

第 3 章：AI 專案的分鏡腳本

CHAPTER 3 Storyboarding for AI Projects

從古埃及（見圖 3.1）到現代廣告與漫畫，文字 + 圖片 = 更大的影響力。

From ancient Egypt (see Figure 3.1) to modern-day advertising and comics, Words + Picture = Greater Impact.

在 AI 專案中，我們用分鏡（storyboarding）來有效講故事，確保它可行並能帶來預期效益，並把這個新生專案的 UX 願景傳達給使用者與利害關係人。

In AI projects, we use storyboarding to effectively tell our story, ensure it is viable and will deliver the projected benefit, and communicate the nascent project's UX vision to users and stakeholders.



為什麼要做分鏡？

Why Bother with a Storyboard?

你可能會想說：「我到底為什麼需要分鏡？我不能只列一份需求清單就好嗎？」

You might be tempted to say, “Why do I need a storyboard in the first place? Can't I just have a list of requirements?”

我來講個關於「心理健康助理」App 的小故事，馬上讓你看到分鏡在下一個 AI 驅動專案中的實際用處。

Let me tell you a short story about the “Mental Health Assistant” app, which will help demonstrate the storyboard's immediate utility for your next AI-driven project.

最近大家常談到大型語言模型（LLM）在心理健康領域看起來很有幫助（1）。但仍有許多問題沒有答案，其中最核心的一題是：在這個高度細緻、極度依賴同理與對「他者經驗」理解的領域裡，我們到底該把 LLM 服務推到多遠？想像下面這個用例：

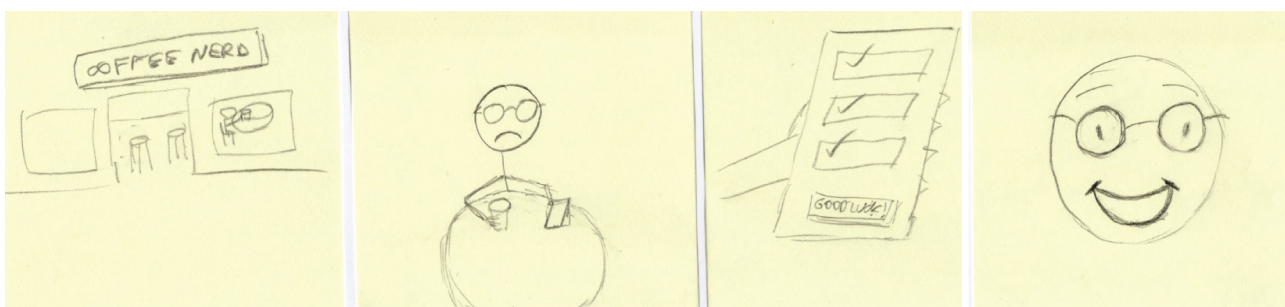
Much has been made recently about LLM's seeming helpfulness in the mental health field (1). However, many questions remain, including the central question: How far should the LLM service be pushed in this highly delicate arena that relies heavily on empathy and understanding of the experience of a fellow human being? Imagine the following use case:

文字寫下來看似還算可行，但請看看圖 3.2：用便利貼草草畫出的這個用例視覺分鏡。

While this may seem somewhat viable written out, look at a visual storyboard for this use case sketched using sticky notes, shown in Figure 3.2.

看完這個分鏡，你覺得它像個可行的產品嗎？你會把孩子的心理健康交給這個 App 嗎？大概不會。因為這份分鏡沒有把「感覺變好」的效益到底如何被交付清楚地串起來。

Looking at the storyboard, does that seem like a viable product? Would you trust your kid's mental health to this app? Probably not. Because this storyboard fails to connect the dots on how the benefit of "feeling better" would be delivered.



注意

NOTE

分鏡對分析 AI 驅動用例至關重要，因為它能让故事裡的缺口、不一致或胡扯之處，比單純文字描述更一眼就暴露出來。

A storyboard is essential for analyzing AI-driven use cases because it makes any gaps, inconsistencies, or nonsense in your story stand out much more than a simple written statement.

現在我們換個角度，再試一個不同版本的「心理健康助理」用例：

Now let's try a different twist on the Mental Health Assistant use case:

圖 3.3 顯示了用便利貼畫出的這個用例視覺分鏡。你會立刻看出：這個用例更貼近現實，也更可能引起客戶共鳴。

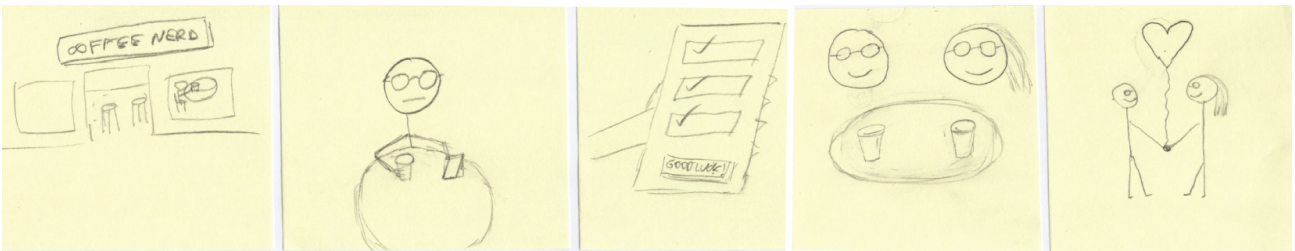
Figure 3.3 shows a visual storyboard for this use case sketched using sticky notes. It is immediately apparent that this use case is more realistic and will likely resonate with customers.

多數人都懂「重度臨床憂鬱」和「輕度社交焦慮」之間的鴻溝。憂鬱是一種疾病——需要嚴肅對待。憂鬱症患者可能需要藥物來緩解症狀。對重度憂鬱來說，治療方向若搞錯，後果可能是災難性的。因此，憂鬱治療並不是一個適合完全交給新生代 LLM 的理想案例。

Most people understand the gulf that exists between deep clinical depression and mild social anxiety. Depression is a disease—it requires serious attention. A depressed person may need to have medication to help with their symptoms. With deep depression, the consequences of getting the treatment wrong may be catastrophic. Depression treatment is not the ideal case to be wholly entrusted to nascent LLMs.

相對地，需要一點鼓勵、以及溫柔提醒（例如提醒使用者自己設定的「更願意投入戀愛」這類個人目標）的輕度社交焦慮，對 AI 而言就是更現實的用例。在這裡，LLM 互動的上行空間很大，而我們能想像的任何下行風險也小得多。（我們會在第 5 章〈價值矩陣——AI 準確率是鬼扯，UX 該怎麼做〉討論如何為 AI 驅動結果賦值；關於 AI 倫理使用，請見第 4 部〈偏誤與倫理〉。）

On the other hand, mild social anxiety that needs a bit of encouragement and a gentle reminder about the personal goal of being more open to romance (perhaps set by the users themselves) is a much more realistic use case for AI. In this case, LLM interaction can have lots of upside, but any downside we can imagine would be considerably less severe. (We will discuss assigning value to AI-driven outcomes in Chapter 5, “Value Matrix—AI Accuracy is Bullshit. Here’s What UX Must Do About It.” See more about the ethical use of AI in Part 4, “Bias and Ethics.”)



注意

NOTE

很多 AI 專案之所以失敗，是因為沒有把問題框對，導致產品或服務沒有需求。你如果講不出一個有說服力的故事，就沒有機會。分鏡甚至能在你投入設計的時間與成本之前，就先幫你解掉這個問題。

Many AI projects don't succeed because they fail to frame the problem correctly, resulting in a lack of demand for their product or service. If you cannot tell a compelling story, you don't have a chance. Storyboards can help you solve this problem even before you invest time and effort into your design.

在本章剩餘部分，我們會聚焦在：如何用分鏡，為你的 AI 驅動用例講出一個有說服力的故事的最佳實務。

For the remainder of this chapter, we will focus on best practices of using a storyboard to tell a compelling story for your AI-driven use case.

