

# **心理與神經資訊學**

# **(Psychoinformatics & Neuroinformatics)**

課號：Psy1007

識別碼：20710100

教室：博雅 101

時間：四 234





聽說魯師沒有時間備課  
!?

# 網頁實驗總論

# 認真研究超英趕美

相關不能推論因果



實驗找出行為開關

# 心理學案例研究：朋友的影響力 (1/3)

## Informational message

Today is Election Day

What's this? • close



Find your polling place on the U.S. Politics Page and click the "I Voted" button to tell your friends you voted.

0 1 1 5 5 3 7 6  
People on Facebook Voted

I Voted

## Social message

Today is Election Day

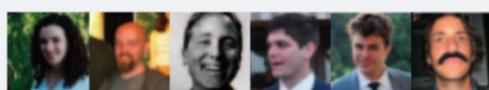
What's this? • close



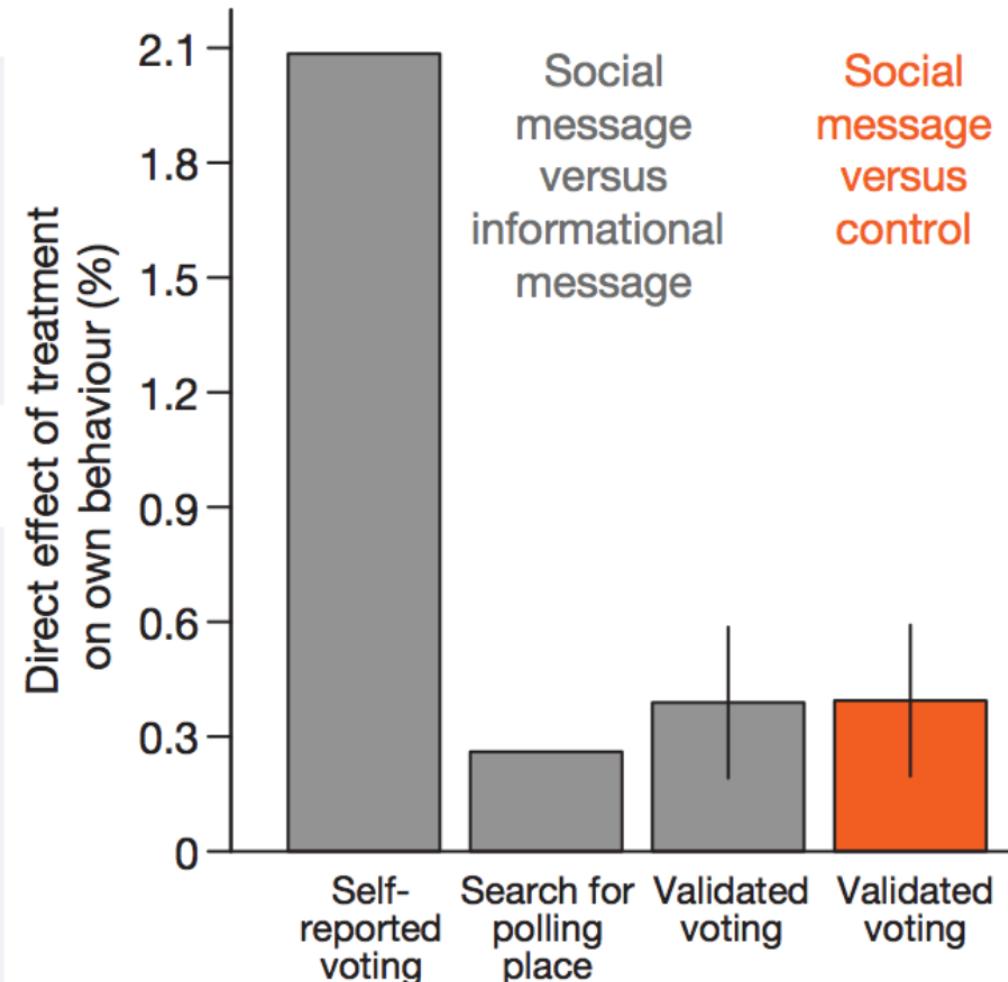
Find your polling place on the U.S. Politics Page and click the "I Voted" button to tell your friends you voted.

