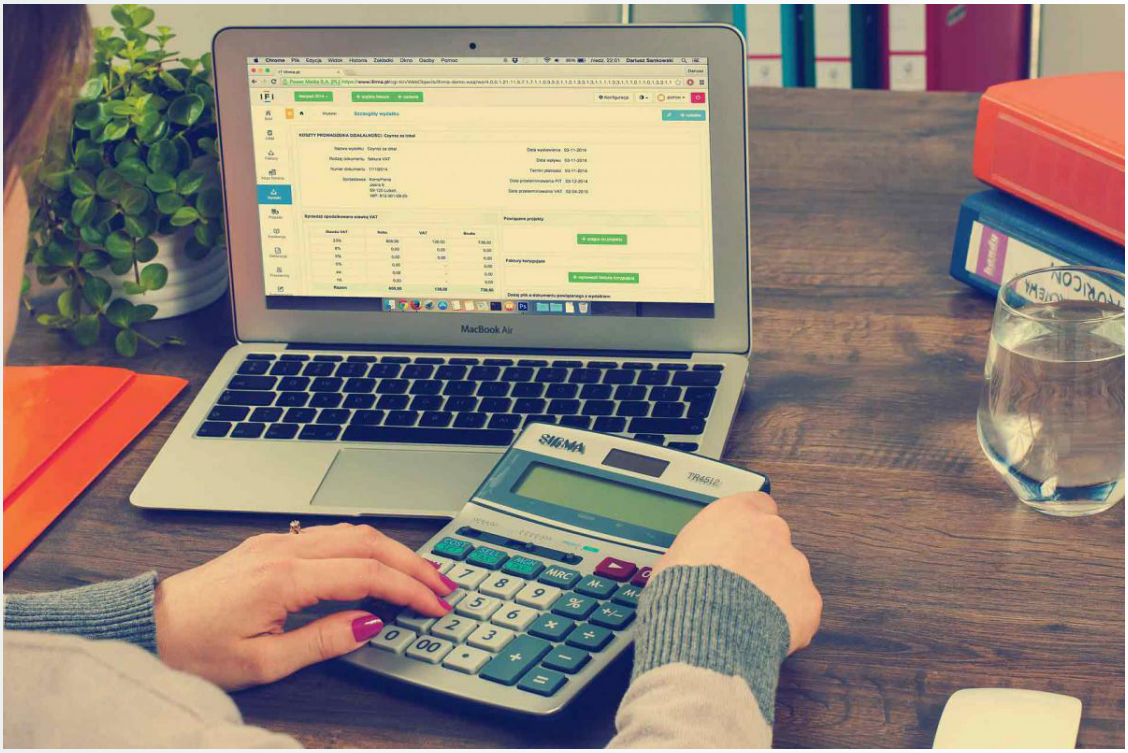
This leads back to where I started, asking why Harari wrote this book. As he says: "since we might soon be able to engineer our desires too, the real question facing us is not 'What do we want to become?', but 'What do we want?' Those who are not spooked by this question probably have not given it enough thought" (p464).

I don't know if I was spooked by reading Sapiens, but I certainly was challenged. I would make it compulsory reading for all aspiring futurists.

Signals in the Noise

THE 49 BEST FREE WEBSITES AND APPS TO LEARN SOMETHING NEW

by John Fawkes



Once upon a time, if you wanted to learn something, you had to a) pay a bunch of money, and b) go to a school or classroom, a place specifically dedicated to learning. Those days are over.

Now, a profusion of apps, websites and institutions offer us a wider variety of (often superior) educational experiences than ever before – and we can access them from anywhere in the world, often for free. The apps and websites on this list can teach you practically anything – from coding and cooking, to surfing and negotiating.

In this day and age, there is simply no excuse to not know something you'd like to know. You can learn anything, for free, at your own pace, anywhere you can access the internet. We're out of excuses not to educate ourselves – short of downloading knowledge directly into your head, this is as easy as it gets.

Signals in the Noise

THE 49 BEST FREE WEBSITES AND APPS TO LEARN SOMETHING NEW

TAKE FREE ONLINE COURSES ON A VARIETY OF SUBJECTS

Khan Academy – High-quality free courses on a variety of subjects.
Alison – Free online courses from the world's top publishers.
CourseBuffet – Free online courses created by universities.
Udemy – Huge selection of free and premium courses – mostly on technical skills.
Highbrow – Free 10-day courses, divided into 5-minute daily lessons and delivered by email.
Academic Earth – Free online academic education for everyone.
Learnist – Print and video content, crowdsourced and curated by experts.
Degreed – Unlimited learning. Free forever.

