

How I Learned to

Stop Drawing Lines

and

Love Whitespace

Graham Odds

I'd like to take my few minutes today to talk to you about creating structure in designs.

Lorem ipsum dolor sit amet, justo a odio rutrum amet nec neque, est id, vel lacus fusce justo tellus, libero lorem vitae dignissim class mattis ultrices. Risus posuere tempus felis, libero diam lectus aptent magna arcu amet, id nullam nam et pede, pulvinar nulla. Ipsum massa ut vestibulum ut venenatis neque, pede sociis rutrum pellentesque risus. Lobortis nam at dolorem dapibus. Leo eu nec. Nonummy justo nec nullam feugiat, nibh quis mattis. Nec nulla elementum nibh dui, urna auctor diam, felis semper tristique ipsum donec, convallis quis sit sociis quis rutrum suspendisse, ipsum mauris.

Eget wisi, scelerisque wisi cras. Proin a lacinia proin, eleifend purus, sed mi praesent, dolor aenean venenatis eros diam sit rhoncus. Bibendum ac lacinia, rutrum integer, sed scelerisque dictum luctus facilis magna. Gravida sed porttitor pellentesque lacus, blandit nibh dui eu pede, ac dui dictum pellentesque ut pellentesque quis, dui morbi sit id leo laoreet nec. Metus id feugiat nam adipiscing consequatur imperdiet, cursus est volutpat leo nam.

Dignissim facilisis wisi ante in. Platea sapien in nec, et a est velit, mi vehicula aliquam, erat id in, tellus natoque. Leo aenean neque pellentesque quis turpis dui. Aliquam lectus sed massa habitant mauris lectus, in nulla quos mauris cras viverra tempus, wisi erat donec mi at, pellentesque magna. Aliquam turpis non nec velit facilisis netus, et sit sit, nulla vestibulum amet tempus cursus. At augue, suspendisse adipiscing vulputate eget pellentesque metus molestie, metus urna, vitae felis lacus.

Suscipit adipiscing semper sed faucibus in, in in ullamcorper, libero arcu dolor lorem vel tortor. Taciti donec aliquam magnis phasellus esse wisi, orci vitae quam est hendrerit, cursus vestibulum dis amet aliquam augue, quam consequat sodales, sed mauris. Magna porttitor mauris mollis turpis pretium in, cras a nunc, lorem inceptos pellentesque nulla vestibulum ligula, ligula per ut nulla urna mauris sem. Placerat aliquam. Justo nunc rutrum laoreet, viverra ipsum massa, convallis commodo erat libero.

```
override public function set filters(value:Array):void
{
    var n:int;
    var i:int;
    var e:IEventDispatcher;

    if (_filters)
    {
        n = _filters.length;
        for (i = 0; i < n; i++)
        {
            e = _filters[i] as IEventDispatcher;
            if (e)
            {
                e.removeEventListener(BaseFilter.CHANGE, filterChangeHandler);
            }
        }
    }

    _filters = value;

    var clonedFilters:Array = [];
    if (_filters)
    {
        n = _filters.length;
        for (i = 0; i < n; i++)
        {
            if (_filters[i] is IBitmapFilter)
            {
                e = _filters[i] as IEventDispatcher;
                if (e)
                {
                    e.addEventListener(BaseFilter.CHANGE, filterChangeHandler);
                }
                clonedFilters.push(IBitmapFilter(_filters[i]).clone());
            }
            else
            {
                clonedFilters.push(_filters[i]);
            }
        }
    }

    super.filters = clonedFilters;
}
```

If we look around, there are many examples where the all-important structure in a design is very subtle, as though it were a secondary concern to the information. In prose we use a little extra space between paragraphs and in code we use indentation. To my mind, this is exactly the way it should be.

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Fantasy

Gameweek 4
This week's deadline has now closed. Log in throughout the day to check your team's points.