0 1 1 5 5 3 7 6  
People on Facebook Voted

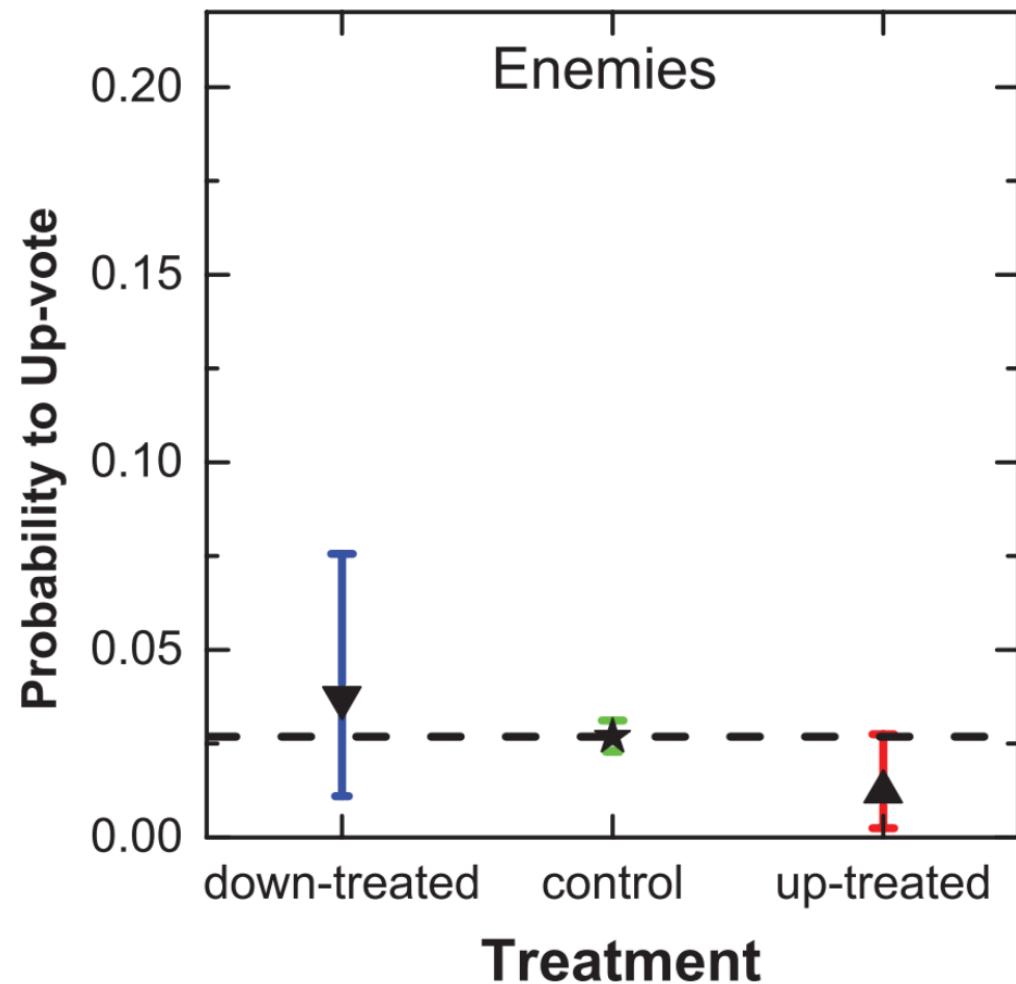
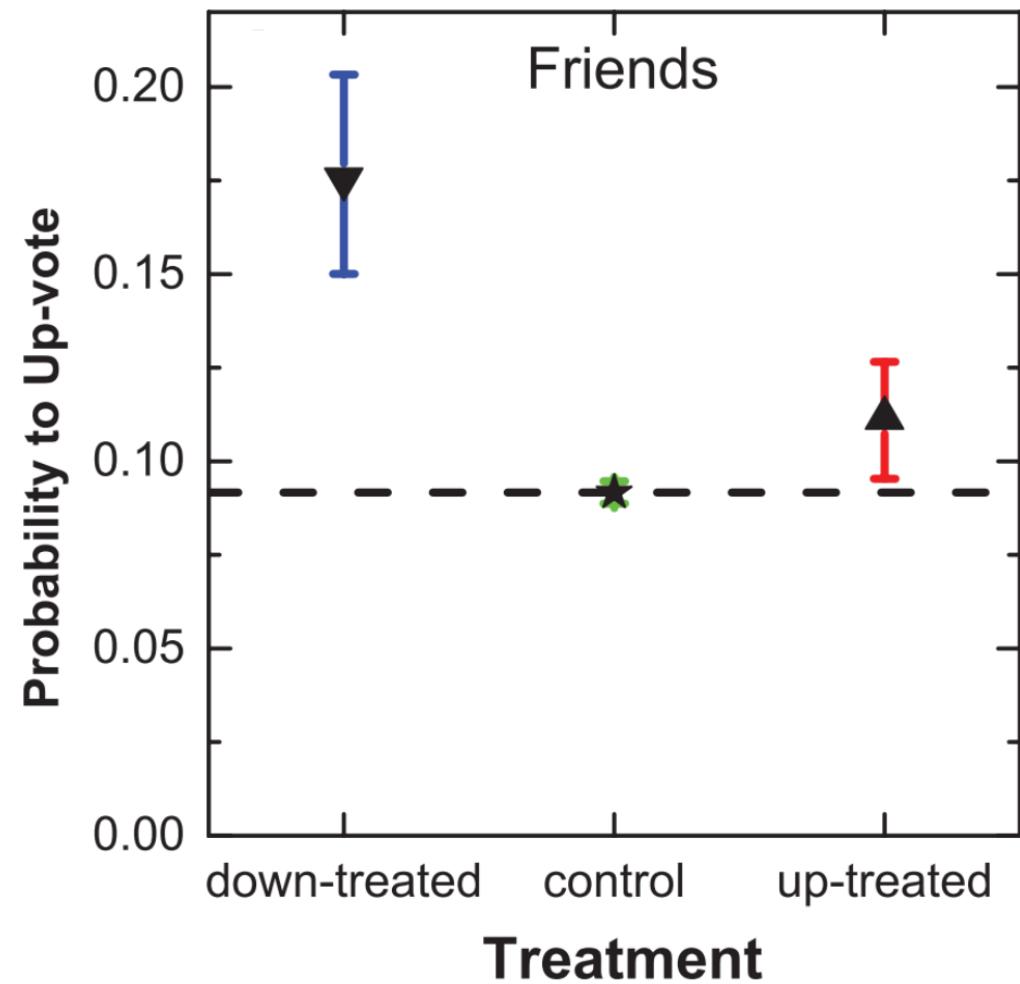
I Voted



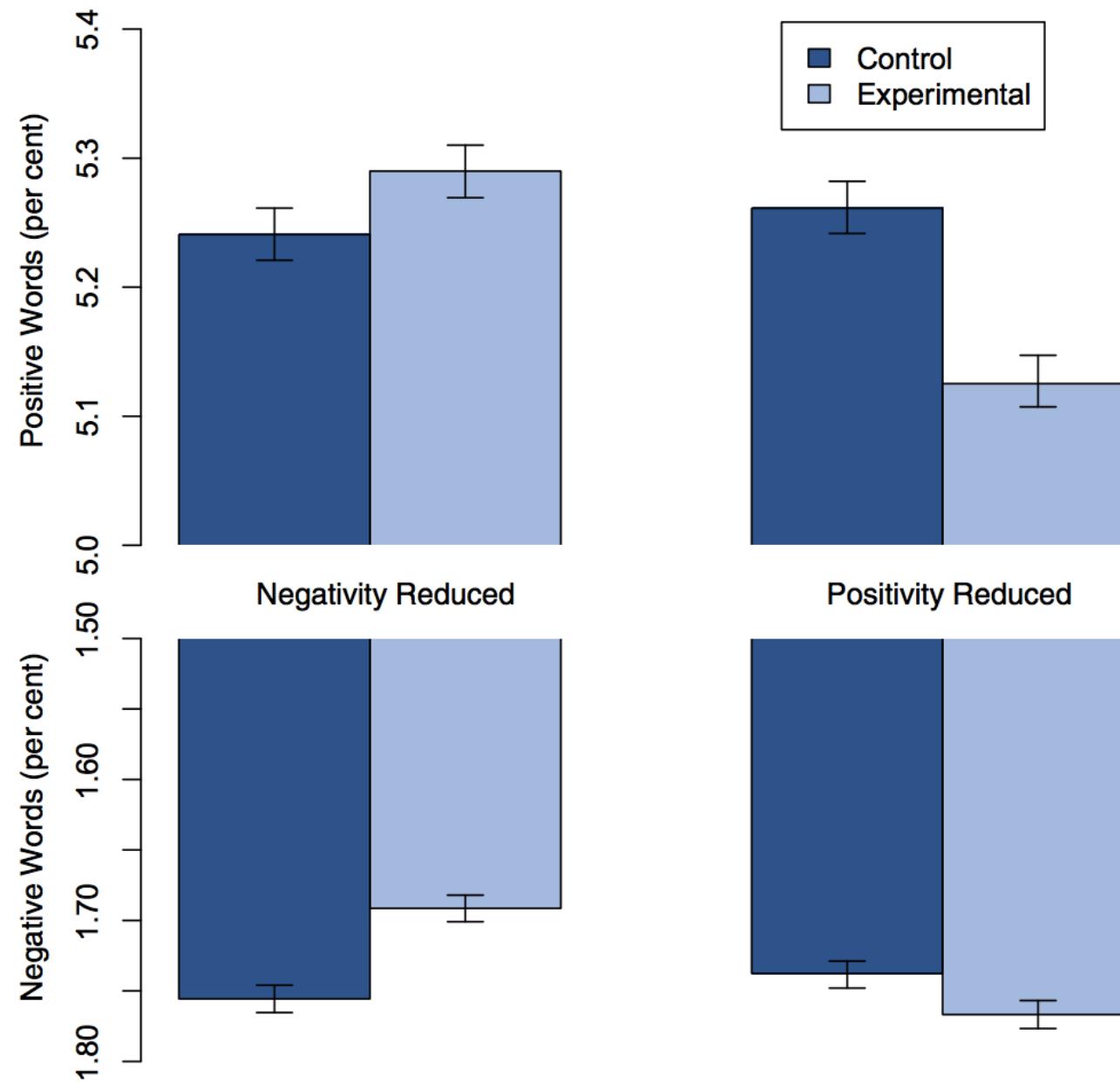
Jaime Settle, Jason Jones, and 18 other friends have voted.