如何製作分鏡

How to Create a Storyboard

為你的 AI 專案做分鏡，本來就應該很簡單。然而，和許多「簡單」的事情一樣，分鏡雖不複雜，卻其實相當精妙。我在我的第四本書《一美元原型：現代行動 UX 設計與快速創新方法》（2）第二部，花了很多篇幅解釋流程並提供大量真實案例。本章我會快速回顧書中的材料，並聚焦在：為了讓分鏡在 AI 專案中更好用，你需要做的特別調整。

Creating a storyboard for your AI project is meant to be simple. However, like many other “simple” things, a storyboard, while not complicated, is actually fairly sophisticated. I dedicated Part 2 of my fourth book, *The \$1 Prototype: A Modern Approach to Mobile UX Design and Rapid Innovation* (2), to explain the process in detail and give many fine examples from real-life applications. For this chapter, I will quickly review the material in my *\$1 Prototype* book and focus on the specific adjustments you need to make to your storyboards to make

them work best for AI projects.

一份典型的分鏡由六個組成要素構成：

A typical storyboard is made up of six components:

- 建立場景 (Establishing shot)
- Establishing shot
- 物件 (Things)
- Things
- 人物 (People)
- People
- 臉部表情 (Faces)
- Faces
- 轉場 (Transitions)
- Transitions
- 結論 (Conclusion)
- Conclusion

我們來逐一檢視這些要素。

Let's review each of these components.

建立場景 (Establishing Shot)

Establishing Shot

建立場景是你的開場畫面——用來鋪陳情境，把主角和讀者放進故事發生的環境裡。第一格永遠值得你多花一點時間。

The establishing shot is your opening slide—the way you set the scene and place the protagonist and the reader into the environment where the story happens. It's always worth spending just a bit more time on this first panel.

注意

NOTE

如果你在畫分鏡時卡住了，我的建議是：先專注在建立場景，花多少時間都沒關係，先讓自己完全沉浸在情境裡。當你準備好了，你自然會往下一格前進。

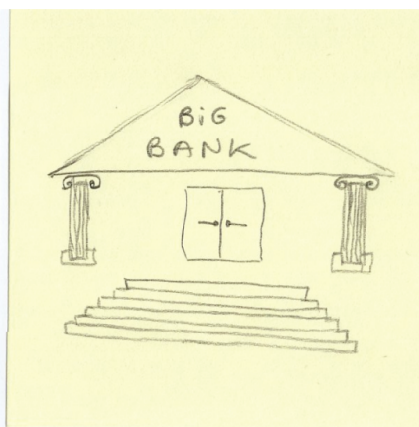
If you get stuck while drawing your storyboard, my advice is to focus on the establishing shot and spend as much time as you need to immerse yourself in the situation. You will naturally move on to the next panel when you are ready.

在「心理健康助理」的分鏡裡，我們用「Coffee Nerd」咖啡館作為開場，如圖 3.4。

In our “Mental Health Assistant” storyboard, we open the story at the Coffee Nerd café, shown in Figure 3.4.

圖 3.5 也展示了更多不同開場鏡頭的例子 (繁忙市中心街角、某家大型銀行的台階上、以及公園裡的一段悠閒散步) 。

A few more examples of different opening shots (a busy downtown corner, on the steps of a large bank, and a relaxing walk in a park) are shown in Figure 3.5.



物件 (Things)

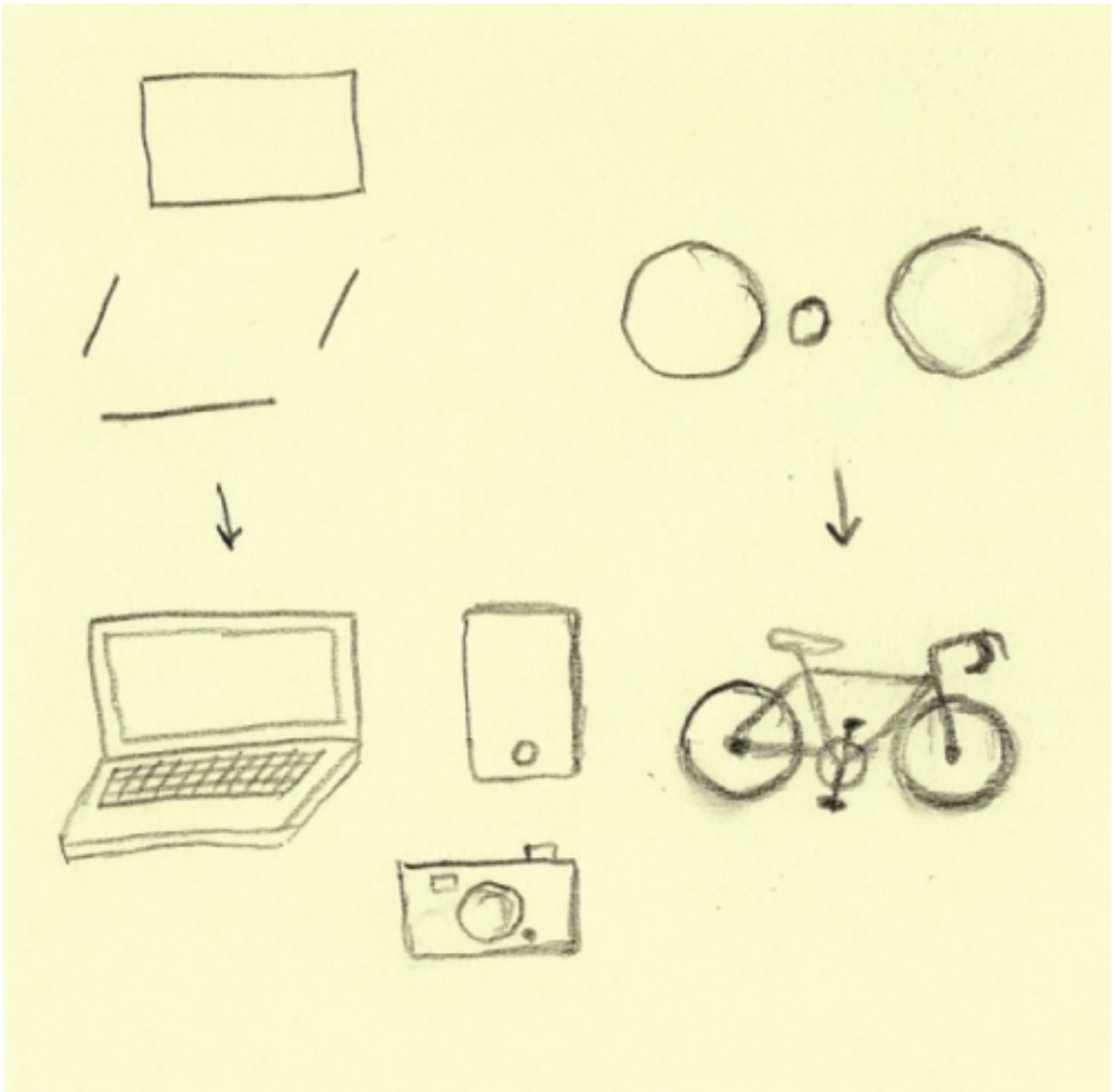
Things

「物件」指的是分鏡中的無生命物體：建築、家具、各種小裝置等等。物件其實不難畫——只要你會畫方形和圓形，你幾乎就能畫出人類已知的任何小玩意（見圖 3.6）。

Things include inanimate objects in your storyboard: buildings, furniture, gadgets, etc. Things are not hard to draw—if you can draw a box and a circle, you can draw almost any gadget known to humankind (see Figure 3.6).

花點時間練習看看你能不能畫出一台電腦和一支手機。（如果你想挑戰一下，試著畫腳踏車——比看起來難！）

Take a moment to practice and see if you can draw a computer and a phone. (If you really want a challenge, try drawing a bicycle—it's harder than it looks!)