Next Deadline
Open: Gameweek 4 (10 Sep 11:30 GMT)

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BARCLAYS PREMIER LEAGUE

Team	Pld	Pts
Man Utd	3	9
Man City	3	9
Liverpool	3	7
Chelsea	3	7
Wolves	3	7
Newcastle	3	7
Aston Villa	3	5
Wigan Athletic	3	5
Stoke City	3	5
Bolton	3	3
Everton	2	3
QPR	3	3
Sunderland	3	2
Norwich City	3	2
Swansea City	3	2
Fulham	3	1
Arsenal	3	1
WBA	3	0
Blackburn	3	0
Tottenham	2	0

[Form Guide](#) | [Full Table](#)

BARCLAYS PREMIER LEAGUE

FIXTURES LIVE SCORES RESULTS VIDEO

Sat 10th September 2011

Home	Away	Time
Arsenal	v Swansea City	15:00
Everton	v Aston Villa	15:00
Manchester City	v Wigan Athletic	15:00
Stoke City	v Liverpool	15:00
Sunderland	v Chelsea	15:00
Wolves	v Tottenham	15:00
Bolton	v Man Utd	17:30

Sun 11th September 2011

Home	Away	Time
Norwich City	v WBA	13:30
Fulham	v Blackburn	16:00

[Ticket Availability](#) [View all fixtures >](#)

GAMES

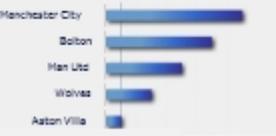
FANTASY PREMIER LEAGUE 2011/12
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Stats Magazine

Top 5 Goal Scorers (Club)



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Features Press Release

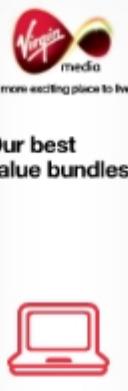
Premier League Players' Kit Scheme
Barclays Premier League players provide free football kit and equipment.



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But for some reason UI designs often seem to want to unnecessarily scream and shout about their structure by excessively using lines and boxes. Furthermore, such prominent structure throughout means the design loses control of a user's perception, since genuine emphasis is all but impossible.

How, for example, would you reliably direct a user's attention to any particular spot on this page?



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Compare that to the subtle, whitespace-heavy structure in Google's search page, where a single arrow is sufficient to direct a user's attention to a particular spot.

The image shows a Google search interface for the query "ui design". The search bar contains the text "ui design" and shows "About 17,000,000 results (0.09 seconds)". To the right of the search bar is a blue search button with a magnifying glass icon and a link to "Advanced search".

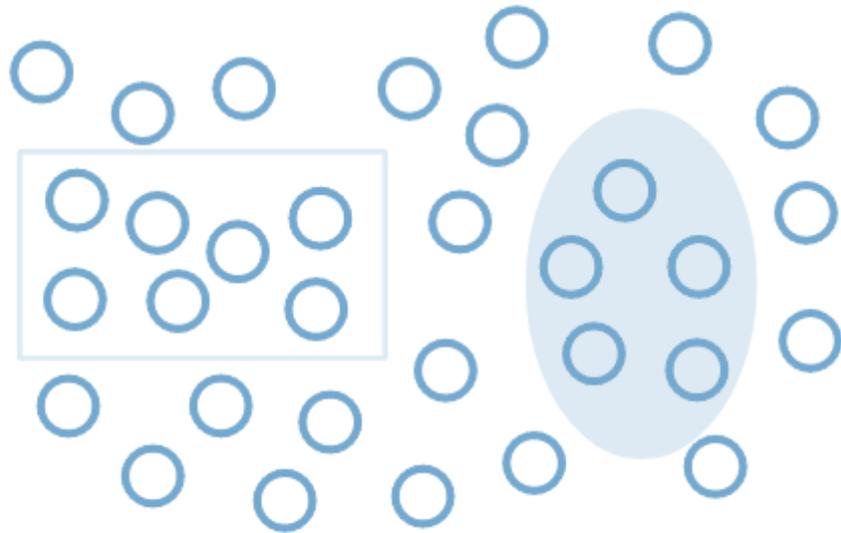
On the left side, there is a vertical navigation menu with icons and text for various search categories: "Everything", "Images", "Videos", "News", "Shopping", "Discussions", "Blogs", "Books", and "More". Below this menu, there are three sections for filtering results: "Edinburgh, UK" with a "Change location" link, "The web" with "Pages from the UK", and "Any time" with options for "Past hour", "Past 24 hours", and "Past week".