# 心理學案例研究：朋友的影響力 (2/3)



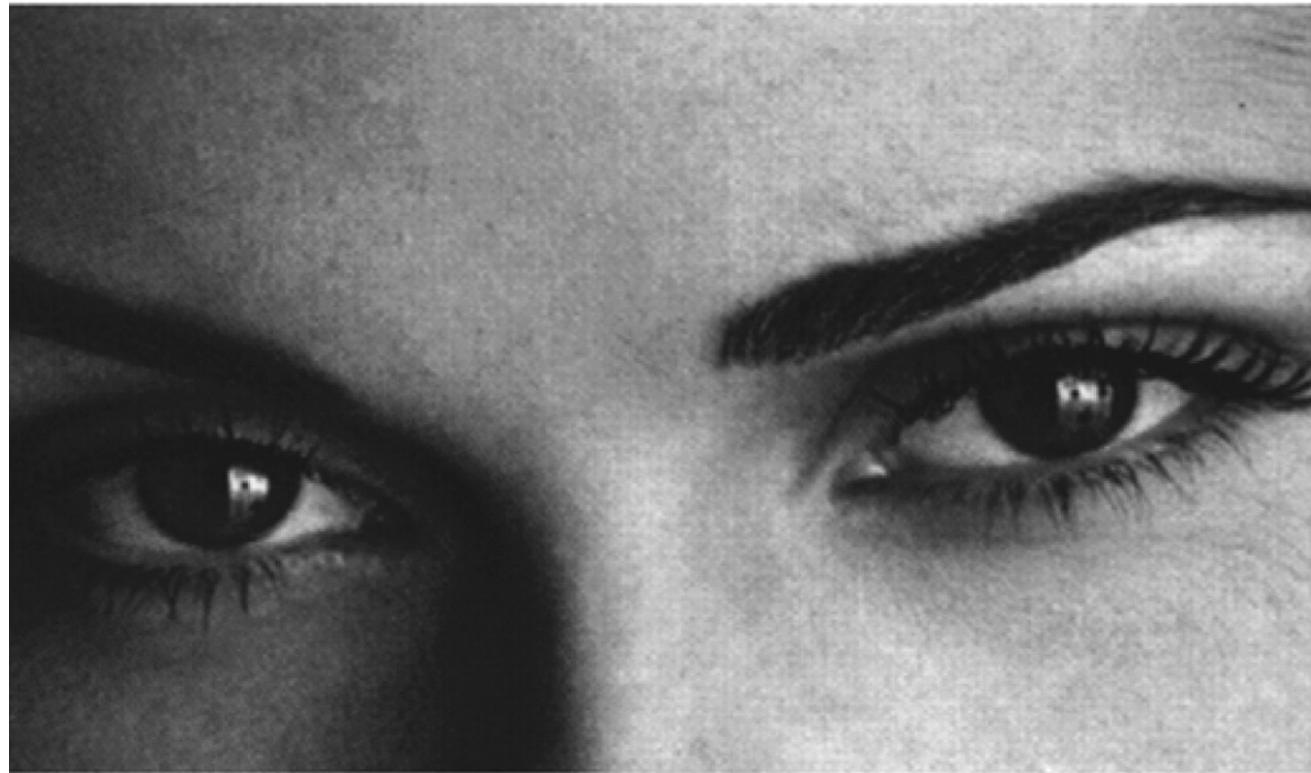
# 心理學案例研究：朋友的影響力 (3/3)



# 心理學案例研究：讀小說增進察言觀色

快樂？

難過？



驚訝？

確信？

# 其他網頁實驗範例

Big Five Personality Test

Reading the Mind in the Eyes Test

Implicit Association Test

Visual Search

...



# 網路研究可靠嗎？

## *Six Preconceptions About Internet Methods*

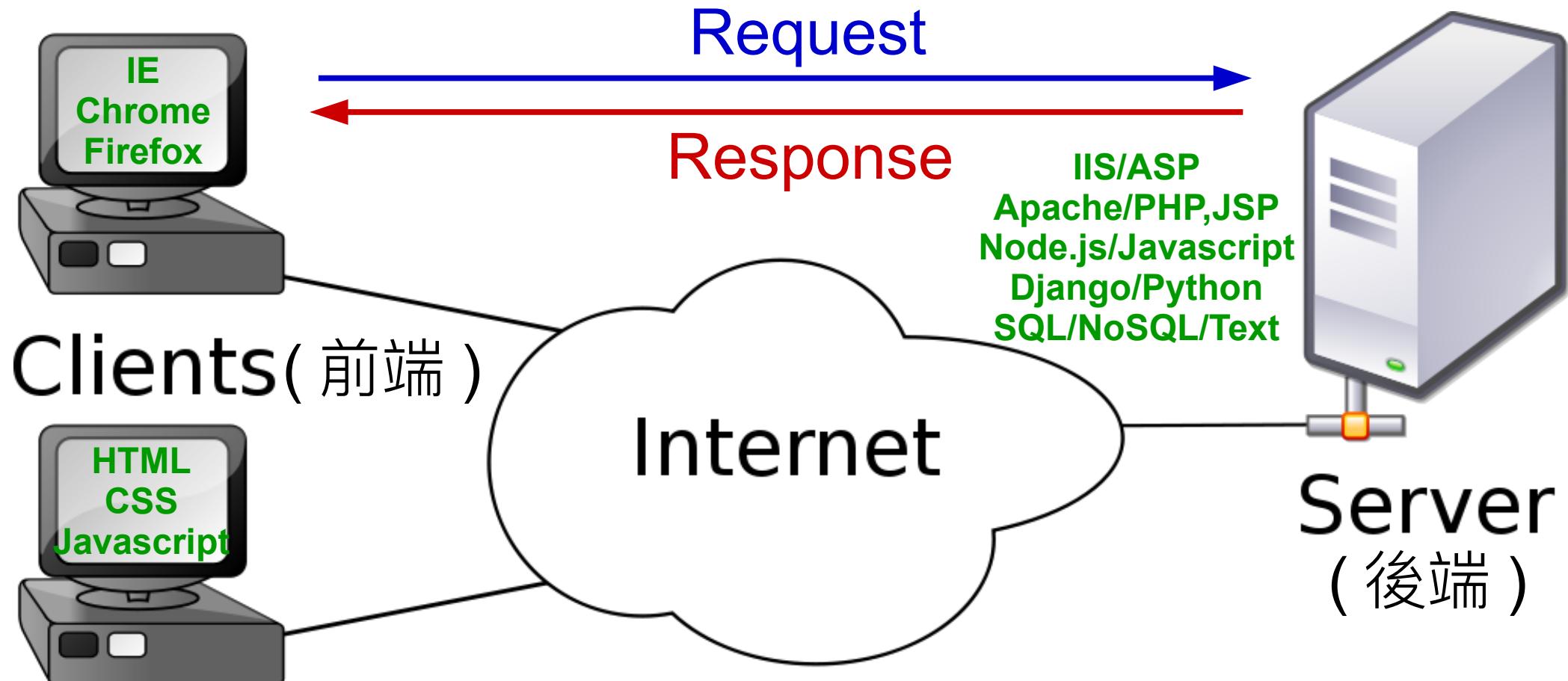
Preconception	Finding
1. Internet samples are not demographically diverse (e.g., Krantz & Dalal, 2000).	Mixed. Internet samples are <i>more</i> diverse than traditional samples in many domains (e.g., gender), though they are not completely representative of the population.
2. Internet samples are maladjusted, socially isolated, or depressed (e.g., Kraut et al., 1998).	Myth. Internet users do not differ from nonusers on markers of adjustment and depression.
3. Internet data do not generalize across presentation formats (e.g., Azar, 2000).	Myth. Internet findings replicated across two presentation formats of the Big Five Inventory.
4. Internet participants are unmotivated (e.g., Buchanan, 2000).	Myth. Internet methods provide means for motivating participants (e.g., feedback).
5. Internet data are compromised by anonymity of participants (e.g., Skitka & Sargis, in press).	Fact. However, Internet researchers can take steps to eliminate repeat responders.
6. Internet-based findings differ from those obtained with other methods (e.g., Krantz & Dalal, 2000).	Myth? Evidence so far suggests that Internet-based findings are consistent with findings based on traditional methods (e.g., on self-esteem, personality), but more data are needed.

