

設計思維

Design Thinking

A Talk by Dr. Raymond Yeh on December 8, 2013
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今天晚上想跟各位分享幾個故事，有關如何以設計思維來改變我們的人生。

一個月以前，我的姐姐在中國過世了。走前，她在完全昏迷的狀態，我們在這裏為她設了兩個牌位，每天也誦經跟念佛迴向。所以雖然醫生說她完全不可能恢復，可是她居然醒過來，而且能夠回到老家裏；後來還會講話，跟她三個女兒圓滿地告別。然後，很平安地往生了。雖然她不是一個佛教徒，可是我相信她跟佛菩薩有很好的連接。

我已經是個老人了，在這個漫長的歲月裏面，已經送過很多人走——比我大的，比我年輕的。可是大多數的人，他們都不願意走，因為很多沒有完成的事情還沒有交代。可是人生是一個旅程，改變是一個常數，但是大多數的人都拒絕改變。因此如何來設計這個多變的旅程呢？

對我來說，設計思維是「能把許多關係有意義的連接在一起因而達到的一種整體合諧的能力」。美國最有名的建築師法蘭克·洛

I would like to share a few stories this evening about how design thinking can help to facilitate powerful change in our lives.

About a month ago, my older sister in China passed away in peace. We created a couple of *Pai Wei* and recited the Buddha's name and Sutras for her while she was in a coma. Although doctors had given up hope, she actually woke up and was able to go home to have a very good closure with her three daughters. Though she was not a Buddhist, I believe she had a meaningful connection with the Buddha and Bodhisattvas.

As an old man, I've walked with many, old and young, during their last stages of life and waved goodbye to them. Most of them, however, resisted the life transition, since they usually had unfinished business that they could no longer tend to. Life is a journey, and change is inevitable. We can embrace it or resist it, with resistance being the norm. How do we design our journey for change?

Design thinking, in my opinion, is "the ability to make meaningful connections to reach a harmonious balance of the whole." The famous American architect Frank Lloyd Wright described the "design thinking" of his famous work, the Kaufman House, with such poetic expression of how he meaningfully connected nature and the house:

*"No house should ever be on any hill or on anything.
It should be of the hill, belonging to it,
so hill and house could live together
each the happier for the other."*

The basic design thinking of Frank Lloyd is to meaningfully connect nature and the interior of the house so that the two mesh together harmoniously to become a beautiful scene.

We are, of course, connected with everything. But which connections are more meaningful than others? Let me give another example here. If ever there were a poster boy for innovation, it would be former Apple CEO Steve Jobs. His iPod is cited as an example of innovation at its best.

伊談到他的代表作品：考夫曼瀑布屋，一個在瀑布上面的房子時，他以如詩般的句子來解釋他的設計思維：

房子不該在山上，
或是在任何東西上面。
房子是山的一部分，
山也是房子的一部份，
兩者的關係是：你中有我，我中有你。

法蘭克·洛伊的設計思維，基本上是把大自然與室內有意義地連接在一起。所以兩者很協調地融合在一起，成為一道迷人的風景。

我們當然跟萬物都是有連接的，可是什麼是有意義的連接？我想再舉一個例子，現在最流行的一個產品iPod，是已故蘋果公司的創辦人Steve Jobs設計的。iPod被公認為一個極好創新的例子。

雖然iPod是一個非常成功的產品，可是iPod本身不是一個新的發明；它只是把幾個已有的東西，像Sony的Walkman的觀念、mp3格式，跟iTunes store的音樂舞台，加上好的設計——美觀和易用——然後讓這些元素有意義地連接在同一個平台上，使一個單一的設備能簡單輕鬆地更新音樂。這些多元的連接，促使蘋果創造了一個「突破點」，幫助蘋果公司徹底改變了音樂產業。

在人生的旅程裏面，我們常有好的機會，但是有時無法有意義地連接上。這裏有一個好例子。當年發明以蒸汽機推動船隻的，是一位美國的工程師羅伯特·富爾頓，他建議拿破崙如果用他的蒸汽機船，就可以把英國的海軍打敗；可是拿破崙聽不進去，他說：「對不起，你要我把船，對著風、對著浪開，然後底下燒一把火，我實在沒有時間聽你這種沒有智慧的話。」