The search results are displayed in a list format. The first result is an advertisement for "UI & Web Apps Design | CatalystResources.com" with the URL "www.catalystresources.com" and the description "Comprehensive Apps UI Designs for SaaS and Cloud in 90-120 days". The second result is for "projekt202 - We make software make sense | projekt202.com" with the URL "www.projekt202.com" and the description "UI Design (Web, Wireless & Desktop)". The third result is for "User Interface Design - We offer high quality, specialist" with the URL "www.redbullet.co.uk/UI-Design" and the description "Website UI design. Contact us now.". The fourth result is for "User interface design - Wikipedia, the free encyclopedia" with the URL "en.wikipedia.org/wiki/User_interface_design - Cached" and the description "User interface design or user interface engineering is the design of computers, appliances, machines, mobile communication devices, software applications, and ... Processes - Requirements - Research – past and ongoing - See also". The fifth result is for "UI-Patterns.com" with the URL "ui-patterns.com/ - Cached" and the description "User Interface Design patterns are recurring solutions that solve common design problems. Design patterns are standard reference points for the experienced ...". The sixth result is for "10 User Interface Design Fundamentals | Think Vitamin" with the URL "thinkvitamin.com/design/10-user-interface-design-fundamentals/ - Cached" and the description "17 Aug 2009 – It's no great mystery that truly great user interfaces are the ones that are engineered to stay out of the way. 'Staying out of the way' means not."

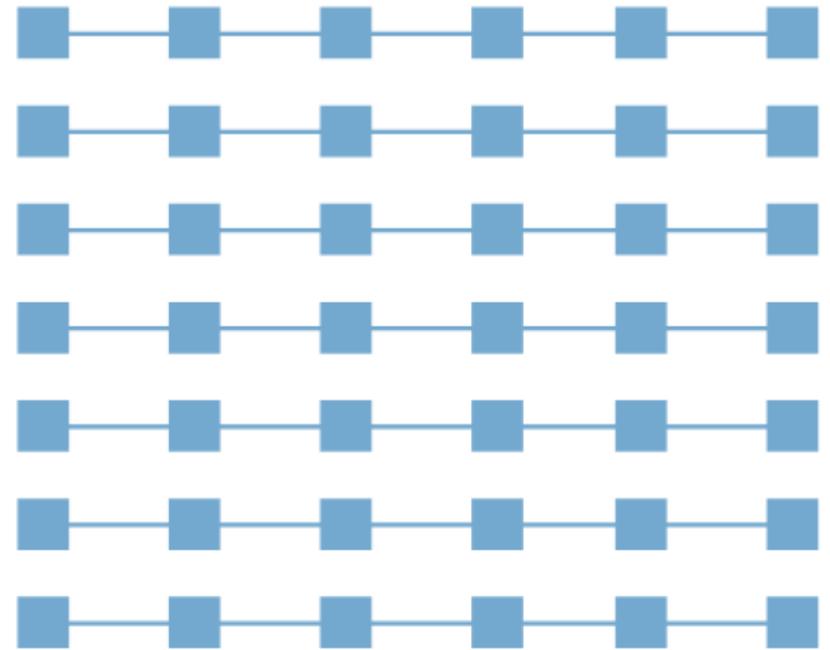
Not only that, but if they want to emphasise something more strongly, like an important revenue stream, then simple lines and boxes are available for highlighting because they aren't a basic building block of the design.

The structure we see in designs is explained by something known as the Gestalt Principles. They describe various psychological phenomena that are hard-wired into our visual perception, and, as such, are entirely intuitive, and, when consciously used, very powerful.