此文討論網路研究要小心的事項

# **前端技術 (HTML/CSS/JavaScript)**

# 網頁的前端和後端技術

前端資料由瀏覽器來處理，  
主要是頁面的顯示和小資料的儲存 / 查詢



後端資料由伺服器來處理，主要是大資料的儲存 / 查詢

# HTML5 小抄



## Cheat Sheet [TAGS]

### New [tags added in HTML5]

<article>	self-contained composition that is independently distributable
<aside>	section of page that consists of content tangentially related to content around it
<audio>	sound content
<bdi>	span of text to be isolated from surroundings for bidirectional formatting purposes
<canvas>	area that can be used to draw graphics via JavaScript
<command>	user invokable command
<datalist>	dropdown list
<data-template>	data template

<details>	details of an element
<embed>	embedded content
<figcaption>	caption of figure element
<figure>	group of media content
<footer>	footer for section or page
<header>	header for section or page
<hgroup>	group of headings for section
<keygen>	generated key in a form
<mark>	marked text
<meter>	measurement in defined range
<nav>	navigation links

<output>	represents results of calculation
<progress>	progress of any kind of task
<rp>	parenthesized ruby text
<rt>	ruby text
<ruby>	ruby annotations
<section>	section in a document
<source>	media resources
<summary>	header of a detail element
<time>	date/time
<video>	video
<wbr>	possible line break

### Old [unsupported tags]

<acronym>	acronym
<applet>	applet
<basefont>	base font
<bgsound>	background sound
<big>	big text
<center>	centered text
<fn>	footnotes
<font>	text font, size, and color
<frame>	sub window
<frameset>	set of frames

<isindex> provides searchable index related to current document

<dir>	directory list
<noembed>	no embed section
<noframes>	no frame section
<s>	strikethrough text
<strike>	strikethrough text
<tt>	teletype text
<u>	underlined text
<xmp>	preformatted text

### Existing [tags in HTML4 & 5]

<!---->	comment
<!doctype>	document type
<a>	hyperlink
<abbr>	abbreviation
<address>	address element
<area>	image map area
<b>	bold text
<base>	base URL for all links in page relative to document root
<bdo>	text direction
<blockquote>	long quotation
<body>	body element
 	single line break
<button>	push button
<caption>	table caption
<cite>	citation
<code>	code text
<col>	attributes for columns
<colgroup>	groups of columns
<dd>	definition description
<del>	deleted text
<div>	generic block-level element
<dfn>	defining instance of a term
<dl>	definition list
<dt>	definition term
<em>	emphasized text
<fieldset>	logically group items in a form
<form>	defines a form
<h1> to <h6>	header 1 to header 6
<head>	document information
<hr>	horizontal rule
<html>	html document
<i>	italic text
<iframe>	inline sub window
<img>	image
<input>	input field
<ins>	inserted text
<kbd>	keyboard text
<label>	label for a form control
<legend>	title in a fieldset
<li>	list item
<link>	resource reference
<map>	image map
<menu>	menu list
<meta>	meta information
<noscript>	no script section
<object>	embedded object
<ol>	ordered list
<optgroup>	option group
<option>	option in a drop-down list
<p>	paragraph
<param>	parameter for an object
<pre>	preformatted object
<q>	short quotation
<samp>	sample computer code
<script>	script
<select>	selectable list
<small>	small text
<span>	inline generic container
<strong>	strong text
<style>	style definition

<sub>	subscripted text
<sup>	superscripted text
<table>	table
<tbody>	table body
<td>	table cell
<textarea>	text area
<tfoot>	table footer
<th>	table header
<thead>	wraps row containing table headers
<title>	document title
<tr>	table row
<ul>	unordered list
<var>	variable

Brought to you by:



# HTML5 New Elements

```
<input list='clist'>
<datalist id='clist'>
<option value='Tom'>
<option value='Mary'>
<option value='Sue'>
</datalist>
<br>
Progress: <progress value=0.6></progress><br>
Yes<meter value=0.1></meter><br>
No<meter value=9 min=0 max=10></meter><br>
<br>
<form oninput='c.value=parseInt(a.value)+parseInt(b.value)'>
<input type=range id=a value=100>100
+<input type=number id=b value=100>
=<output name=c></output>
<br>
<!--http://www.w3schools.com/html/html5_canvas.asp-->
<!--http://www.w3schools.com/html/html5_geolocation.asp-->
```

