

Making Sense in a Turbulent World

亂世中找尋意義

A Talk Given by Dr. Raymond Yeh
at Developing Virtue Girls School Graduation on June 9, 2016
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I would like to first congratulate the newly minted graduates. You are indeed very fortunate to have graduated from this unique school. All of you must be excited about going to college and beyond. Let me take this opportunity to point out that the world will become increasingly turbulent with rapid changes, which you need to learn how to make sense of and take it into consideration. Here are just a few trends for you to contemplate:

1. Environmental destruction: The so-called great Pacific garbage patch is now twice the size of France. By 2050, there will be more garbage in the ocean than there are fish; 40 percent of the world will have shortage of freshwater by 2030; and all topsoil will be lost in 60 years ...

2. Exponential technological advances: This will lead to a rapid loss of jobs. With the fully automated factories and streamlined value chains, not only factory workers will lose their jobs, but also white-collar workers will as well. The computers are becoming much smarter nowadays. In 1997, IBM's Deep Blue chess playing computer defeated the reigning world chess champion Gary Kasparov. This year, Google's AlphaGo defeated the world Go champion ten years ahead of



首先要恭喜今天剛出爐的畢業同學，妳們非常幸運，從這所獨特的學校畢業了。各位一定很興奮，能夠上大學，面對未來。我想藉這個機會指出，全球正經歷急遽的變化，這個世界將越來越混亂，因此妳們必須將這個因素列入考慮，才

能從中找到意義。下面是幾項趨勢，提供給各位參考：

一、環境破壞：所謂的大太平洋垃圾帶，如今面積已是法國的兩倍大。到2050年，海洋中的垃圾將比魚群還多。到2030年，全球40%的地區將缺乏淡水；60年之內，全球的表土將流失殆盡。

二、科技飛躍進展：這將導致就業機會加速流失。工廠全自動化與價值鏈簡化，不僅造成工廠工人的失業，白領階級也不能倖免。今天的電腦已變得十分聰明，1997年IBM的深藍電腦打敗當時的世界棋王蓋瑞·卡斯巴洛夫。今年谷歌的圍棋機器人AlphaGo打敗世界圍棋冠軍，比預期提早十年。估計人工智能將在2045年取代人類智能。

prediction. It is projected that machine intelligence will overtake human intelligence by 2045.

Along with such rapid technological advances is the projection that up to 80% of jobs will disappear within 20 years; while new jobs will be available, there would probably be insufficient time to take care of those displaced offices. Similarly, educational institutions will also be forced to change from a knowledge-transfer mode to that of problem-solving mode. As such, it is also predicted that 50% of the traditional colleges in the US will face bankruptcy during the next fifteen years.

3. The collapsing of the hierarchical structure: Since the Internet is taking control of the world, the concept of “critical mass” is now being replaced by that of “critical connections.”

So, how do you plan for college and beyond? Well, given the trends cited above, you don't have a choice but to become a lifelong learner. But what and how should you learn? Well, here are four categories of learning for you to consider, so you can learn to understand, work, and to be yourself and live together with other people. Let me explain.

1. Learn to understand!

From a scientific point of view, this means continuously questioning related facts, images, representations, etc., because they are indispensable. Here are some further suggestions for you to consider, namely:

1) Learn how to learn fast.

a) You need to be a trans-disciplinarian capable of establishing bridges between different disciplines. Make sure you sample a variety of courses including arts, humanities, architecture, math, science and technology before you graduate. This trans-disciplinary approach will help you to be able to adapt to the increasingly rapid changes of your professional life.

b) Learn to understand “insights” of knowledge so that you have a broad picture as well as a deep understanding of the “why”? In science and math, for example, Ian Stewart's *17 Equations that Change the World* is a very insightful work. Ask your professors to recommend this kind of material for you so that you can absorb those insights in order to keep up with facts and knowledge that double every two years.

