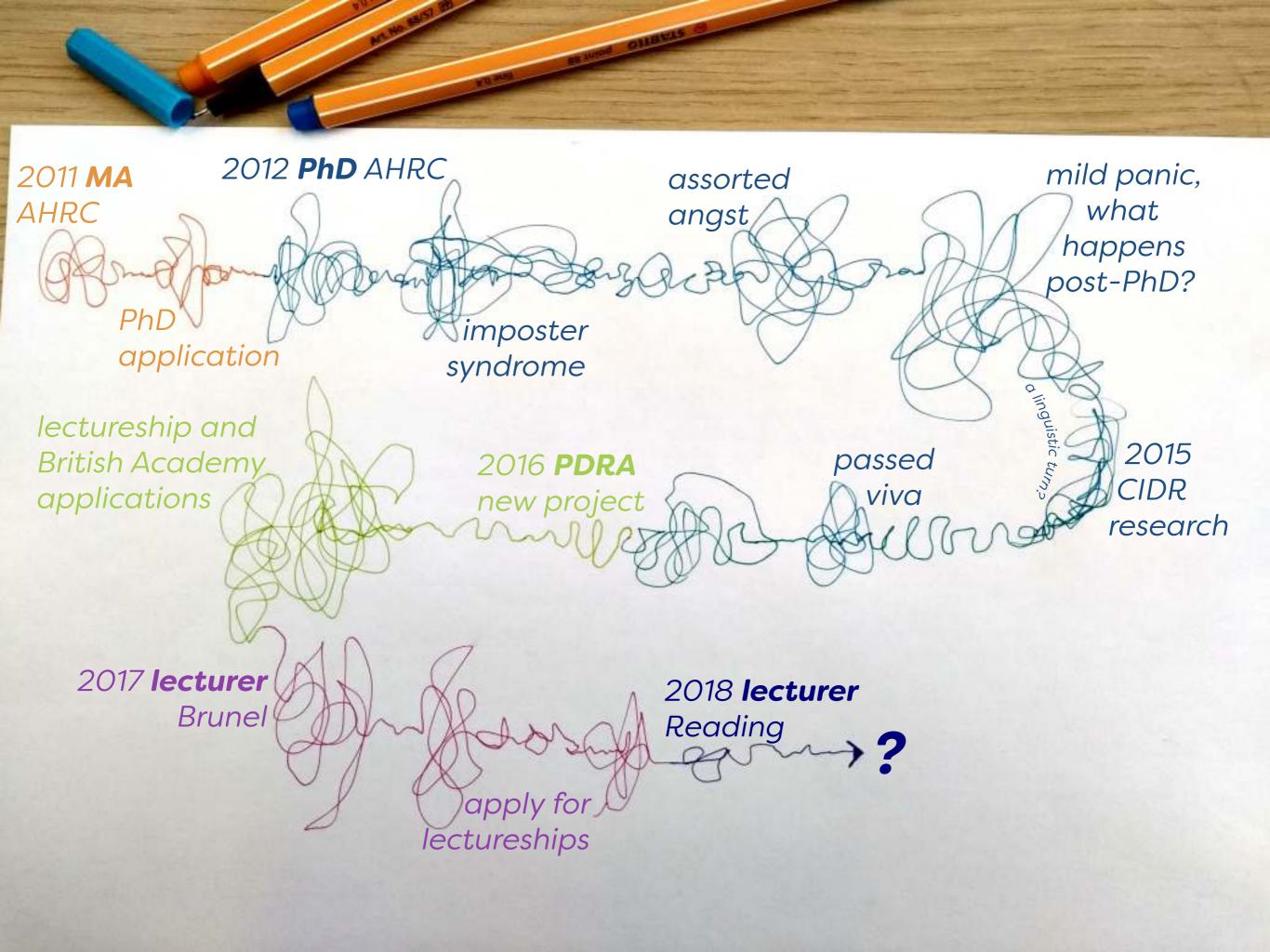
PAST - PRESENT, FUTURE: TENSE

Matthew Lickiss
Typography & Graphic Communication
University of Reading





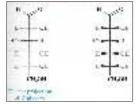
MA Information Design, AHRC funded, 2011/12 representations of molecular structures

Fig. 28 Sample components from the Cochranes of Oxford molecular models

Annaudia

Erythrose ($C_aH_aO_a$) shown in two different configurations using Fischer projections (see p.20). Both have the formula $C_aH_aO_a$, but note the mirrored arrangement of the H and OH between the two.