人物 (People)

People

人很重要。人物以及他們的行動，才是分鏡能走起來的原因。但對多數人而言，畫人有點麻煩，就算你受過人體藝術訓練也一樣。

People are important. People and their actions are what make the storyboard go. However, they are kind of a pain to draw for most folks, even if you've been specially trained in figure drawing.

因此我強烈建議用火柴人。它又快又簡單，而且完全不會干擾意思。事實上，火柴人常常更容易讓讀者把自己代入情境。品質是一把雙刃劍。我自己的畫風很基本，但那份「不精緻」反而是優點——它明顯是進行中作品，細節差異不容易被放大；讀者就會更聚焦在故事本身。換句話說，畫的品質必須符合你對專案的確定性程度。此刻我們離「這個 App 值不值得做」都還很遠，所以低品質反而更好：它讓注意力落在畫所代表的故事，而不是畫本身。

That is why I highly recommend drawing stick-figure people. It's easy and fast, and it doesn't interfere with the meaning in any way. In fact, it often makes it easier for the reader to mentally place themselves into the action. Quality is a double-edged sword. My own drawings tend to be quite basic, but therein lies the redeeming lack of quality—they are clearly a work in progress, and minute differences are noticed less. Thus, the reader is more focused on the story itself. To put it another way, the quality of the drawing must match the level of certainty of the project. We are far from being certain this app is worth doing at all at this point, so lower quality is actually preferred because it focuses the mind on the story the drawing represents and not on the drawing itself.

如果你想把人物畫得更花俏，可以試試圖 3.7 的箱子或海星變體。

If you want to get fancier when drawing people, try the box or starfish variations shown in Figure 3.7.



尤其是海星畫法，又簡單又好玩，也成了現場在大海報上做速記草圖的創作者長年最愛。畫海星時，手要放鬆，用大而流暢的筆觸；最後再加上頭部。稍加練習，你就能畫出許多動態、且和商務情境相關的姿勢。你選哪種風格完全是個人偏好；任何裝飾都只是選配——如果你想繼續「stick」在基本火柴人上，也完全沒問題。

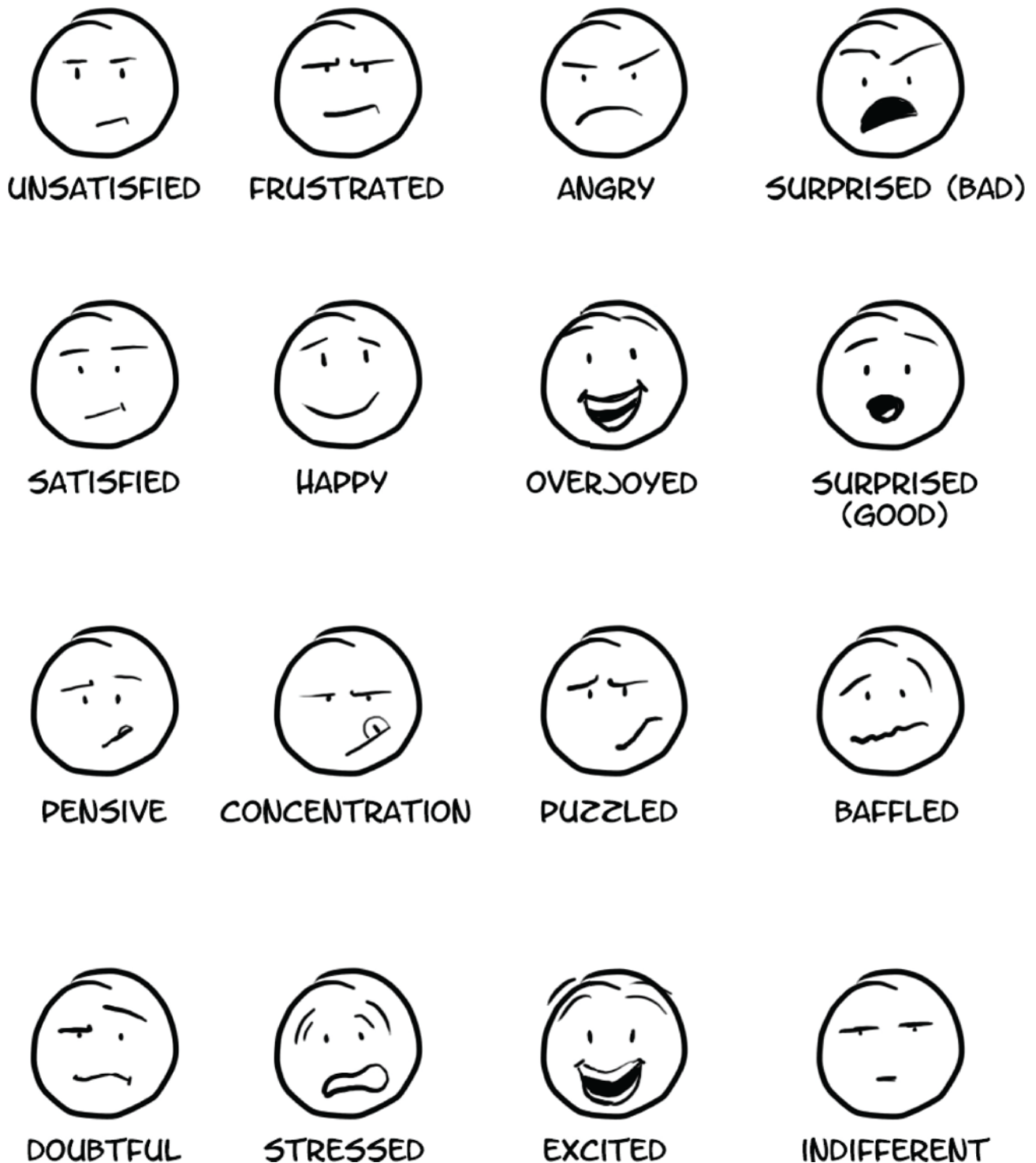
Starfish, in particular, are easy and fun to draw and have become a perennial favorite of sketch note artists working live with large poster boards. When drawing in starfish style, keep your hand loose and make broad, sweeping strokes. Add the head at the very end. With a bit of practice, you should be able to duplicate a variety of dynamic business-relevant poses. Whatever style you choose comes down to personal preference. Any embellishments are strictly optional; if you prefer to “stick” to basic stick figures, they work just fine.

臉部表情 (Faces)

Faces

在畫完人物之後，另一個很難畫的是表情。我常用的一個專家小技巧來自 Ken Cheng 的《See What I Mean?》(3)：在火柴人的臉上加眉毛。眉毛能快速又容易地區分細微表情差異，例如「驚喜但覺得好」和「驚喜但覺得糟」，或「滿意」與「冷淡」(見圖 3.8)。

After people, one of the hardest things to draw is facial expressions. One pro tip from Ken Cheng's book, See What I Mean? (3) that I use all the time is to add eyebrows to your stick-figure drawings of faces. Eyebrows help quickly and easily distinguish between subtle variations of expressions, such as surprise-good versus surprise-bad and satisfied versus indifferent (see Figure 3.8).



轉場 (Transitions)

Transitions

在經典著作《Making Comics》中，Scott McCloud 歸納了六種轉場類型。在 UX for AI 的分鏡裡，我們主要關心下面四種：

In his seminal book, *Making Comics*, Scott McCloud recognized six types of transitions. In the UX for AI storyboards, we are mainly concerned with the following four types:

- 動作到動作 (Action-to-Action) : 同一個主體連續動作的呈現
- Action-to-Action: Shows the same subject in a series of actions
- 主體到主體 (Subject-to-Subject) : 同一場景中主體在不同對象間切換
- Subject-to-Subject: A series of changing subjects within a scene
- 場景到場景 (Scene-to-Scene) : 跨越顯著的時間與 / 或空間距離
- Scene-to-Scene: Transitions across significant distances in time and/or space
- 主體到 AI (Subject-to-AI) : 主體與 AI 互動的轉場
- Subject-to-AI: When the subject is interacting with an AI

每一種轉場都會為你的故事帶來特定效果。我會用前面討論過的「心理健康助理」分鏡 (見圖 3.3) 來示範。

Each type of transition introduces a particular effect in your story, which I will demonstrate using the “Mental Health Assistant” storyboard we discussed previously (see Figure 3.3).