隨著如此快速的科技發展，人類的工作預計將有80%在未來20年消失。雖然新的工作機會也將出現，但恐怕無法及時提供給未來的失業大軍。同樣的，教育機構的教學勢必將從「傳播知識」的模式，轉變為「解決問題」的模式。傳統的美國大學院校，預計約有50%將在未來15年間面臨破產。

三、階級結構將瓦解：網際網路主導整個世界的發展，使得「臨界規模」的觀念已被「臨界關聯」所取代。

因此，要如何規劃上大學乃至如何規劃未來？從上述的趨勢來看，各位別無選擇，只能「活到老、學到老」。但是要學些什麼？該怎麼學？以下是四種學習，供大家參考。也就是學習了解、學習做事、學習共存、學習做自己。

一、學習了解

就科學精神而言，就是不斷質疑事物的本質、現象或其代表，因為這些都是不可或缺的。以下是進一步的一些建議：

(一) 學會快速學習

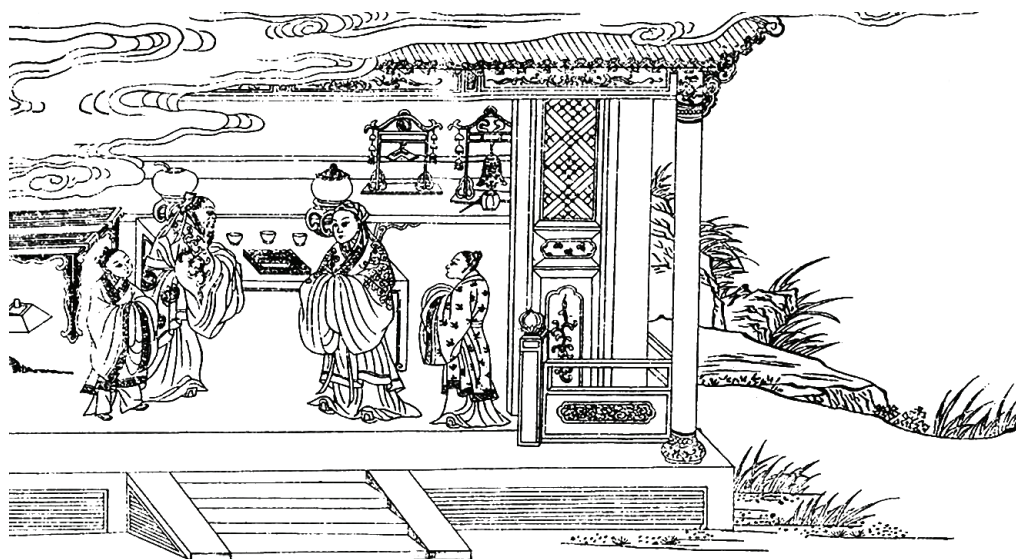
1. 要跨領域學習，將不同的領域連接起來。大學畢業之前，最好廣泛選修不同的課程，包括藝術、人文、建築、數學、科學、技術等。這種跨領域的學習，有助於妳們未來適應快速變遷的職場生涯。

2. 了解知識後面的智慧。這樣才能對知識「為何如此」，有廣度與深度的認識。舉例而言，在科學與數學領域中，伊恩·司徒亞特的《改變世界的十七個方程式》就是一本見解深刻的書。請妳的教授推薦這類書籍給妳，這樣妳們就能從中吸收，在知識量每兩年倍增的情況下跟上腳步。

(二) 學會思考

絕大多數的人，不會提出「為什麼」、「怎麼會這樣」、「這對將來有什麼意義」這類的問題，因此欠缺批判式思考，不知道如何連結自己的見聞，以創造新的事物或思維。除了「批判式思考」，妳們還必須學習：





2) Learn to think.

Most people don't know how to think "critically" by asking questions such as "Why?", "How?", and "What does this mean for the future?" Most people don't know how to connect what they see in the world and create something new. In addition to "critical thinking," you also need to learn:

a) "Computational thinking" which is the ability to actualize your ideas into actionable possibilities. In fact, software, the result of computational thinking, will disrupt most traditional industries in the next 5-10 years. Uber is an example in that it is just a piece of software, it doesn't own any cars, and is now the biggest taxi company in the world. Similarly, Airbnb is now the biggest hotel company in the world, although they don't own any properties.

b) You also need to learn "design thinking," an ability to connect seemingly disparate parts into a cohesive whole be it in arts, architecture or large system development. Take for example, Michelangelo's statue of David. Other statues of David had him standing with one foot on top of the giant lying on the ground. But Michelangelo designed it when David first engaged the giant with his eyes. David's weapon, a sling, was on his back, an indication that he was going to use intelligence rather than force to win.