Enclosure

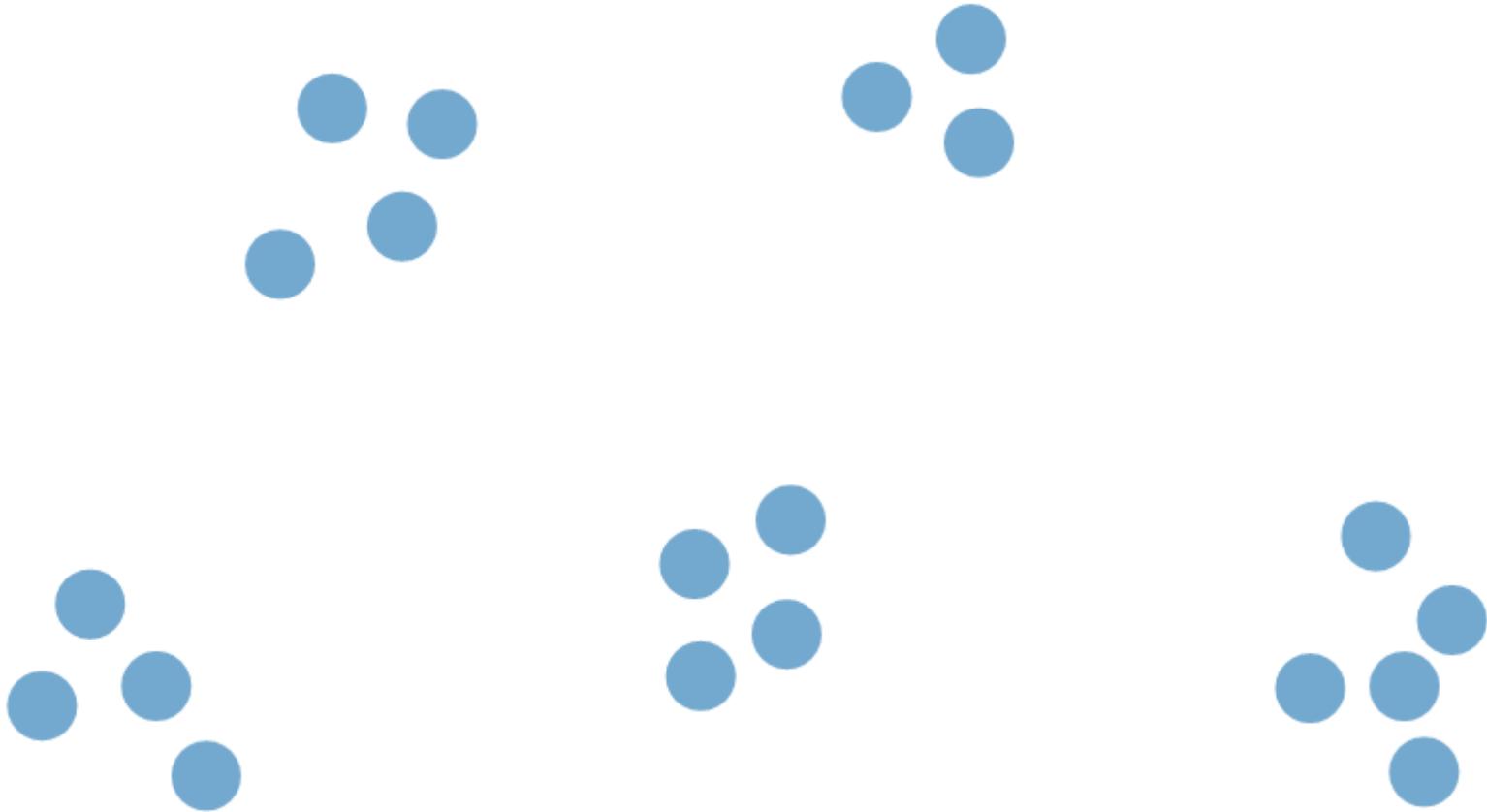


Connection



That items are grouped by lines and boxes, as we've seen, is described by the principles of Enclosure and Connection, but it's the other Gestalt Principles that clarify how we can use mere whitespace to create the more subdued structure I'm encouraging.

Proximity



The principle of Proximity, for example, says the same grouping achieved by boxes and lines is also perceived when things are simply closer together.

Symbol	Name	Last Trade	Change	Change %	Volume
WPP.L	WPP	661.94	+50.94	8.34%	5.89M
ITV.L	ITV	57.85	+2.00	+3.58%	13.94M
RR.L	Rolls-Royce Holdings	603.50	+14.00	+2.37%	5.56M
DGE.L	Diageo	1,192.00	+22.00	+2.37%	12.34M
AAL.L	Anglo American	2,335.50	+34.00	+1.48%	4.71M
IPR.L	International Power	318.90	+4.00	+1.27%	5.16M
SGE.L	Sage Group	243.10	+2.80	+1.17%	2.79M
BATS.L	British American Tobacco	2,697.50	+31.00	+1.16%	2.74M
BG.L	BG Group	1,230.50	+12.00	+0.98%	6.31M
WTB.L	Whitbread	1,444.00	+12.00	+0.84%	0.55M