Margin

Border

Padding

Content

# CSS3 小抄

Quick Reference Guide

FREE

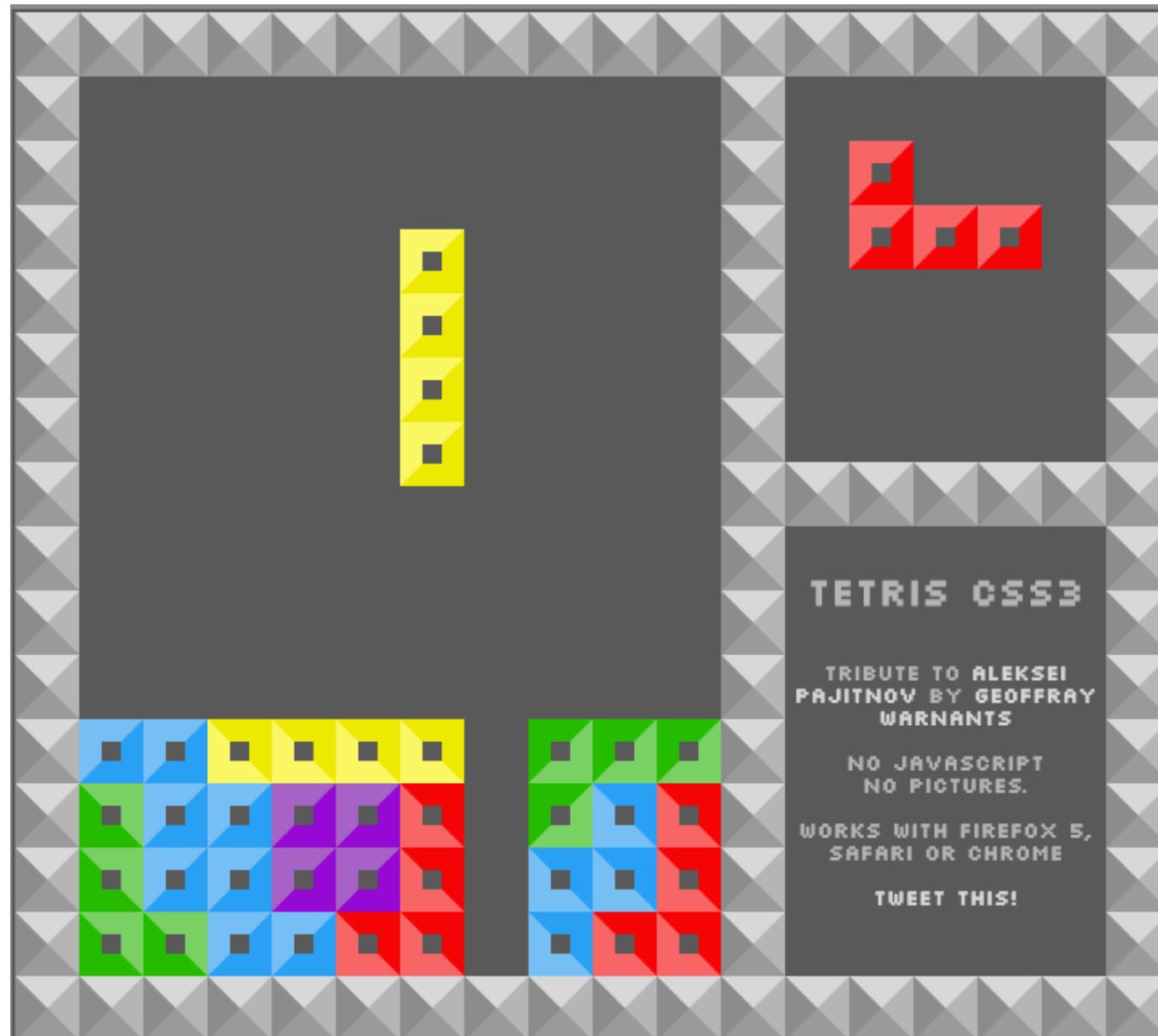
## Cascading Style Sheets (CSS 3)

BACKGROUND	
<b>background</b>	<i>background-image</i> <i>background-position</i> <i>background-size</i> <i>background-repeat</i> <i>background-attachment</i> <i>background-origin</i> <i>background-clip</i> <i>background-color</i>
<b>background-attachment</b>	scroll   fixed
<b>background-break</b>	bounding-box   each-box   continuous
<b>background-clip</b>	<i>length</i> % <i>border-box</i>   <i>padding-box</i>   <i>content-box</i>   no-clip
<b>background-color</b>	<i>color</i> transparent
<b>background-image</b>	<i>url</i> none
<b>background-origin</b>	<i>border-box</i>   <i>padding-box</i>   <i>content-box</i>
<b>background-position</b>	top left   top center   top right   center left   center center   center right   bottom left   bottom center   bottom right <i>x</i> -% <i>y</i> -% <i>x-pos</i> <i>y-pos</i>
<b>background-repeat</b>	repeat   repeat-x   repeat-y   no-repeat
<b>background-size</b>	<i>length</i> % auto   cover   contain
BORDER	
<b>border</b>	<i>border-width</i> <i>border-style</i> <i>border-color</i>
<b>border-break</b>	<i>border-width</i>

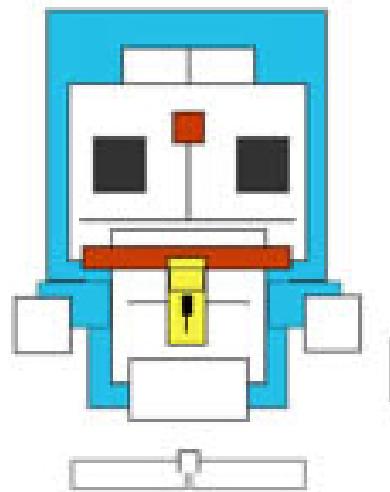
BORDER	
<b>border-top</b>	<i>border-top-width</i> <i>border-style</i> <i>border-color</i>
<b>border-top-color</b>	<i>border-color</i>
<b>border-top-style</b>	<i>border-style</i>
<b>border-top-width</b>	<i>thin</i>   <i>medium</i>   <i>thick</i> <i>length</i>
<b>border-width</b>	<i>thin</i>   <i>medium</i>   <i>thick</i> <i>length</i>
<b>border-radius</b>	<i>border-top-right-radius</i> <i>border-bottom-right-radius</i> <i>border-bottom-left-radius</i> <i>border-top-left-radius</i>
<b>border-top-right-radius</b>	<i>length</i>
<b>border-bottom-right-radius</b>	<i>length</i>
<b>border-bottom-left-radius</b>	<i>length</i>
<b>border-top-left-radius</b>	<i>length</i>
<b>box-shadow</b>	<i>inset</i>    [ <i>length</i> , <i>length</i> , <i>length</i> , <i>length</i>    <color> ] none
<b>border-style</b>	<i>none</i>   <i>hidden</i>   <i>dotted</i>   <i>dashed</i>   <i>solid</i>   <i>double</i>   <i>groove</i>   <i>ridge</i>   <i>inset</i>   <i>outset</i>
FONT	
<b>font</b>	<i>font-style</i> <i>font-variant</i> <i>font-weight</i> <i>font-size/line-height</i> <i>font-family</i> <i>caption</i>   <i>icon</i>   <i>menu</i>   <i>message-box</i>   <i>small-caption</i>   <i>status-bar</i>
<b>font-family</b>	<i>family-name</i> <i>generic-family</i> <i>inherit</i>

BOX MODEL	
<b>float</b>	left   right   none
<b>height</b>	auto <i>length</i> %
<b>max-height</b>	none <i>length</i> %
<b>max-width</b>	none <i>length</i> %
<b>min-height</b>	none   inherit <i>length</i> %
<b>min-width</b>	none   inherit <i>length</i> %
<b>width</b>	auto % <i>length</i>
<b>margin</b>	<i>margin-top</i> <i>margin-right</i> <i>margin-bottom</i> <i>margin-left</i>
<b>margin-bottom</b>	auto <i>length</i> %
<b>margin-left</b>	auto <i>length</i> %
<b>margin-right</b>	auto <i>length</i> %
<b>margin-top</b>	auto <i>length</i> %
<b>padding</b>	<i>padding-top</i> <i>padding-right</i> <i>padding-bottom</i>