圖 3.9 的「動作到動作」轉場，是你日常最常用、最基本的預設。在前述的「心理健康助理」分鏡裡，從建立場景轉到年輕男子喝咖啡，就是一個典型的動作到動作。

The Action-to-Action transition shown in Figure 3.9 is your basic everyday bread-and-butter default. In the “Mental Health Assistant” storyboard discussed previously, we can consider the transition from the establishing shot to the young man drinking coffee a typical “Action-to-Action” transition.





另一個例子是：年輕男子終於鼓起勇氣向年輕女子自我介紹，如圖 3.10。

Another example of this type of transition might be when the young man finally gets the courage to introduce himself to the young woman, as shown in Figure 3.10.

這兩個例子裡，「動作」指的都是主角為了推進故事而採取的行動。

In both cases, the “action” part of the transition is the action taken by the protagonist to advance the story.

「主體到主體」轉場就像鏡頭在兩張臉之間切換。若你畫一格是男子獨自坐著喝咖啡，另一格是女子在另一張桌子喝咖啡，這就是主體到主體轉場，如圖 3.11。

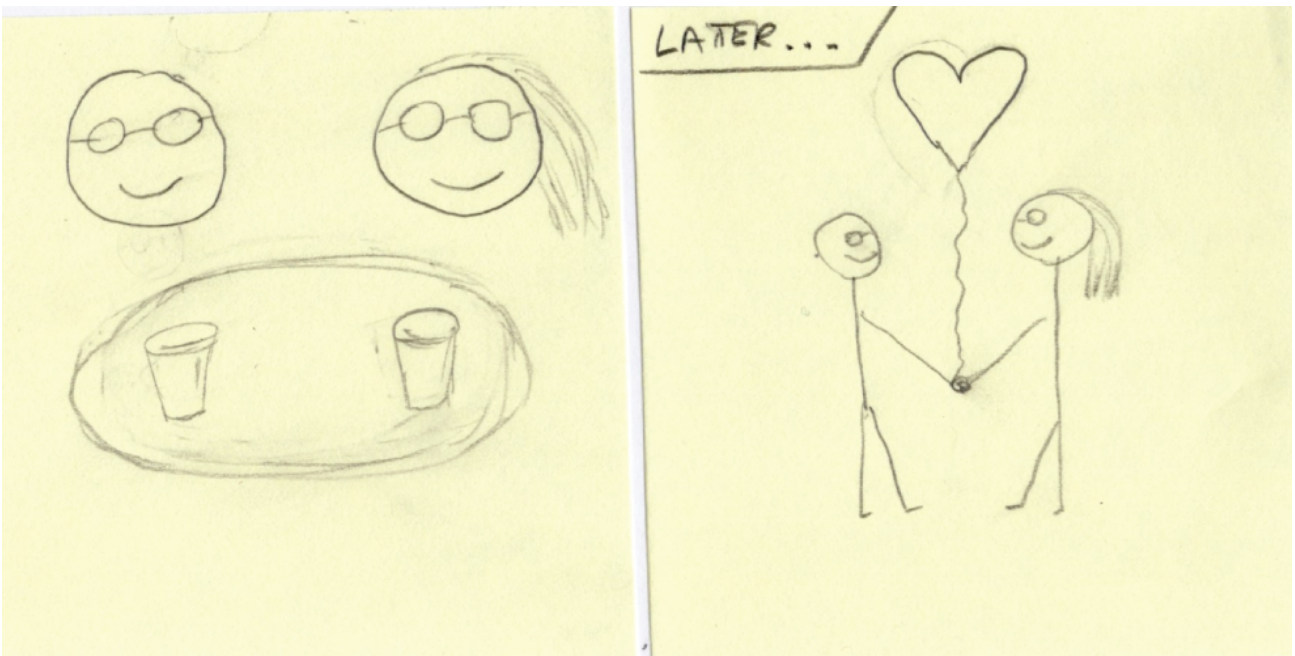
Subject-to-Subject transition is when the camera pans between two faces. In this case, if you had a panel of a young man sitting alone drinking coffee and one of the young woman drinking coffee at a different table, this might be considered a Subject-to-Subject transition, as shown in Figure 3.11.

注意

NOTE

我在原始分鏡裡刻意省略了女子獨自坐著的那一格，因為它對故事幫助不大。故事要短、要直指重點——理想是 4-6 格。

I omitted the panel of the woman sitting alone from the original storyboard because it did not add much to the story. Keep the story brief and to the point—4-6 panels are ideal.



「場景到場景」轉場適合用在事件發生在「稍後」、平行發生、或換到其他地方的情況。例如在我們的分鏡裡，很容易想像：那對年輕人牽著愛心氣球走向夕陽，是在稍後才發生——畢竟咖啡館通常不賣愛心形狀的氣球（見圖 3.12）。

Scene-to-Scene transitions are useful when events occur “later,” in parallel, or in another place. For example, in our storyboard, we can easily imagine that the young couple going into the sunset with a heart balloon in hand happened a short while later: after all, coffee shops do not usually sell heart-shaped balloons (see Figure 3.12).

注意

NOTE

「場景到場景」是 UX 分鏡裡唯一合理使用旁白字幕 (caption) 的情況。其他任何 caption 的用法都是偷懶，因為旁白會把讀者從故事裡硬拉出來。請努力用動作、表情與對話推進故事。

Scene-to-Scene transitions are the only legitimate use of captions in UX storyboards. Any other use of captions is a cop-out, as narration yanks the reader out of the story. Make the effort to use actions, facial expressions, and dialogue to move the story forward.

「主體到 AI」是主體到主體的一種特殊情況，特別會在 AI 驅動專案的分鏡中出現。你可以把 AI 想成故事裡另一個「主體」。在「心理健康助理」分鏡裡，主角的臉和 AI 的「臉」（此例中，是手機上某個客製化清單的模糊暗示）之間的切換，就是典型的主體到 AI 轉場（見圖 3.13）。

Subject-to-AI is a special case of the Subject-to-Subject transition that comes into play specifically in creating storyboards for AI-driven projects. You can think of AI simply as another “subject” in the story. In the “Mental Health Assistant” storyboard, the transition between the face of the protagonist and the “face” of AI (in this case, a vague suggestion of a customized checklist on his cell phone) provides a typical example of a Subject-to-AI transition (see Figure 3.13).



文學、電影與流行文化提供了各式各樣的 AI 主體範例：從行星大小的巨型 AI (Matrioshka Brain (4)) 到人形機器人 (《魔鬼終結者》) ，到 AI 驅動的太空船與棲地 (HAL-9000 、《星際爭霸戰》的電腦) ，再到活在異次元的無形 AI (Dan Simmons 的《Hyperion Cantos》系列、《攻殼機動隊》動畫) 。畫分鏡時，選一個你覺得最適合你專案的 AI 呈現方式即可。我個人偏好把 AI 想成《迷失太空》木星 2 號的 B-9 環控機器人，它 (他 ?) 對顯而易見的事情有著驚人的掌握：「危險 · Will Robinson · 危險！」 (見圖 3.14) 。

Literature, movies, and popular culture provide numerous and versatile examples of AI-driven subjects, ranging anywhere from giant planet-sized AI (Matrioshka Brain (4)) to humanoid robots (Terminator) to AI-driven spaceships and habitats (HAL-9000, Star Trek’s computer) to disembodied AIs that live in the alternate dimensions (the Hyperion Cantos books by Dan Simmons, Ghost in a Shell anime). For your storyboard, pick whatever AI representation feels most appropriate for your project. Personally, I prefer to imagine my AI representations in the style of the Lost in Space Jupiter 2’s B-9 environmental control robot famous for its (his?) profound grasp of the obvious: “Danger, Will Robinson, Danger!” (see Figure 3.14).