拿破崙不能夠打破他的「自我格局」，因為他知道逆風逆浪開船是很難，而在船底下燒火是很危險的。所以，他就沒有辦法連接到可以征服英國海軍的機會。

我認為，設計思維是我們日常生活中的一部份。就如準備一頓飯時，應如何將色、

Although iPod is a very successful product, it is not a new invention. What made the iPod and the music ecosystem it engendered so appealing was that it meaningfully connected all the elements — Sony's portable music concept (Walkman), mp3 format, iTunes store on-line music sharing platform plus great design, ergonomics and ease of use — in a single device, and then tied it directly into a platform that effortlessly kept that device updated with music. As such, these multiple connections enabled Apple to reach a tipping point which helped Apple to revolutionize the music industry.

There are, of course, many disconnects as well in our journey of life. Here is a good one. The American engineer, Robert Fulton invented the steam powered ships that sailed the Mississippi River. When Fulton tried to convince Napoleon that he could defeat the British Navy by using steam powered ships, Napoleon disconnected. His response was, "What, sir, would you make a ship sail against the wind and currents by lighting a bonfire under her deck? I pray you excuse me, I have no time to listen to such nonsense."

Napoleon knew that his fleet could not "sail against the wind and currents" and that a fire under its deck was very dangerous. Challenging this conventional wisdom was too much of a risk for Napoleon. He could not imagine how fire under the decks of his ships could make it possible for them to sail against the wind and current. He missed the opportunity to beat the British Navy.

In my humble opinion, design thinking is everywhere in our daily life. For example, how does one meaningfully connect color, taste, and smell when preparing a meal? Or, how do you decide to support your children growing up—parents as models, living environment, education, etc.? In these cases, the designers, whether chefs or parents need to make necessary adjustments to their designs while in actions.

Here is an embarrassing experience of mine that helped me to learn about the dynamic aspect of design thinking. When I was promoted to a full professor about forty years ago, I was also elected chairman of the department. As someone who had never had any administrative experience before, I asked, "What kind of department do we want?" Then I proceeded to change accordingly. In my first year, I upgraded our admission standards as well as the criteria for hiring new faculty members, etc. As a result I had to turn down six assistant professors who were in line for tenure, though some of them were very good.

Well, by the end of the first year, it was a total disaster as many students who would have come were barred by the higher standards, and I had few means to compete for top talents with well-known schools. In other words, I was able to recruit neither desired students nor faculty members. It was a major embarrassment. I was forced to ask the question: "Was the proposed change in the right direction?" The answer was "Yes!" So, we decided to go forward with the proposed change, despite the very undesirable early results.

香、味有意義地連接成一席美食？或如何教育我們孩子的成長——父母的榜樣、生活環境、教育等等？這種情況下，設計師——廚師或父母——必需在行動中調整他們的設計。

下面是我自己一個尷尬的經歷，從這個經驗中，我了解了設計思維動態的一面。四十年前，當我被升成正教授的時候，同時也被選為系主任。因為沒有做過主管，我第一件事就問，「我們要變成一個什麼樣的系？」有了這個方向以後，我就開始把整個入學的標準提得很高；雇用教授的標準也一樣地被提高。因為有了這個高的標準，所以在第一年我就把六位助理教授免職了，雖然有幾位很好。

第一學年結束時，是大失所望。因為許多要來我們系的學生，被新的入學標準擋住了，同時我也沒辦法跟名校競爭搶教授。所以第一年我們既沒有招到教授，也沒有收到很多學生。我不得不問：「我提出的改變方向對嗎？」大家的回答都同意這個新方向。所以我們繼續前行。

第一年什麼教授都沒找到，所以只好找工業界的人來教書，好在他們都願意幾乎無償地來任教。因為有很多空缺，於是我邀請了全世界最有名的十二位計算機科學家，前來擔任講座教授；每一位授課兩週，結果有九位願意出任。在第二學年開課以前，宣傳海報發送到各大校園之後，我很驚訝地發現，外面的人開始在談論這個高品味的講座系列。這是我第一個經驗，了解這個行業中的高手與系上的名望，是可以有意義地連接起來。