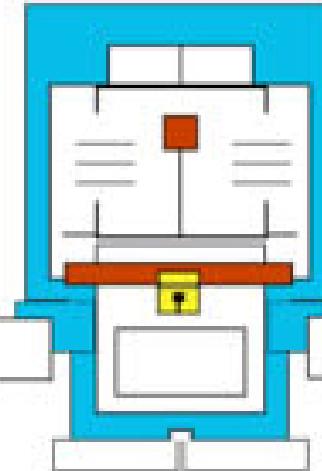
# CSS3 Animation: tetris.html



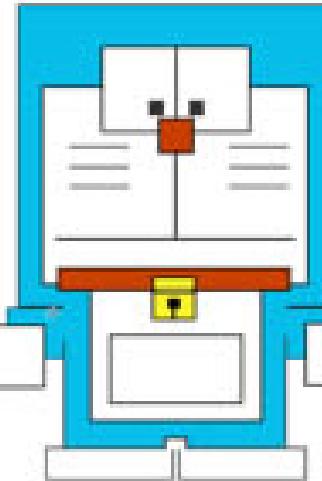
# CSS3 支援度問題：doraemon.html



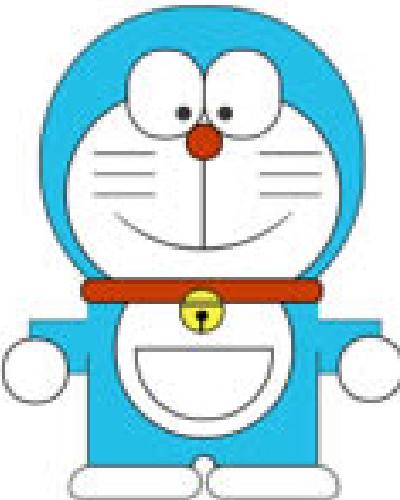
ie6



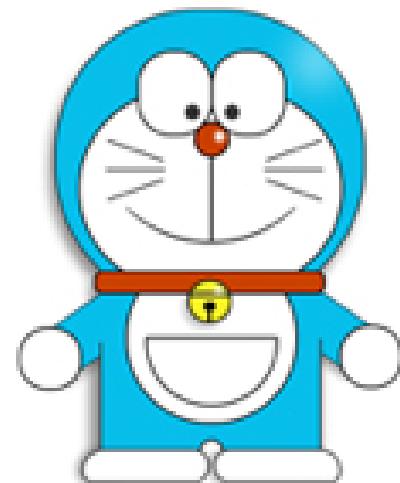
ie7



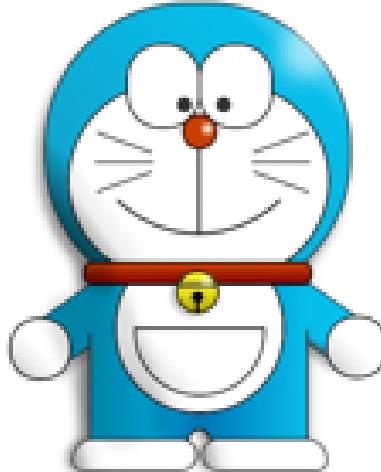
ie8



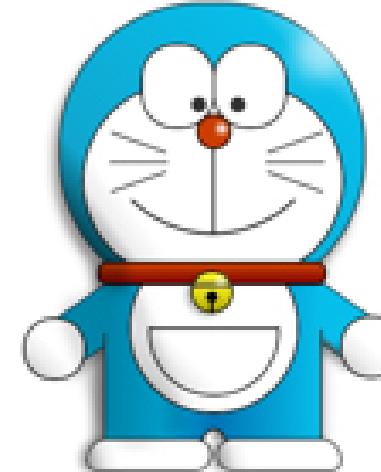
ie9



Opera



Firefox



Chrome

# JavaScript

JavaScript 使用前端 (i.e., browser) 產生動態網頁



簡易教學文件：  
› [W3School](#)

互動學習網站：  
› [CodeCademy](#)  
› [CodeSchool](#)

JavaScript 可結合 HTML5的 Canvas做更細緻的繪圖

JavaScript : Java = 助教 : 助理教授

# 早期的應用：網頁特效

只能說古人和現代人的審美觀差很多



# Javascript 範例：intro.html

語法和 C 語言很類似

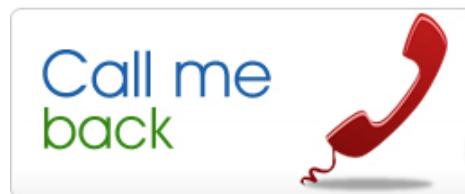
```
<script>
var i=10;
var str='cold and lonely';
var animals=['cat','dog','panda'];
var tel={'suling':63097, 'tren':63104}
for(i=0; i<str.length; i++){ // while(i<str.length)
    console.log(str[i]);
    if(i<animals.length){
        alert(i+animals[i]);
    }
}
console.log(i)
function print(s1,s2){
    document.write(s1+' '+s2+"<br>");
}
for(i in tel){ print(i,tel[i]); }
</script>
```

# Javascript 範例：keyboard.html

Event-driven call-back function

Press something! You press <span id=key>N/A</span>.

```
<script>
var f=document.getElementById("key")
document.onkeydown = function(e){
    var e=e || event
    f.innerHTML=String.fromCharCode(e.keyCode)
    if(e.keyCode==49) // '1'
        f.innerHTML+=" Great!"
}
</script>
```



# Javascript 範例 : mouse.html

## Event-driven call-back function

Click on somewhere! You're clicking the <span id=but>  
N/A</span> button on <span id=pos></span>.

```
<script>
var b=document.getElementById("but")
var p=document.getElementById("pos")
document.onclick = function(e){
    var e=e || event
    switch(e.button){ # not working under Chrome
        case 0: b.innerHTML="left"; break;
        case 1: b.innerHTML="middle"; break;
        case 2: b.innerHTML="right"; break;
    }
    p.innerHTML=e.clientX+"," +e.clientY
}
</script>
```

# Javascript 範例 : rt.html

測量反應時間



Press something! Your RT is <span id=rt>N/A</span>.  
<script>

```
var r=document.getElementById("rt")
startTime = new Date().getTime()
document.onkeydown = function(e){
var e=e || event
endTime = new Date().getTime();
r.innerHTML=(endTime-startTime)/1000
}
</script>
```

# JavaScript 測反應時間範例

| Test Number                | Reaction Time (in seconds) | The stoplight to watch. | The button to click. |
|----------------------------|----------------------------|-------------------------|----------------------|
| 1                          | <input type="text"/>       |                         |                      |
| 2                          | <input type="text"/>       |                         |                      |
| 3                          | <input type="text"/>       |                         |                      |
| 4                          | <input type="text"/>       |                         |                      |
| 5                          | <input type="text"/>       |                         |                      |
| AVG.                       | <input type="text"/>       |                         |                      |
|                            |                            |                         |                      |
| <a href="#">Start Over</a> |                            |                         |                      |

# JS 範例 : timed\_events.html



Non-blocking 行為幫助多工



```
<script>
var t1=new Date().getTime();
function print(s){
    var t2=new Date().getTime();
    deltaT=t2-t1;
    document.write(deltaT+' '+s+"<br>");
}
setTimeout("print('test1')",3000)
setTimeout("print('test2')",6000)
var timer=setInterval(function(){print('test3');},2000);
setTimeout("clearInterval(timer)",10000)
</script>
```