把「危險 Will Robinson」機器人當作設計上的 AI 心智模型，其迷人之處在於：它幾乎適用於我們當代消費型 AI 產品的多數樣貌。圖 3.15

展示了同一個分鏡，只是換成了 Amazon Alexa。

The beauty of the “Danger Will Robinson, Danger” Robot as an AI mental model for your designs is that it pretty much applies to most manifestations of our modern state of consumer AI products. Figure 3.15 shows the same storyboard featuring Amazon Alexa.

請注意：用觸手怪的建立場景來鋪陳情境，以及用眉毛有效傳達 Will 在每一格的感受。

Note the use of the establishing shot of the tentacle monster to set the scene and the effective use of eyebrows to communicate what Will is feeling in each panel.

注意

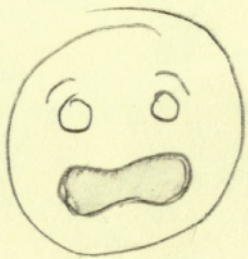
NOTE

你有注意到嗎？我毫不羞恥地重複使用便利貼，做出另一個分鏡！沒錯，這正是我們用便利貼的原因。沒有任何獎品頒給你「第 15 次把整張重畫一遍」，也沒有獎品頒給你徒手畫圓。我會用硬幣或辦公室雜物來畫圓，用尺（或緊急時用一疊便利貼）來畫直線。身為設計師，你有責任有效率地使用你的時間，以及別人的錢。

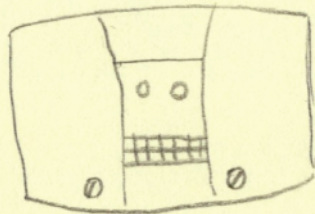
Did you notice? I shamelessly reused our sticky notes to create a different storyboard! Yes, that is precisely why we do this with sticky notes. No, there are no prizes for redrawing the whole thing for the 15th time. Or for free-handing your drawings. I use coins and office junk to draw circles and a ruler (or a pack of sticky notes in a pinch) to draw straight lines. As a designer, you owe it to your team to be efficient with your time and other people's money.



A A H H H H H !!!



DANGER, WILL ROBINSON
DANGER!



How is THAT EVEN
REMOТЕLY HELPFUL RIGHT
NOW?



I don't know THAT
ONE



如果你想再更宅一點，我非常推薦 Nathan Shedroff 和 Christopher Noessel 的《Make It So：從科幻學互動設計》（5）。（Chris 也很慷慨地提供了關於 AI 倫理的精彩觀點，你可以在第 22 章〈AI 倫理〉讀到。）

For more nerdy UX fun, I highly recommend the book *Make It So: Interaction Design Lessons from Science Fiction*, by Nathan Shedroff and Christopher Noessel (5). (Chris was also kind enough to provide an awesome perspective on AI ethics, which you can enjoy in Chapter 22, “AI Ethics.”)

分鏡的結論 (Conclusion)

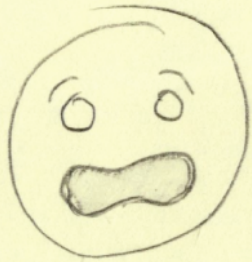
Storyboard Conclusion

可以說最重要的一格就是最後一格：結論。結論是英雄 / 女英雄和夢中情人（或一張沙發）一起奔向夕陽的地方。結論也會揭示 AI 解法的預期效益，讓讀者能判斷故事是否「站得住」並可能產生想要的結果。回想本章前面「心理健康助理」App 的最初版本，那個「我感覺好多了！」（一個誇張的燦笑）並沒有從前面的故事自然推導出來（見圖 3.16）。

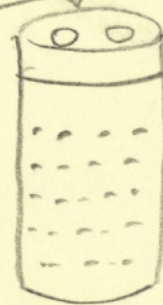
Arguably, the most important panel is the last one: the Conclusion. The conclusion is where the hero/heroine rides into the sunset with the girl (or a couch) of their dreams. The conclusion is also where the projected benefit of the AI-driven solution is revealed so the reader can evaluate if the story “holds together” and is likely to produce the desired outcome. Recall the initial incarnation of the “Mental Health Assistant” app earlier in the chapter and how that “I feel so much better!” outcome (a maniacal happy grin) did not follow from the rest of the story (see Figure 3.16).



A A H H H H H !!!



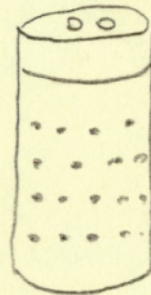
KENNY G JUST RELEASED HIS NEW ALBUM. WOULD YOU LIKE TO HEAR IT?



HOW IS THAT EVEN REMOTELY HELPFUL RIGHT NOW?



I don't KNOW THAT ONE

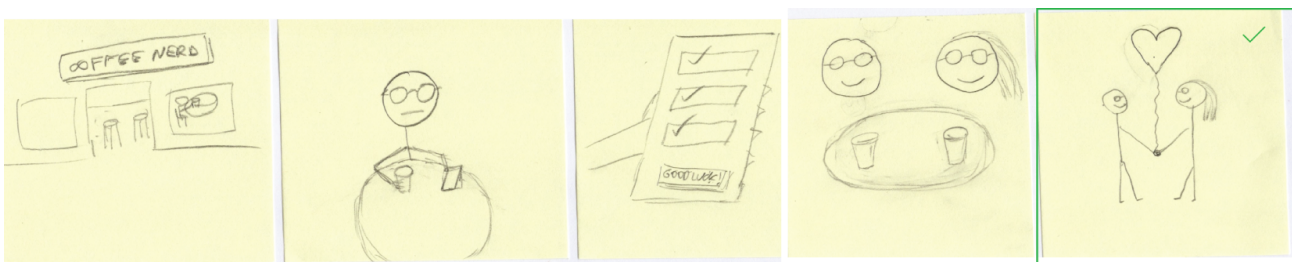
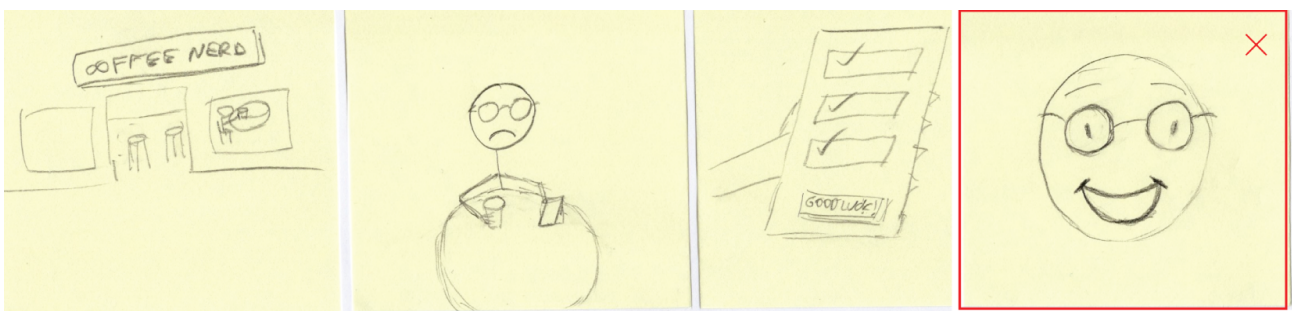


相比之下，在後來版本的「心理健康助理」故事裡，兩個人在咖啡館閒聊後建立浪漫連結的「回報」，就很符合現代西方自由民主敘事中對異性戀伴侶「應該如何看對眼」的典型想像（見圖 3.17）。

In contrast, in our later version of the “Mental Health Assistant” story, the “payoff” of two people finding a romantic connection after striking up a casual conversation in a coffee shop fits in well with a standard modern liberal democratic Western narrative of how a heterosexual couple is supposed to hit it off (see Figure 3.17).