at 16:45 on 26th August 2011

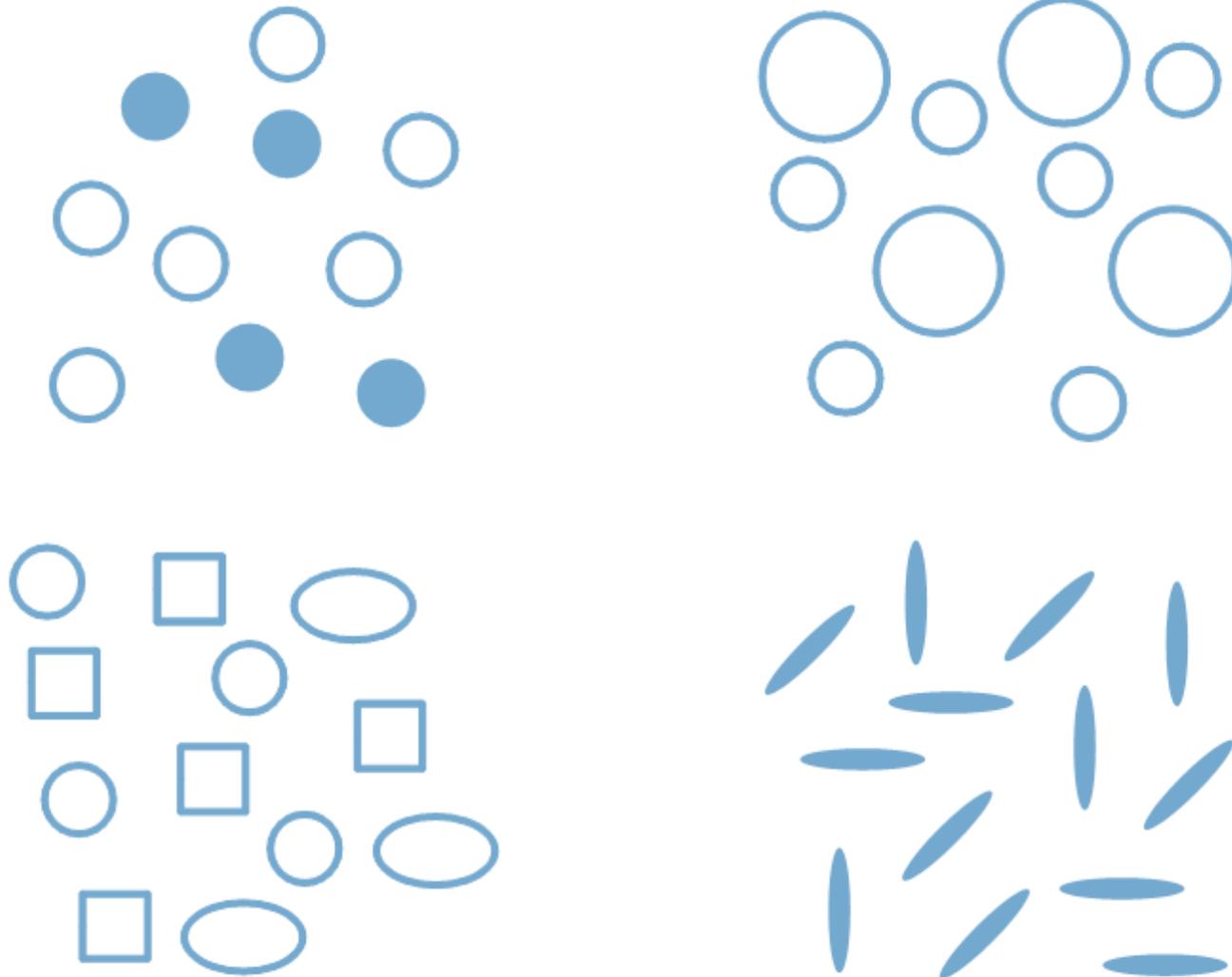
It's one of the reasons we don't need fully gridded tables like this.

Symbol	Name	Last Trade	Change	Change %	Volume
WPP.L	WPP	661.94	+50.94	8.34%	5.89M
ITV.L	ITV	57.85	+2.00	+3.58%	13.94M
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IPR.L	International Power	318.90	+4.00	+1.27%	5.16M
SGE.L	Sage Group	243.10	+2.80	+1.17%	2.79M
BATS.L	British American Tobacco	2,697.50	+31.00	+1.16%	2.74M
BG.L	BG Group	1,230.50	+12.00	+0.98%	6.31M
WTB.L	Whitbread	1,444.00	+12.00	+0.84%	0.55M