Shown at 100% size (Eliel, 1962, p.20)



Textbook demonstration of a Fischer projection. The same molecule has been drawn twice, the first as a regular Fischer project, the second using the wedge convention [A13, A14] to reinforce the fact that the horizontal bonds are coming out from the plane of the page towards to viewer.

(Housecroft, Constable, 2000, p.1057)

Part of a set of Fischer projections showing configurations of heptaric acid. The projections are arranged in pairs, with projections on opposite sides of the dashed lines being mirrors of each other.

Detail of larger set of projections, shown at 75% size (Mislow, 1965, p.92)

A10 Fischer projection

Line-bond method transformed to show limited dimensionality. 1891 to present.

Mode: schematic

Sensory channels: optic (possible haptic depending on drawing method, e.g. whiteboard drawing)

Interactivity: varied with medium – none for print, but hand or computer drawn uses may be interactive, editable and allow annotation

Medium(s) and material: print, screen, hand rendered (pencil, ink, chalk, etc.)

 ${\bf Production: varied-from\ professional\ letterpress\ to\ modern\ offset\ lithoto\ hand\ rendered}$

Dimensions - medium: 2

 $\label{eq:Dimensions} \mbox{ Dimensions} - \mbox{ represented: 3 (3rd dimension limited to showing above or below the plane of medium)}$

Conveyance of additional dimensions: projection via coded use of vertical/horizontal lines

Scale significance: none, sparing specific annotation such as noting a bond length

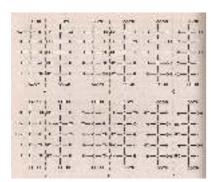
Meaning density: 6 {2 spatial, atom type, bond configuration, bond position relative to the plane of the medium}

Colour use: none (none required, may be used to show labelling, special areas of interest)

Colour range: monochrome (additional colour may be used to show labelling, special areas of interest, make comparisons)

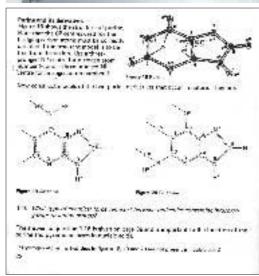
Atom sign: elemental symbol letter(s), these may be missed off in many places if element type or presence is assumed

Bond sign: solid line (sometimes dotted in early use), multiple lines may be used for bond type. Angles and lengths generally nominal unless annotated otherwise. Horizontal bonds are coming out of the plane of



Representations of molecular structures





Representations of molecular structures

A23 Space filling models (print/static 2D)

Physical model kits of intersecting sphere portions, on 2D media.

Mode: schematic

Sensory channels: optic

Sensory channels: optic

Interactivity: None

Medium(s) and material: print, screen, projection etc.

Production: photography, hand drawing, technical illustration, software exports reproduced via varied methods from professional offset litho to pdf

Dimensions - medium: 2

Dimensions - represented: 3

Conveyance of additional dimensions: perspective projection Scale significance: atoms scaled proportional to atom size +/- perspective Meaning density: 5 {3 spatial, atom type, bond configuration} Colour use: semantic, aesthetic use of tone variation to simulate 3D

lighting

Colour range: limited colour (set range of colours to atom spheres)
Colour use: Limited colour. May be printed greyscale or black and white
- in such cases colour encoded information may be lost or made
harder to process but may be supplemented by element symbols.