2. Learn to work.

This is a lifelong apprenticeship in tenacity and creativity. It signifies discovering novelty in bringing to light our creative potentialities in addition to hard labor. A key element here is to allow yourself to be the best you could become! Here are two important aspects:

1) Build a little edge each day over the long haul. This practice provides the accumulation of both insights and skills for actualization. Indeed, tenacity is a key element to success in any field of endeavor. My friend Bob Block, a serial entrepreneur, is a

1. 運算思維，也就是將想法化為實際可行的能力。事實上，軟件正是運算思維的結果，並將在未來的五到十年之間，瓦解絕大多數的傳統產業。網路叫車公司「優步」正是一例，該公司本身只是一套軟件，並不擁有任何車輛，如今卻成為全球最大的計程車公司。同樣的，住屋短租網站Airbnb現在是全球最大的旅館業者，但該公司並未擁有任何實體旅館。

2. 妳們還要學習設計思維，就是將看似不相關的事物連成整體的能力。這種思維方式，無論在藝術、建築或是大型系統開發都用得上。例如米開朗基羅的大衛雕像，大部分的大衛雕像姿勢，都是一腳踩在躺在地上的巨人頭上。但米開朗基羅的設計卻是突顯大衛首遇巨人的眼神，並將他的武器彈弓藏在背後。這顯示要用智力，而非武力打倒巨人。

二、學習做事

就是以毅力和創造力終身學習。這表示除了辛勤耕耘，還要培養發現新事物、新觀點的能力，以期發揮我們的創意潛能。一個關鍵要素是全力以赴，展現出最好的妳。以下是兩大重點：

1. 每天多努力一些。如此日積月累，儲備對事物的洞察力與實踐力。無論做什麼，堅持不懈都是成功的關鍵因素。我的朋友鮑勃·布洛克是創辦多家公司的企業家，正是最好的例證。他大學剛畢業時，在一家廣告公司上班。每天他都寫下五個點子如何幫助公司進步。雖然他的大部份點子被扔進垃圾桶，但只有幾個點子獲採用。一年後，他成為該公司密爾瓦基分公司的負責人。

2. 撿起漏接的球。當我的小女兒大學畢業時，她

case in point. When he first worked at an advertising company fresh out of college, he wrote five ideas each day on how to improve some aspects of his company. While most of the ideas went to the wastebasket, just a few of them were adopted, which led him to become the head of a small branch office in Milwaukee a year later.

2) Pick up the loose balls. When my younger daughter graduated from college, she asked me how to become an indispensable person in an organization. So, I told her to pick up as many “loose balls” as she can. A “loose ball” is something that should be done in an organization but no one is doing it. I shared with her my experience as a dishwasher in a pizza parlor when I was 19. When I was supposed to take a 15 min break, I simply helped in other areas in need, i.e. picking up some loose balls, including learning and helping the Chef to make dough and sauce on weekends. I was promoted to be the Chef a little over two months later over an assistant chef when the Chef was fired.

3. Learn to live together.

Life is journey and we walk with different people at different segments of our journey. Make sure we build high quality relationship with whoever shows up in our journey; you never know whether that person would be a future collaborator. In each case, make sure you could achieve “good closure” when you say goodbye. More importantly, as Mark Twain once remarked: “There isn’t time, so brief is life, for bickering, apologies, heartburns, callings to account. There is only time for loving, and but an instant, so to speak, for that.” Here are some key qualities for good relationships:

1) Learn to listen. I was surprised to find that many great leaders in academia, industry and government that I was fortunate to meet were very focused on listening to me.

2) Always ask “What do you think?” Marriot Jr. shared a story of President Eisenhower when he went home for Christmas from military training. Once, they were discussing whether they should go out or stay in as the wind was blowing pretty hard outside. During the discussion, President Eisenhower turned to him and asked, “What do you think?” His advice was taken to stay in, he had since always asked the same question even later when he became the head of Marriot hotels. Indeed, Confucius said that “there is a teacher whenever three people are together.”

3) Learn to think in other person’s shoes in order to “forgive.” Nelson Mandela was imprisoned for 27 years and later elected the president of South Africa. On his inauguration, he invited his three prison guards, who treated him badly during those years, as honored guests to the ceremony and introduced them as three friends who helped him to tame his temperament. He was able to forgive in order to create the unforgettable “truth and reconciliation” process to build a new nation in which the blacks and whites work together.

As we forgive others and ourselves, we become more lighthearted, because negative energy will leave our body and mind.