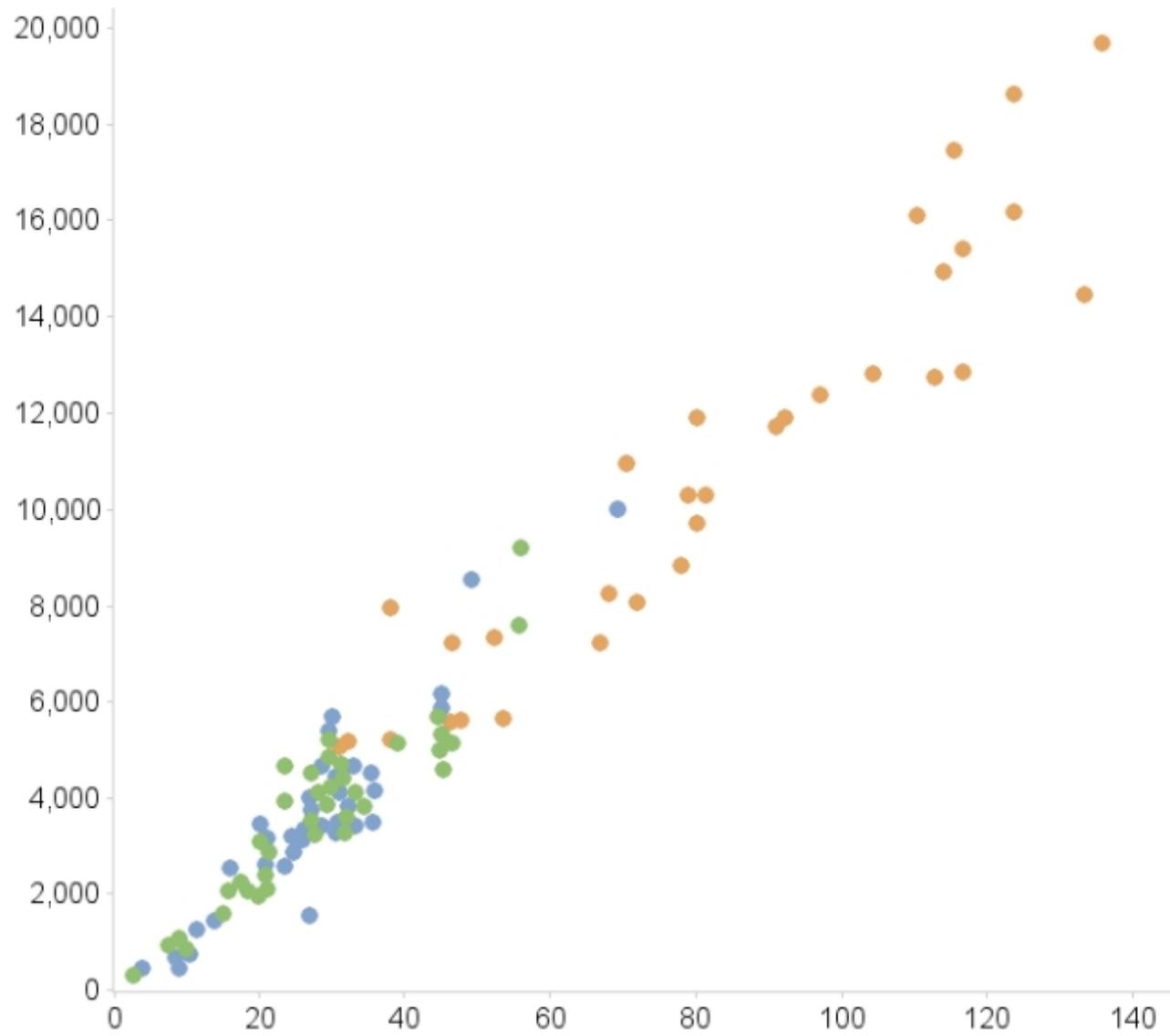
at 16:45 on 26th August 2011

But can use just whitespace instead. The removal of the lines ensures the information is at the forefront by subduing the structure, thereby allowing us to absorb the information much more readily.

Similarity



The principle of Similarity, meanwhile, suggests grouping and commonality is perceived whenever items have a similar appearance.



That is why the colours of the points on this scatter plot create three distinct series.

Closure



Continuity



Unlike the others, the principles of Closure and Continuity aren't directly related to grouping. Rather, they essentially say that we see complete shapes even when they're incomplete.

Show:

Business News

Markets slide further on euro woe BBC News - Business, September 5th, 2011
 Stock markets continue the slide begun late last week as fears over Italian and Spanish debts reassert themselves.