但請注意，正如 Yuval Noah Harari 的《人類大歷史：從野獸到扮演上帝》（6）精彩指出的，這種熟悉情境對其他文化背景的人可能顯得相當陌生。畫分鏡時，請把你要設計的文化與族群納入考量。

Note that this familiar scenario might look quite foreign to people from other cultures, as Sapiens by Yuval Noah Harari points out so eloquently (6). In your storyboard, consider the culture and people you are designing for.



我最喜歡、也最能凸顯「在結論格調整適當的 Natural Bang」重要性的例子之一，是我曾為一家線上帳單支付公司做過的分鏡。產品經理堅持結論格要畫主角在網路繳完帳單後「欣喜若狂、跳起舞來」。

One of my favorite examples showcasing the importance of dialing the appropriate “Natural Bang” in the Conclusion panel is a storyboard I once made for an online bill pay company. The product manager insisted that the Conclusion panel show the protagonist “overjoyed beyond measure and dancing a jig” after he paid his bills online.

我不同意。

I disagreed.

我告訴他，更真實的情境應該是：主角「只是對我們的線上服務減少了繳費麻煩感到滿意」，因此「現在他有時間到戶外和狗玩飛盤」——這才合理。團隊其他人也支持我的版本。令我完全震驚的是，新帳單支付服務的廣告真的拍了主角對著電腦微笑點頭，鏡頭接著切到他在戶外丟飛盤給狗。

I told him that it’s much more realistic that the hero of our story is “simply satisfied with how our online service reduced the hassle of bill paying,” so “now he has time to go outside and play frisbee with his dog”—a much more realistic scenario. The rest of the team approved of my version. To my utter astonishment, the ad for the new bill pay service featured the protagonist smiling and nodding at the computer, with the camera next

showing him outside throwing a frisbee to his dog.

注意

NOTE

在你的結論格，請把「回報的幅度」畫得合理。聚焦在那份感受，讓讀者自己去解讀這個解法提供了多大金額價值。這也讓你的分鏡成為和利害關係人討論、做使用者研究，甚至偶爾用於行銷與銷售素材的絕佳開場！

For your Conclusion panel, focus on making the magnitude of the payoff look realistic. Focus on the feeling and have the reader interpret the extent of the monetary value provided by the solution. This makes your storyboard an ideal conversation starter for stakeholder conversations, user research, and occasionally even marketing and sales materials!

AI 的分鏡

Storyboarding for AI

除了「主體到 AI」這種特殊轉場之外，畫 AI 分鏡最大的改變，是更強調故事的「是什麼 (what) 」與「為什麼 (why) 」，並刻意省略大量介面細節。當 AI 正被整合進各種日常物件後，UX 設計師會有多種可行的實作選項：智慧小裝置、智慧日用品（例如汽車）、AI 代理等等。專案初期不要太武斷地指定實作方式，才能保留團隊的創造力。

In addition to the specialized Subject-to-AI transitions, the most significant change to drawing AI storyboards is the increased focus on the “what” and “why” of the story and the intentional omission of much of the interface detail. Now that AI is actively integrated into various everyday objects, multiple implementation options are widely available to UX designers, involving a combination of smart gadgets, smart everyday objects (such as cars), AI agents, etc. Avoid being too prescriptive early in your project to maintain your team's creativity.

注意

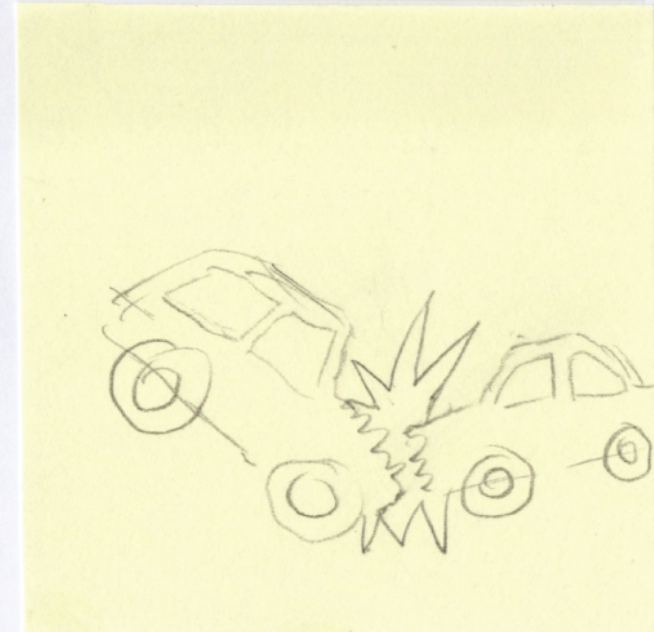
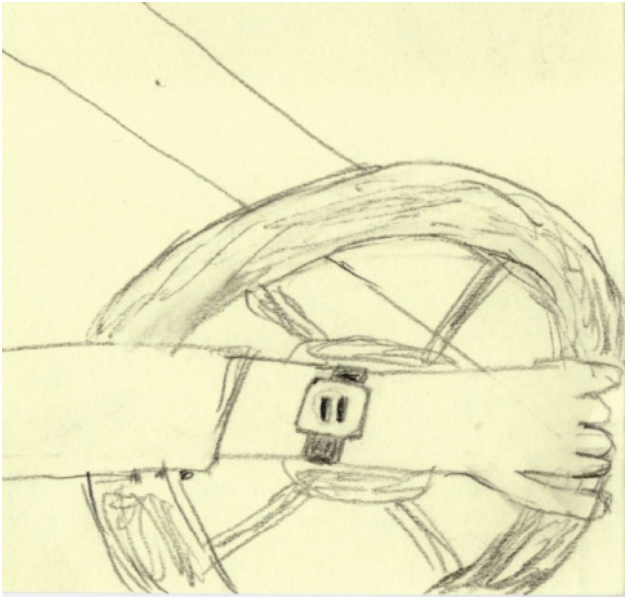
NOTE

針對 AI 驅動用例的分鏡，務必要簡潔，省略多餘格數或任何可能限制團隊想像的內容。能用抽象呈現就盡量用抽象，但也要確保故事前後自治、講得通。這是一種平衡。

It's important to be brief and omit extra panels or anything that might limit the team's imagination when creating AI-driven use case storyboards. Use abstract representations whenever possible, but also ensure that your story hangs together well. It's a balance.

來看一個簡單的 AI 產品案例研究：「開車時接電話」。先看看今天典型的體驗長什麼樣（見圖 3.18）。

Consider a simple AI-driven product case study: “Answer Phone While Driving.” First, let's review how a typical experience might look today (see Figure 3.18).



在這個「現況體驗」分鏡裡：

In this "current experience" storyboard:

- 主角在開車、聽音樂。(也許是〈The Final Countdown〉? 好歌, 很應景。)
- The protagonist is driving the car, and listening to music. (Maybe "The Final Countdown"? That's a fine song. Very apropos.)

- 突然，他的手錶收到一通來電——用那兩個小小的按鈕表示。
- Suddenly, a phone call comes in on his watch, indicated by those two tiny buttons.
- 要按其中一個小按鈕，他得把視線從路上移開，低頭看手錶。
- To hit one of these tiny buttons, he has to take his eyes off the road and look at his watch.
- 然後就出事了。
- Which leads to a disaster.

接著，我們重新想像：如果 Tony

Stark (又名鋼鐵人) 要用「AI-first」的方式來設計，這段體驗會是什麼樣子。在新版故事中，我們的 AI 穿戴裝置會更像《鋼鐵人》戰甲裡的 Jarvis，而不是一個分心又沒腦的玩具 (見圖 3.19)。

Instead, let us now reimagine how this experience might look if Tony Stark (a.k.a. Iron Man) were to design it “AI-first.” In our revised story, our AI-driven wearable would act more like Jarvis, the AI in the Ironman suit, and not like a thoughtless distracting toy (see Figure 3.19).