4. Learn to be.

問我如何一個組織裡成為不可或缺的人。所以我就告訴她盡力撿起漏接的球，能撿多少是多少。所謂「漏接的球」，是指一個組織裡該做的事，卻沒人去做。我跟小女兒分享我19歲在一家披薩店洗碗的往事，在15分鐘的休息時間裡，我並沒休息，而是去幫其他人的忙。我當時就是撿起「漏接的球」，包括利用周末學習並幫忙大廚做麵糰、醬汁。兩個多月後，當大廚被開除時，我越過二廚被擢升為大廚。

三、學習共存

生命是一段旅程，每個階段都會跟不同的人同行。因此，記得跟每位出現在生命旅程中的人建立良好關係，因為你永遠不知道下次再相遇時，對方會不會是你的合作夥伴。跟每個人都要好聚好散，而且更重要的是，正如馬克吐溫說的：「生命如此短暫，我們沒時間吵架、道歉、傷心、計較。我們只有時間去愛，但也不過是眨眼瞬間，稍縱即逝。」以下是維持良好關係的幾個關鍵條件：

1. 學習傾聽。我有幸在學術界、產業界、政府部門遇到許多偉大的領導人物，我非常驚訝地發現，他們都很專注地聽我講話。

2. 凡事問對方：「你的看法如何？」小瑪里奧分享了一則艾森豪總統的軼事，那是有一年耶誕節，小瑪里奧從軍隊受訓返家，家裡主客正討論著要外出還是待在家中，因為當時外頭正颳大風。討論中間，客人艾森豪總統忽然轉頭問小瑪里奧：「你的看法如何？」而他留在家中的意見最後被採納了。從此，小瑪里奧也效法這樣徵詢他人的意見，即使後來成為全球連鎖旅館瑪里奧萬豪的負責人，依然奉行不渝。的確，孔子也說過：「三人行，必有我師焉。」

3. 設身處地為人著想，原諒別人。南非民族英雄曼德拉曾入獄27年，後來當選南非總統。在他就職典禮時，邀請了三名曾經虐待他的獄卒為典禮貴賓，並稱呼他們是幫助他改掉壞脾氣的三個朋友。因為能夠原諒對方，曼德拉才能為南非帶來「真理與和解」的新局面，讓黑人和白人攜手合作共同為國效力。

“Learning to be” is a lifelong apprenticeship of authenticity. Here are some pointers for your considerations of finding your authentic self:

1) Upholding the values you learned here at DVGS. These are the fundamental principles in becoming an authentic person.

2) Be quick but don't hurry. While one needs to be fast in this rapidly changing world, one also needs to learn the art of not hurrying to capture moments and to taste the “little joys of life.” They will become your sweetest memories. Not hurrying through life will also allow us to appreciate the wonders of ordinary things, such as chasing butterflies, watching the sunset which often leads us to an inner quest to understand the why. Through such deep appreciation of nature and people, we will gradually become more in touch with our inner self.

3) Always extending a helping hand. As we help others, our hearts begin to open up more and the results of such services make other people and ourselves happier.

As you become more authentic, you will move further toward building a life with little regrets and your joys will abound! This is what I call the “Indra's net effect” as beautifully described by Marianne Williamson's poem:

“... We are all meant to shine,
as children do.

We were born to manifest the glory of God that is within us.
It's not just in some of us; it's in everyone.

And as we let our own light shine,
we unconsciously give other people permission to do the same.

As we are liberated from our own fear,
our presence automatically liberates others.”

To the graduates, Bon Voyage! ✨

當我們原諒自己與他人時，負面能量就離開我們的身心，我們也因此而變得輕鬆自在。

四、學習做自己

「學習做自己」是一段終身學習真誠的過程，以下提供各位找尋真我的幾項重點：

（一）奉行妳們在培德女中所學的價值觀。做一個坦蕩真誠的人，這些價值觀就是基本原則。

（二）快而不急。面對快速變遷的世界，反應雖然要求迅速，但也必須擁有不急躁的藝術，才能捕捉當下，品嚐人生中的小確幸，這些都將成為往後甜美的回憶。同時，不急躁能讓我們發掘平凡中的不平凡，例如追逐蝴蝶、欣賞夕陽這些看似平凡的事情，都能觸發內心的呼喚，尋找生命的「為什麼」。藉由對大自然以及他人的深度欣賞，我們將逐漸與內在自我接軌。

（三）隨時伸出援手。幫助別人，能夠開拓我們的心量，同時讓別人與自己更快樂。

當妳越來越坦蕩真誠，妳的人生將充滿喜悅，鮮少遺憾後悔！這正是我說的「因陀羅網效應」，誠如瑪麗安娜·威廉森的詩所描述：

我們每個人都會發光，就像兒童一樣。
我們每個人出生時，都有上帝給予的光環。
這不是某些人才有，而是每個人都擁有。
當我們讓自己發光，
其實已允許對方做同樣的事。
當能夠摒棄恐懼，我們已帶給他人自由。

祝福各位畢業生，人生旅途愉快！ ✨