另外一個驚訝是，當我們的院長突然離開後不久，院長遴選委員會請我考慮能否擔任這個職務。我問委員會的主席，我第一年系主任的成績很糟糕，為什麼會要找我？他說：「我們需要一個人，敢問我們學院應該怎麼發展，並且有勇氣去做。」

所以故事長話短說，因為全系的努力，第二年招生終於有了一點成績，很多業界的傑出人士紛紛向人推薦我們。第三年，教授和學生方面的招生人數都是大豐收，因為大家都看好這個蒸蒸日上的系所。第四年，哈佛大學的系主任打電話給我，表示希望有我們的學生到哈佛任教。當系主任的四年任期屆滿時，我們科系

Well, I had a lot of open faculty slots to deal with. As it was not hard to find highly qualified people to teach the courses from industry, at almost no cost, I began to think about how to utilize these slots. I created a “distinguished lecture series” inviting twelve top computer scientists from around the world to join us as “distinguished professors” for two weeks at a time. Nine of them signed up. Shortly after the posters went out to all major campuses before the next academic year, I was pleasantly surprised to hear the buzz about this “prestigious program” from people outside. This is my first experience of making meaningful connections at work, namely, connecting the top people in my field to the reputation of my department.

Another funny thing happened. I was invited to consider the Dean's job, shortly after my boss left abruptly to become the President at Rice University during the summer. I asked the search committee chairman why they would consider me as my first year experience, as a department chair, had been disastrous. His reply surprised me. He said, “We need exactly this kind of person, who dares to ask what kind of college we want to be, and has the guts to act on it.”

To make a long story short, during the second year, everyone began to chip in and recruiting showed some results, as many of our distinguished visitors actually recommended people to consider us. We had a bumper crop of faculty and students in our third year, as people were willing to bet on the great potential of an upwardly moving department. During my fourth year, the Computer Science Chair from Harvard called and told me, “Ray, Harvard would be happy to have one of your students on our faculty.” By the time my four-year term ended, the department was ranked #9, one of the two top-10 ranking department at University of Texas at Austin at the time.

A few days ago, I got an e-mail from President of Asia University in Taiwan informing me that in the most recent report of Ranking of Universities in BRICS (Brazil, China, India, Russia, S. Africa), and Emerging Economies (Malaysia, Turkey, etc.), Asia University is ranked # 53, a phenomenal feat for a new university barely fifteen years old. No one would have thought it is possible. I remember fondly that, at my first meeting with its founder, he talked about becoming one of the top 400 universities in ten years. I suggested that they make a connection to the Nobel laureates by creating a Nobel lecture series. In addition, Asia University has made many other meaningful connections in their design thinking such as transdisciplinary education, creation of an innovation college, close collaborations with the Chinese Medical University, etc. As more than a dozen Nobel laureates had lectured at its campus, Asia University has, among other innovations in education they had done, gained tremendous reputation with that meaningful connection.

What I've learned in these experiences is that design thinking is part of that continuous dynamic exploration of life to change. Indeed, good strategy needs to be based also on actual engagement rather than

已經全國排名第九，是我們德州大學奧斯汀分校第二個人圍全國十大的科系。

幾天前，收到台灣的亞洲大學校長發給我的電子郵件。信上說，在金磚五國（巴西、中國、印度、俄國、南非）以及新興經濟體（如馬來西亞、土耳其等）的大學排名榜中，亞洲大學，一個只有十五年歷史的新興大學，居然排上第五十三名，實在出人意料之外。我依然記得當年跟該校創辦人會面的情形，他提到十年內進軍世界四四大，我當時就建議他們成立一個諾貝爾獎得主的特別講座。時至今日，已經有很多位諾貝爾獎金得主在亞洲大學講過課。這個有意義的連接，加上該校在其它方面的創新：跨領域教育、創新學院等等，幫助亞洲大學得到極大的聲望。