Service sector activity 'slumps' BBC News - Business, September 5th, 2011
 Activity in the UK's service sector slumped in August, recording its weakest growth this year, an industry survey suggests.

Oil prices fall on economy fears BBC News - Business, September 5th, 2011
 Oil prices fall on concerns that the US could fall back into recession, and continuing anxiety about eurozone debt levels.

Ex-Iceland PM faces court hearing BBC News - Business, September 5th, 2011
 Iceland's ex-Prime Minister Geir Haarde will stand trial for "failures of responsibility" in his handling of the financial crisis.

VIDEO: Collateral demand for bailout cash BBC News - Business, September 5th, 2011
 Finland is demanding collateral from Greece in exchange for its share of bailout money.

Rio Tinto to sell Palabora stake BBC News - Business, September 5th, 2011
 Mining giants Rio Tinto and Anglo American say they intend to sell their entire stakes in South African copper miner Palabora.

ABG: 574.50 (0.35%) ADM: 1,334.00 (-2.06%) AMEC: 865.25 (-2.40%) ANTO: 1,242.50 (-4.42%) ARM

Biggest Movers

Large Cap Small Cap

	Last 50d	Current	Change
Gainers			
Phoenix IT Group PLC		216.75	2.60%
The Berkeley Group H...		1,205.00	2.21%
Charter Internationa...		799.75	1.81%
BH Macro LTD		1,988.50	0.89%
BH Macro LTD		19.19	0.68%
Losers			
Enquest PLC		98.15	-8.87%
Royal Bank of Scotla...		22.78	-8.31%
Barclays PLC		154.03	-6.76%
Ferrexpo PLC		351.70	-6.21%
JKX Oil & Gas PLC		158.55	-6.13%

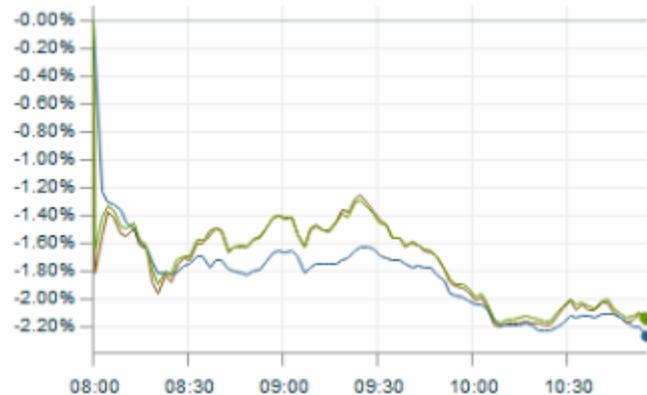
Analytics Tools



- Portfolio Manager**
Create and monitor portfolios of shares
- Hindsight**
Historical time-series charting tool
- Market Map**
Map of UK stock market
- Index Builder**
Create custom share indices

Index Summary

10:55 100: -2.15% 250: -2.27% All: -2.14%



Index	Last 50d	Current	Change
FTSE 100		5,178.12	-2.15%
FTSE 250		10,145.45	-2.27%
FTSE All-Share		2,690.93	-2.14%

Sector Summary

Sector	Change	% Up/Down
Basic Materials	-3.32%	
Capital Goods	-2.46%	
Consumer Cyclical	-2.49%	
Consumer Non-Cyclical	-1.07%	
Energy	-2.21%	
Financial	-3.19%	
Healthcare	-1.10%	
Other	-1.81%	
Services	-1.62%	
Technology	-2.02%	
Transportation	-2.09%	
Utilities	-1.14%	

www.scottlogic.co.uk/market_overview

But we can use this structurally as a softer version of explicit boxes and lines by merely suggesting their presence. Here, for example, the combination of the block titles and alignment of the content makes us see boxes where there aren't any.



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Going back to the Google search results example, it's now immediately clear where and how extensively the Gestalt Principles are being used. Proximity clusters the result details and creates the menus, Similarity creates the list of results, and so on.



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Imagine if, rather than using whitespace for structure, Google decided to use boxes and lines instead. You might end up with something like this. It's distracting, and as we know, completely unnecessary!

Stop Drawing Lines

Love Whitespace

@g_odds

<http://www.scottlogic.co.uk/blog/graham/>

Graham Odds

So why not try shifting the structure of a design to the background and the information to the fore by using whitespace through the power of Gestalt Principles rather than excessive lines and boxes.