# JS Library 使用範例：Parsley

required 1  
optional  
required 2

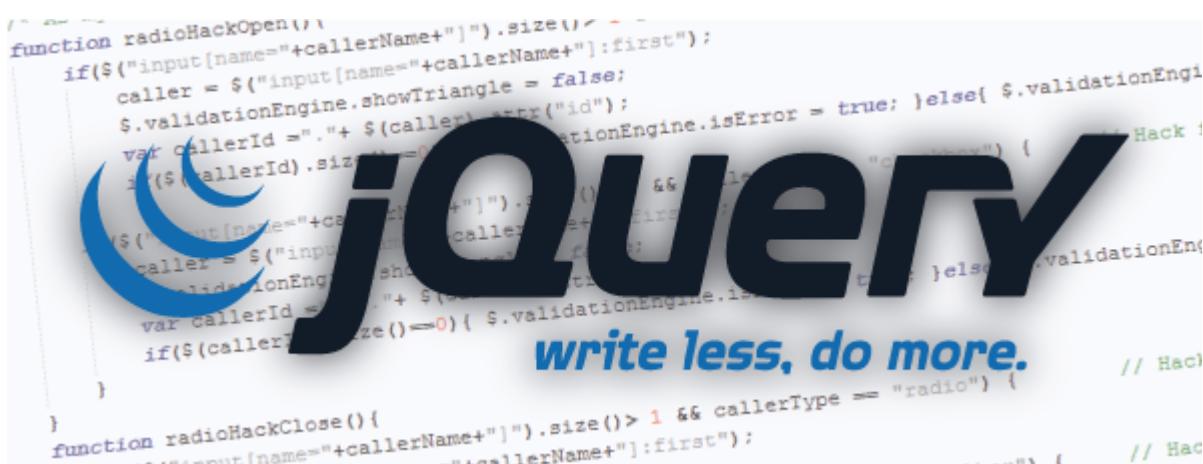
Please check this box if you want to proceed.

Submit

```
<script src="http://parsleyjs.org/dist/parsley.min.js"></script>
<form>
  <input type="checkbox" name="q1" required> required 1<br>
  <input type="checkbox" name="q2" > optional <br>
  <input type="checkbox" name="q3" required> required 2<br>
  <input type=submit>
</form>
```

# jQuery Core

jQuery 極力簡化 JavaScript 的寫作



簡易教學文件：  
➤ [W3School](#)

互動學習網站：  
➤ [CodeCademy](#)  
➤ [CodeSchool](#)

世界上 10 個網站有 6 個使用 jQuery

# jQeury 範例 : jq\_test.html

Simplified Event-driven call-back function

```
<script src="http://code.jquery.com/jquery-3.2.1.min.js">
</script>
<div id="clickme">Click here</div>

<script>
$("#clickme").click(function(){
  $("#pic").fadeOut("slow",function(){
    var i=Math.floor((Math.random()*3)+1); //1,2,3
    $("#pic").attr("src",i+".jpg");
  });
  $("#pic").fadeIn();
});
</script>
```

# jQeury 範例 : jq\_sex.html (1/2)

```
<style> .page {display: none;} </style>
```

Please indicate the sex of this face:

```
<div class="page" id="page1">  
<img src=1.jpg><br>  
<input type=radio name=f1 value=M> M  
<input type=radio name=f1 value=F> F <br>  
<a href="javascript:NextTrial()">Next</a>  
<span class="progress"></span>  
</div>  
<div class="page" id="page2">  
<img src=2.jpg><br>  
<input type=radio name=f2 value=M> M  
<input type=radio name=f2 value=F> F <br>  
<a href="javascript:NextTrial()">Next</a>  
<span class="progress"></span>  
</div>
```

...

# jQeury 範例 : jq\_sex.html (2/2)

```
<script>
var order = new Array(1,2,3,4);
var current = 0; //current trial
$(document).ready(function(){
    ShowTrial(current);
});
function ShowTrial(t) {
    $("#page" + order[t]).show();
    var N = t+1; //counting from 1
    $(".progress").text( '(' + N + '/' + order.length + ')' );
}
function NextTrial() {
    $("#page" + order[current]).hide();
    current++;
    ShowTrial(current);
}
</script>
```

# jQuery UI

## Demos: Few responsive components

The screenshot shows the official jQuery UI website. At the top, there is a dark header bar with icons for Twitter, Facebook, and GitHub, followed by links for Plugins, Contribute, Events, Support, and jQuery Foundation. Below the header is a large orange banner featuring the jQuery logo and the text "user interface". The main content area has a dark background with a grid pattern. On the left, there are two sidebar sections: "Interactions" (with links for Draggable, Droppable, Resizable, Selectable, and Sortable) and "Widgets" (with links for Accordion, Autocomplete, Button, Datepicker, Dialog, Menu, and Progressbar). The central content area contains text about jQuery UI being a curated set of user interface interactions, effects, widgets, and themes built on top of the jQuery JavaScript Library. It also features a "What's New in jQuery UI 1.11?" section with links to upgrade guides and changelogs, and a "Dive In!" section encouraging users to explore the plugins. A sidebar on the right provides download options for "Custom Download", "Quick Downloads" (Stable v1.11.4 and Legacy v1.10.4), and "jQuery 1.6+". The footer contains a "Developer Links" section with links to Source Code (GitHub), jQuery UI Git (WIP Build), Theme (WIP Build), Bug Tracker, Submit a New Bug Report, Discussion Forum, Using jQuery UI, Developing jQuery UI, and Development Planning Wiki.

Plugins Contribute Events Support jQuery Foundation

**jQuery**  
user interface

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**Interactions**

- Draggable
- Droppable
- Resizable
- Selectable
- Sortable

**Widgets**

- Accordion
- Autocomplete
- Button
- Datepicker
- Dialog
- Menu
- Progressbar

jQuery UI is a curated set of user interface interactions, effects, widgets, and themes built on top of the jQuery JavaScript Library. Whether you're building highly interactive web applications or you just need to add a date picker to a form control, jQuery UI is the perfect choice.

**Download jQuery UI 1.11.4**

Custom Download

Quick Downloads:

Stable v1.11.4 jQuery 1.6+

Legacy v1.10.4 jQuery 1.6+

**What's New in jQuery UI 1.11?**

jQuery UI 1.11 includes a new widget, [selectmenu](#). We've added support for using jQuery UI with [AMD](#) and [Bower](#). We also have over 50 bug fixes.

Interested in the full details of what changed? Check out the [1.11 upgrade guide](#), [1.11.1 changelog](#), [1.11.2 changelog](#), [1.11.3 changelog](#), and [1.11.4 changelog](#).