從這些經驗中，我學到：設計思維是動態探索生活而應變的一部分。事實上，好的策略需要根據實際的參與，而不只是單獨的思考。例如，吸取第一次世界大戰的教訓，法國建立了高度強化的防禦工事「馬其諾防線」，徹底防堵德軍由東邊再次進攻法國。然而第二次世界大戰爆發時，德國人卻選擇從比利時進攻，完全避開馬其諾防線，輕易地在六週內征服了法國。

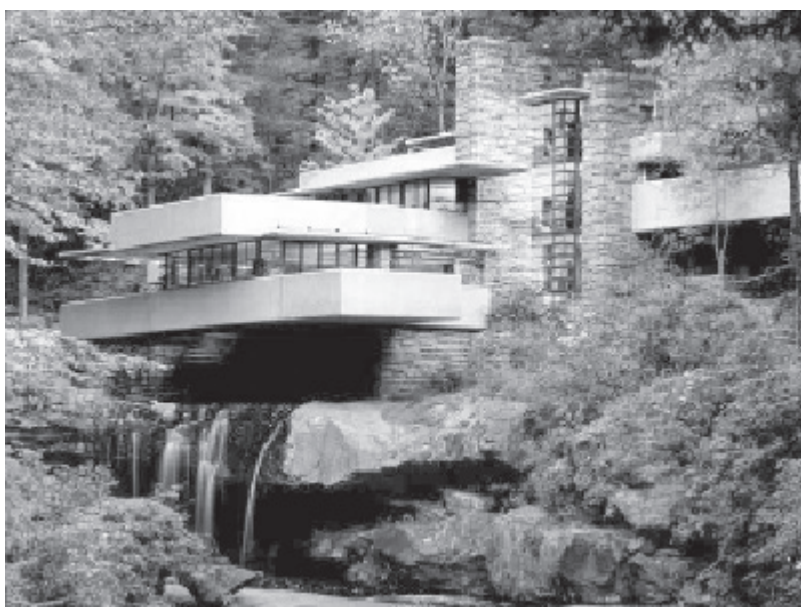
我想提的一點是：萬佛聖城的中小學在最近十年來，因為重視學生的品格教育、學術表現、服務能力、以及中國語文及文化的學習，現在已經是一所小有名氣的學校了。然而我們似乎無法突破現狀、更上一層樓，成為一個非常特殊、獨一無二的教學機構。如果能夠把這些元素，在一個新的設計思維下做更有意義的連結，應該可以找到一個「突破點」，使我們的畢業生成為頂尖大學爭相錄取的對象。問題是，我們願不願意朝這個方向走？

雖然身為一名佛法的初學者，可是在我對於佛法的有限認知中，無處不是設計的思維，四聖諦（苦集滅道）就是一個例子。《華嚴經》中善財童子的五十三參，正是設計人生旅程一個最佳指導。阿彌陀佛成就極樂世界的過程，更是將設計思維的概念發揮得淋漓盡致。「恆順眾生」的確不容易，但是在好的設計思維引導下，你敢想多高，你就可以到多高！

deliberation alone. For example, with lessons learned from World War I, the French built a highly reinforced defense called the Maginot line in order to prevent Germans from ever being able to attack France again from the East. Well, during World War II, the Germans simply went in from Belgium, completely flanked the Maginot line, and conquered France in six weeks.

What I would like to mention now is that the schools in CTTB have established a pretty good reputation due to our education consisting of character education, high academic achievement, strong ability to serve, and good environment for learning Chinese language and culture. However, we don't seem to be able to break through to reach its potential of becoming a very special and unique academic institution. If we can connect these elements more meaningfully with new design thinking, we should be able to reach a state such that our graduates will be heavily recruited by top universities. The question is: do we want to move in this direction?

I am a beginner in the Buddha dharma. However, from my very limited exposure to Buddhism, I see design thinking everywhere. The Four Noble Truths is an example. The story of seeking guidance from 53 spiritual teachers, as related in the *Avatamsaka Sutra*, is an example of good design for a life journey. Of course, the process of how Amitabha Buddha achieved his Pure Land provides an illustration of the highest form of design thinking. To be “in accord with all the living beings” is definitely not easy. However, these examples show that under the guidance of good design thinking, a person can achieve as high as she dares to dream!



考夫曼瀑布屋 The Kaufman House