GET HEALTHIER, BE MORE PRODUCTIVE, AND LEARN FASTER

Memrise – Learn a variety of subjects via digital flashcards and crowdsourced mnemonics.
Greatist – Articles on becoming healthy and happy.
ZenHabits – Minimalist productivity advice, with a focus on psychology.
Anki – Free flashcard software.
Hello Healthy – Short, actionable health weight loss and fitness articles.
Fitocracy – Free workout, fitness tips and fitness tracking.

Signals in the Noise

THE 49 BEST FREE WEBSITES AND APPS TO LEARN SOMETHING NEW

LEARN CODING AND OTHER TECHNICAL SKILLS

Codecademy – Learn Javascript, HTML, CSS, Python and more.
Free Code Camp – Learn to code, meet other coders, build projects that help non-profits.
Code.org – Introductory coding lessons, designed for k-12 students.
Data Camp – Free and freemium courses on R, Python and data visualisation.
CodeCombat – Introductory coding lessons, in the form of a fantasy RPG.
Lrn – Phone app with free interactive coding mini-quizzes.

LEARN A NEW LANGUAGE

Duolingo – Learn over 20 different languages, including Klingon for some reason.
Babbel – Free language learning with integrated speech recognition.
Drops – Study a language on your phone for just 5 minutes a day.
Busuu – Community-based language learning. Interact with native speakers.
CoffeeStrap – Practice a new language by voice chatting with native speakers with whom you share common interests.
Lingvist – Learn a language in 200 hours.

Signals in the Noise

THE 49 BEST FREE WEBSITES AND APPS TO LEARN SOMETHING NEW

SHARPEN YOUR SOCIAL AND CAREER SKILLS

Improve Your Social Skills – Free social skills guide from a guy who overcame Asperger's.
Succeed Socially – Free social skills guide for awkward people.
Job-Hunt.org – Free articles on job hunting, getting promoted, freelancing, personal branding, and other career skills.
Mind Tools – Free tools and videos for improving career, management and communications skills.

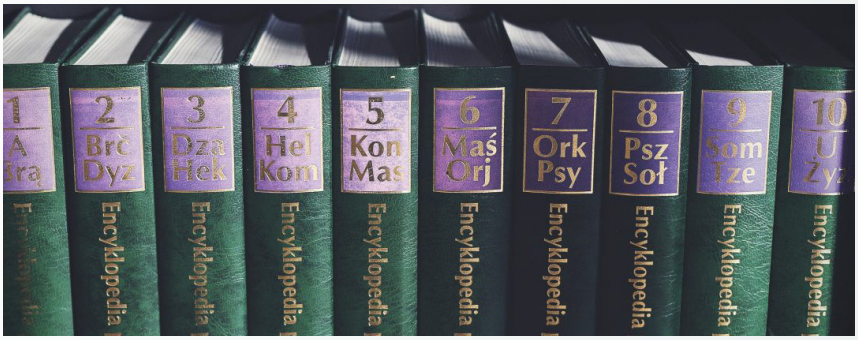
MAKE SOMETHING

Makezine – Online magazine for makers with guides, projects and news.
Snapguide – Free user –created guides for makers.
ChefSteps – Mix of free and premium cooking classes.
Instructables – User –created guides for making everything from cookies to buildings.
Allrecipes – The web's largest collection of recipes.

Signals in the Noise

THE 49 BEST FREE WEBSITES AND APPS TO LEARN SOMETHING NEW

BECOME A HUMAN ENCYCLOPAEDIA



InstaNerd – Read a never –ending series of random factoids.

TED –Ed – Curated, high –quality educational videos.

Brain Pump – Watch a random educational video.

Now I Know – Fun facts delivered in a daily email newsletter.

Curiosity – 5 fun new facts, delivered to your phone every day.

Zidbits – Huge collection of articles on fun and unusual (mostly scientific) topics.

Big Think – In –depth videos by experts.

Curious – Sharpen your brain with daily “workouts”

DO SOMETHING FUN

Yousician – Learn your favourite guitar, bass, piano and ukulele songs.

Parkour & Freerunning World – Free Parkour and Freerunning video tutorials. Be careful!

Chesscademy – Learn chess from the masters, and solve chess puzzles.

Pianu – Learn to play piano online.

Surfedukators – Free surfing videos, tips and tutorials

Flowkey – Free piano training app.