**Dive In!**

jQuery UI is built for designers and developers alike. We've designed all of our plugins to

**Developer Links**

[Source Code \(GitHub\)](#)  
[jQuery UI Git \(WIP Build\)](#)  
[Theme \(WIP Build\)](#)  
[Bug Tracker](#)  
[Submit a New Bug Report](#)  
[Discussion Forum](#)  
[Using jQuery UI](#)  
[Developing jQuery UI](#)  
[Development Planning Wiki](#)

# jQuery Mobile

jQuery Mobile 可產生更適合手機的使用介面

The screenshot shows the official jQuery Mobile website. At the top left is the logo 'jQuery mobile'. The top navigation bar includes links for Demos, Download, API Documentation, Themes, Resources, Blog, and About. A search bar is located at the top right. The main title 'A Touch-Optimized Web Framework' is prominently displayed in large white text. Below it, a paragraph explains that jQuery Mobile is an HTML5-based user interface system designed for responsive web sites and apps across various devices. To the right, there's a 'Download jQuery Mobile' section with options for 'Custom download' and 'Latest stable' (Version 1.4.2, jQuery 1.8 - 1.10 / 2.0). At the bottom left, a section titled 'Seriously cross-platform with HTML5' features a group of smartphones. On the bottom right, a 'Developer Links' sidebar lists links to Source Code (GitHub), jQuery Mobile Git (WIP Build) (with sub-links for JavaScript and CSS), and other developer resources.

**jQuery Mobile**

Demos   Download   API Documentation   Themes   Resources   Blog   About   Search

## A Touch-Optimized Web Framework

jQuery Mobile is a HTML5-based user interface system designed to make responsive web sites and apps that are accessible on all smartphone, tablet and desktop devices.

**Download jQuery Mobile**

Custom download

Latest stable

Version 1.4.2  
jQuery 1.8 - 1.10 / 2.0

**Seriously cross-platform with HTML5**

jQuery Mobile framework takes the "write less, do more" mantra to the next level: Instead of writing unique applications for each mobile device or OS, the jQuery mobile framework allows you to design a single highly-branded responsive web site or

**Developer Links**

- Source Code (GitHub)
- jQuery Mobile Git (WIP Build)
  - JavaScript
  - CSS

必看的 jQuery Mobile Demo

# jQMobiile 範例 :mobile.html(1/2)



```
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href=
"http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css">
<script src="http://code.jquery.com/jquery-2.1.4.min.js"></script>
<script src="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js">
</script>

<div data-role="page" id="p1">
  <div data-role="header"><h1>Header</h1></div>
  Hello from page 1
  <a href="#p2" class="ui-btn">Next Page</a>
  <div data-role="footer"><h1>Footer</h1></div>
</div>
```

# jQMobiile 範例 :mobile.html(2/2)



```
<div data-role="page" id="p2">
<form>
<label><input type="checkbox">Check me</label>
<input id="filter" data-type="search" placeholder="Type to search.." >
<ul data-role="listview" data-inset="true"
    data-filter="true" data-input="#filter">
<li><a href="http://google.com/search?q=cat">Cat</a></li>
<li><a href="http://google.com/search?q=dog">Dog</a></li>
<li><a href="http://google.com/search?q=panda">Panda</a></li>
</ul>
<a href="#p1" class="ui-btn">Previous Page</a>
</form>
</div>
```

如果你討厭寫很多程式的話：

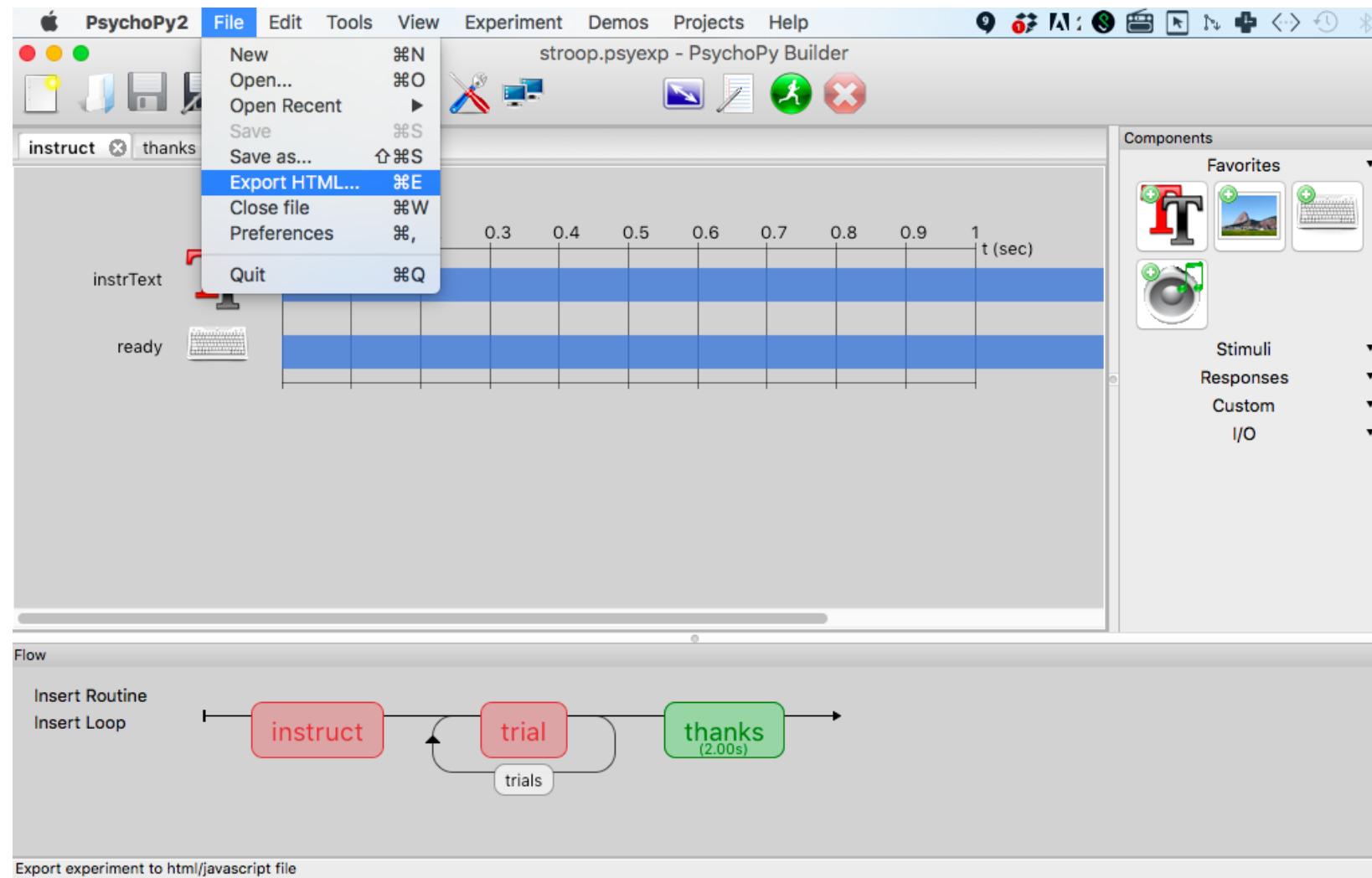


jspysch

# PsychoPy

勿忘我

1.85.1版以上可把 Builder 的 demos 變成網頁版



# 本週作業

進一步研究 Javascript/jQuery

1. 在 jq\_sex.html 用 javascript 的 document.write() 配合迴圈寫出 #page1 到 #page3 的內容來取代原始 html 的冗餘寫法。 (3 分 )
2. 在測試結束後於螢幕上列印出回應正確率。 (3 分 )



----- 或 -----

3. 將第三週的動物偵測實驗改寫成網頁版本。 (6 分 )

# Game Over