在同一個故事的新版本裡：

In the new version of the same story:

- 主角雙手握著方向盤開車 (眼睛也盯著路！)。
- The protagonist is driving a car with both hands on the wheel (and eyes on the road!).
- 主角收到一通來電。(注意這裡用抽象呈現——我們還不知道系統會用什麼方式提示來電，但它應該是不分心的。)
- The protagonist receives an incoming phone call. (Note the abstract representation of that, as we don't know precisely how an incoming phone call will be indicated to the user, but it should be in some non-distracting way.)
- 主角用自然語言回覆：「抱歉我現在不能講——我在開車。路上塞車，而且在下雨！我晚點回你。」(注意：沒有其他提示或「叫出 AI」的動作——主角只是自然地說話。) 雙手仍緊握方向盤、眼睛看著路。
- The protagonist responds using natural language: “Sorry, I can't talk—I'm driving. I'm in traffic, and it's raining! I'll call you back.” (Note that there are no other prompts or AI invocations—the protagonist is simply talking naturally.) Again, hands are firmly on the wheel and eyes on the road.
- 結論格顯示主角在抵達目的地、確保安全之後，回撥給對方。
- The Conclusion panel shows the protagonist calling the person back after presumably arriving safely at their destination.

這個新的 AI

產品分鏡很簡短。它把一些事情 (例如來電如何被傳達) 留給讀者想像與後續研究，但它也用更好的 UX 設計與既有 AI 能力 (例如語音轉文字) 提供了一個具體解法，去解決真實問題：分心駕駛。

The new AI-driven product storyboard is brief. It leaves some things (like how the phone call is communicated) to the reader's imagination and further research. However, it also provides a tangible solution to a real problem—distracted driving—using a better UX design and existing AI capabilities, such as voice-to-text.

請注意，在修正版故事裡，結論格沒有什麼驚天動地的成就；它只是描述一件日常小事：平安抵達目的地。這很真實，並且和原始分鏡那個悲劇結局並置時效果特別好。

Note that in the revised story, the Conclusion slide does not reveal a grand revelation or glorious accomplishment; it simply describes the everyday act of arriving safely at your destination. This is realistic and works well when juxtaposed with the original storyboard, which showcases a tragic outcome.

注意

NOTE

用筆還是用鉛筆？本章兩種例子都給你看了。我的建議是：除非你真的很會畫，否則放棄橡皮擦沒什麼好處——除非你對橡膠或石墨過敏，或你有很嚴重的受虐傾向。（話說回來，我寫了六本書，我又哪來的資格批評別人愛受苦……）

Pen or pencil? Throughout the chapter, we've given you several examples of each. I advise that unless you are really excellent at drawing, there is not much to gain by forgoing the eraser. Unless maybe you are allergic to rubber or graphite. Or have a serious masochistic streak. (Then again, I've written six books, so who am I to judge others for being suckers for punishment ...)

最後想法

Final Thoughts

- 不是每個人都能成為偉大的藝術家，但任何人都能說出一個關於 AI 驅動產品的好故事。
- **Not everyone can be a great artist. But anyone can tell a great story about an AI-driven product.**
- 想要最佳效果，請在抽象與寫實之間取得平衡：在分鏡中只展示最少的 AI 介面細節，也能講出有說服力的故事。
- **For best results, balance abstractions and realism to tell a compelling story by showing minimal AI-driven interface in your storyboard.**
- 如果你畫人很困難，就先專注把「物件」畫得寫實（例如電腦、手機、腳踏車）。火柴人完全夠用——別忘了加眉毛！
- **If you are having trouble drawing people, focus on drawing things (e.g., computers, phones, bicycles) in a realistic way. Stick-figure people will do just fine—just remember to add the eyebrows!**
- 在 ChatGPT 或 Midjourney 還無法一次就生成完整分鏡之前，投入的成本不值得；習慣用鉛筆和便利貼自己畫分鏡吧。
- **Until ChatGPT or Midjourney can create a complete storyboard in one shot, the juice is not worth the squeeze; get used to drawing your storyboards with pencil and sticky notes.**
- 即使未來生成式 AI 發展出可靠的方法，能用提示詞畫出完整分鏡，你仍應該繼續花 2–3 分鐘自己畫一份。為什麼？因為畫畫是人做給人看的練習。畫畫能解放想像力，研究也顯示它能幫助我們理解正在解的問題（7）。畫畫也讓我們感覺和宇宙其他部分連結在一起。我把這叫做「心智—繪圖連結（Mind-Drawing Connection）」。第一人稱親手繪畫的創造力是真實存在的，絕不該被丟掉——這或許才是這個練習最重要的部分。
- **Even after generative AI develops a reliable way to draw a complete storyboard based on a prompt, you should continue investing 2–3 minutes to draw one yourself. Why? Drawing is an exercise by humans and for humans. Drawing is needed to free our imagination, and research shows that it helps us make sense of the problems we're solving (7). Drawing also helps us feel connected to the rest of the universe. I call it the "Mind-Drawing Connection." The creative power of first-person drawing is real and should never be discarded; that is perhaps the most important part of the exercise.**

- 最重要的是：享受畫分鏡的樂趣——這可能是你成人生活中少數幾次，能靠「假装自己又回到八歲」來領薪水（而且真的創造價值！）的時刻。這也是讓 UX 設計這個職業如此酷的原因之一。（馬戲團小丑們，輸了吧！）
- Above all, have fun with your storyboards—it's one of the few times in your adult life you get paid (and add value!) by pretending you are eight years old all over again. And that is just one of the things that makes UX design such a cool profession. (Take that, circus clowns!)

設計練習：畫出你自己的分鏡

Design Exercise: Create Your Own Storyboard

最後，輪到你了！希望你很興奮。你要練習為一個行動或穿戴式 App 畫出自己的分鏡。本書會以一個可愛的小用例作示範，靈感來自 The Death Clock (www.death-clock.org (8))。我們在一股毫無根據的樂觀與無邊創意之下，把這個 App 叫做「Life Clock」。它本質上是一個 AI 驅動的追蹤器，能預測你何時會死，並估算你每天做的各種行為（例如健康飲食、運動、睡得好、和其他人類聊天等等）會為你的生命時鐘增加（或減少）多少分鐘，鼓勵你做出好選擇，活得更長、更充實。

Finally, it's your turn! I hope you are excited. You get to practice drawing your very own storyboard for a mobile or wearable app. In this book, we will be using as an example a happy little use case inspired by The Death Clock (www.death-clock.org (8)). In a fit of unwarranted optimism and boundless creativity, we will call our app "Life Clock." Essentially, it's an AI-driven tracker that predicts when you'll die and how various actions you perform daily (like eating healthy, exercising, sleeping well, talking to other humans, etc.) can add (or subtract) minutes to your life to encourage you to make good choices in order to live a long and fulfilling life.

所以，挑一個用例，拿起鉛筆和方形便利貼。（如果你需要靈感來想 AI 驅動的好用例，就問 ChatGPT。）先從問「我在哪裡？」開始，落筆畫出你的建立場景。接著一路畫下去，總共目標 4–6 格。記得加入一些主體到 AI 的轉場，並在結論格用一個「Natural Bang」收尾，讓讀者能感受到這個 App 帶來的效益。給自己 10 分鐘完成這個練習。

So pick a use case, grab your pencil, and some square sticky notes. (If you need inspiration to come up with good AI-driven use cases, ask ChatGPT.) Start by asking, "Where am I?" and put your pencil to paper to draw your Establishing Shot panel. Continue drawing from there. Aim for 4–6 panels total. Be sure to include some Subject-to-AI transitions and conclude your story with a "Natural Bang," giving the reader the appropriate feel for the app's benefit in your Conclusion panel. Give yourself 10 minutes to complete the exercise.

注意

NOTE

如果你需要靈感，可以參考以下例子。在你完成自己的設計練習之前，不要進入下一章。

If you need inspiration, consider the following example. Do not proceed to the next chapter until you have completed your own design exercise.

