

台大杜鵑花節錯覺展：科學的藝術與藝術的科學

下條信輔教授暨台大師生聯合特展

**Close Encounter – Illusions where science meets art**

Shinsuke Shimojo's work in collaboration with National Taiwan University

## 光射線

## LINE MOTION EFFECT

### 要做什麼？

先按中間的按鈕後觀察，然後按下左鍵及右鍵，觀察中央直線如何改變。你覺得會發生什麼事情？

【本作品由下條信輔設計於本展覽首展】

### What to do?

Press the middle button first, and watch. Then, press the left and the right button. Observe how the central line appears differently. What do you think will happen?

(Originally created for this exhibition by Shinsuke Shimojo.)

### 發生了什麼事？

線段的各個部份在物理上都是同時呈現的，但是當你按下不同按鈕時，線段可能看起來像是從你按的位置展開。這個現象最早被彥阪、宮內和下條於1993年發現，稱為“線段運動效果”。他們一系列的後續研究顯示，當觀察者的注意力集中在視野的某側時，整個視野處理視覺訊息的效率會呈現漸層的差異，因此注意的該側視野較早到達意識的門檻（也可能引發了運動知覺的偵測）。

### 更多嘗試與體驗

- \* 轉動盒子的位置後再試試看，以便確定這效果仍然一樣。
- \* 將雙手交叉後再按左、右鍵，或者請別人按鍵。仍得到一樣的效果嗎？

### What's going on?

The line probe is always presented physically simultaneously, but it may appear unfolding or extending from the side where you pressed the button on. This is called the "line motion effect" first reported by Hikosaka, Miyauchi & Shimojo in 1993. Their series of studies suggested that when the observer's attention is on one side of the visual field, there is a gradient in efficiency of visual information processing, thus the attended side reaches the consciousness threshold earlier (it may also trigger motion detectors).

### Other things to try

- \* Rotate the box and try the same thing, just to make sure that the effect remains essentially the same.
- \* Press the button with crossed hands, or just watch somebody else pressing the button. Still the same effect?