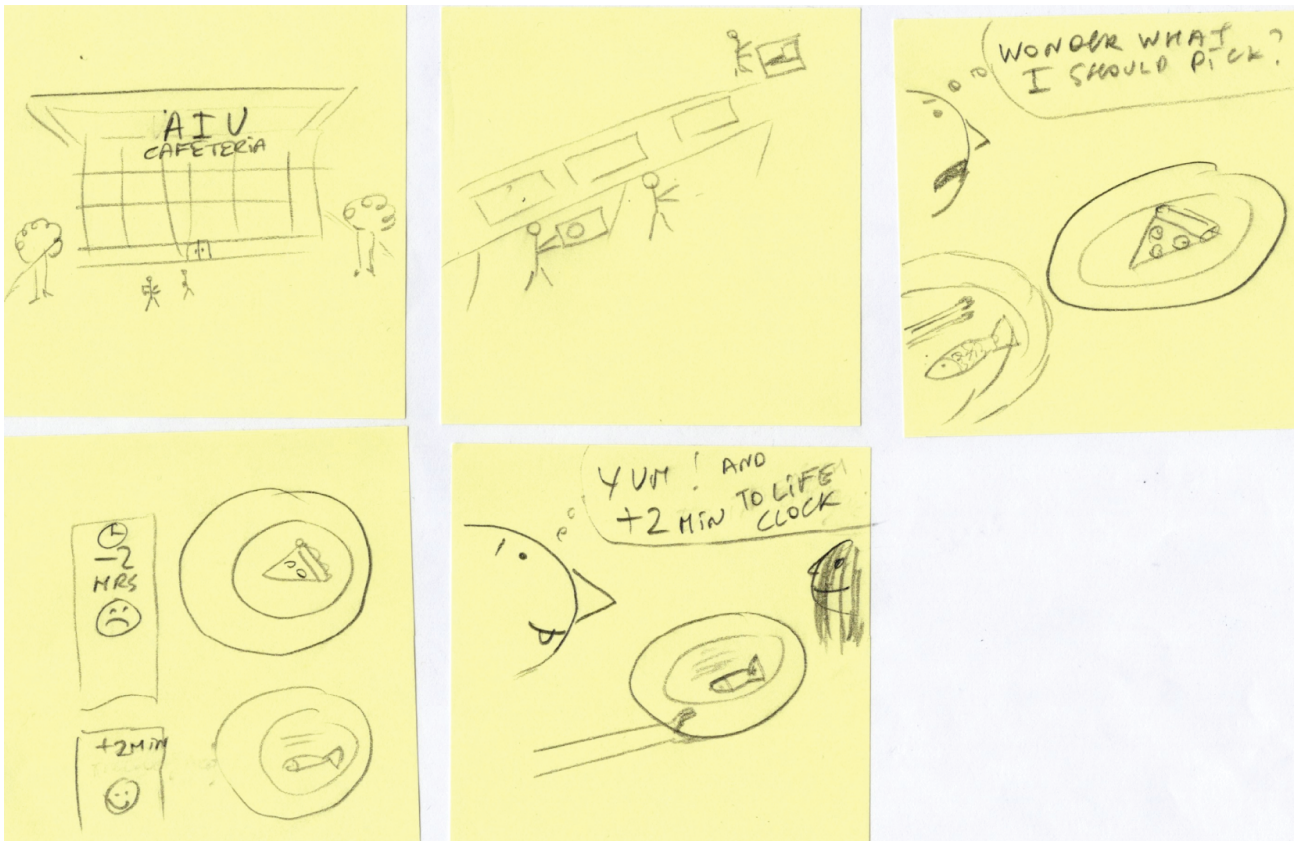
分鏡練習範例：Death Clock

Storyboarding Exercise Example: Death Clock

你最後應該會得到一份類似圖 3.20 的分鏡，但會因為你選的用例不同而內容不同。在這份分鏡裡：

You should end up with a storyboard similar to the one in Figure 3.20 but covering a different use case, depending on what you choose to design. In this storyboard:

- 故事從 AI University 的餐廳開始。
- The story begins at the AI University Cafeteria.
- 學生從櫃檯拿食物，往結帳隊伍移動。
- Students are grabbing food from the counter and moving toward the checkout line.
- 我們的主角在「披薩」和「魚加蘆筍」之間猶豫不決。
- Our protagonist is vacillating between choosing a pizza or a fish and asparagus plate.
- 他拿出可靠的「Life Clock」App，用某種方式讓 App「看見」食物（怎麼做到不清楚，但這是暗示的動作）。
- He pulls out his trusty “Life Clock” app on his phone and somehow gets the app to “see” the food (not clear how but that’s the action implied).
- App 的判決很明確：魚加蘆筍這道菜能讓他的生命時鐘多兩分鐘（雖然之後上廁所可能會很有娛樂效果）。
- The app verdict is clear: The fish and asparagus dish adds two minutes to his life clock (while making for an entertaining bathroom visit later).
- 主角對自己的選擇很滿意。看他那健康又精神的樣子，加上餐盤上超棒的午餐選擇，他很快就吸引到一位潛在愛慕者的注意（對，本章有個主題，該死！）。也許她也選了魚加蘆筍，所以接下來五小時，他們的尿味會一模一樣（9）。
- The protagonist is happy with his choice. Given how hale and hearty he looks and the outstanding choices on his lunch tray, it’s no wonder he quickly catches the eye of a potential love interest (yes, there is a theme to this chapter, damn it!). Maybe she also picked fish and asparagus, so for the next five hours, their urine will smell exactly alike (9).



參考資料

References

1. 1. Asbach, M., Menon, R., & Long, M. (2024) 。 〈 AI in psychiatry: Things are moving fast 〉 。 Psychiatric Times 。 <https://www.psychiatrictimes.com/view/ai-in-psychiatry-things-are-moving-fast>
1. 1. Asbach, M., Menon, R., & Long, M. (2024). AI in psychiatry: Things are moving fast. Psychiatric Times. <https://www.psychiatrictimes.com/view/ai-in-psychiatry-things-are-moving-fast>
2. 2. Nudelman, G. (2014) 。 《 The \$1 prototype: Lean mobile UX design and rapid innovation for material design, iOS8, and RWD 》 。 DesignCaffeine Press 。
2. 2. Nudelman, G. (2014). The \$1 prototype: Lean mobile UX design and rapid innovation for material design, iOS8, and RWD. DesignCaffeine Press.
3. 3. Cheng, K. (2012) 。 《 See what I mean: How to use comics to communicate ideas 》 。 Rosenfeld Media 。
3. 3. Cheng, K. (2012). See what I mean: How to use comics to communicate ideas. Rosenfeld Media.
4. 4. Matrioshka Brain (2024) 。 Wikipedia 。 https://en.wikipedia.org/wiki/Matrioshka_brain
4. 4. Matrioshka Brain (2024). Wikipedia. https://en.wikipedia.org/wiki/Matrioshka_brain
5. 5. Shedroff, N., & Noessel, C. (2012) 。 《 Make it so: Interaction design lessons from science fiction 》 。 Rosenfeld Media 。
5. 5. Shedroff, N., & Noessel, C. (2012). Make it so: Interaction design lessons from science fiction. Rosenfeld Media.

6. 6. Harari, Y. N. (2015) 。 《Sapiens: A brief history of humankind》 。 Harper 。

6. 6. Harari, Y. N. (2015). Sapiens: A brief history of humankind. Harper.

7. 7. Roessingh, H. (2020) 。 〈手寫筆記的好處〉 。 BBC 。 www.bbc.com/worklife/article/20200910-the-benefits-of-note-taking-by-hand

**7. 7. Roessingh, H. (2020). The benefits of note taking by hand. BBC.
www.bbc.com/worklife/article/20200910-the-benefits-of-note-taking-by-hand**

8. 8. The Death Clock 。 www.death-clock.org

8. 8. The Death Clock. www.death-clock.org

9. 9. Robbins, T. (1994) 。 《Half asleep in frog pajamas》 。 Bantam Books 。

9. 9. Robbins, T. (1994). Half asleep in frog pajamas. Bantam Books.