Atom sign: Spheres of scaled size, colour for atom type. If greyscale print element symbol letters may be added.

Bond sign: intersection of spheres



Slide from the 1980s showing a photograph of a pair of CPK models. Note that small paper labels have been placed on the model as annotation.

Slide: $50 \times 50 \text{ mm}$ (Photographed by the author)



Greyscale illustration of cyclohexane using Stuart-Briegleb models. As cyclohexane is formed only of carbon and hydrogen atoms (normally shown as black and white respectively) the loss of colour does not change semantic colour use.

Shown at 75% size (Mislow, 1965, p.44)

THE PAST - PRESENT ...

PhD, AHRC funded, 2012/15 relationships between document instantiations across systems, mediums, and genres























Guardian/ICM final poll: result

07.24

have to strike deals with others is the choice of 22%, while a Labour-led government that had to strike deals was picked by only 19%, a possible sign of success for the Conservative warnings about an SNP-backed "coalition of chaos" installing Miliband in Downing Street.

The public also envisages the Lib Dems outperforming most polls by achieving 14%, and Ukip underperforming some-

Martin Boon of ICM Unlimited who pioneered this "wisdom of crowds" approach explained: "Most people will have an inkling about how friends and relatives will vote, and in aggregate these impressions may count for more than individuals' sometimes less-than-clear sense of their own intentions. That's the 'wisdom' theory, and when we put it to the test in 2010 it proved more accurate gauge of the result than the conventional approach."

But it is ICM's headline prediction that has been the more intensely anticipated set of numbers, because its final survey has got closer than the rest of the polling pack to the final result in three of the last four general elections. In the raw data, Labour is actually ahead - by 37% to the Conservatives' 33%. But this is misleading, because Labour leaners are less com-

A strikingly high 73% of all voters now say they will definitely cast a ballot. But turnout rises further to 85% among Conservatives, and to 79% for Labour supporters. Adjust for this differential, and Labour's initial advantage shrinks to a single point -35% against the Tories' 34%.

ICM then applies its final adjustment allocating a chunk of those voters who won't reveal their 2015 plans back to the party they say they backed last time, something which experience suggests that many of them will do.

This final tweak pulls the Conservatives up to draw level with Labour, and comes close to pushing the Tones into the lead.

ICM Unlimited interviewed a random sample of 1,560 adults aged 18+ by telephone on 3-6 May. Interviews were conducted across the country and the results have been weighted to the profile of all adults. ICM is a member of the British Poll-

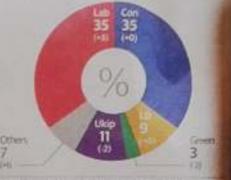
State of the parties



the thank we proceed an inferior proceedings in

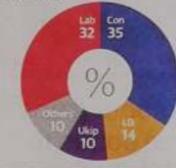
Berlin-Tegel between 0457 and 0556,

returning to Düsseldorf as a passenger.



The public's prediction

Respondents' average estimates of party scores



Campaign issues

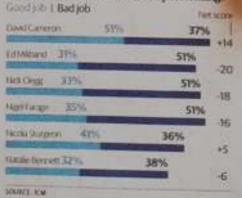
What's made you stop and think about the way you'll vote?



Through a smoker party holding the government to carried the

Rating the main players

How you think the leaders are performing?



kindle

Top stories . General electron 2015. Botain heading for hung partament.

the Tories into the lead. These results are on such knife edge," explains Boon, "that assuming that ju one or two extra former Conservative or Lib Dem vote will 'go home' on Thursday could have dragged Labo down to 34%, and given the Tories the narrowest leads."

· ICM Unlimited interviewed a random sample 1,560 adults aged 18+ by telephone on 3-6 M 2015. Interviews were conducted across the country and the results have been weighted to t profile of all adults. ICM is a member of the Briti Polling Council and abides by its rules. The p will be updated on 7 May with an additional 450 so late interviews added into the sample.

FA told Graham Taylor not to pic 'too many' black players for England

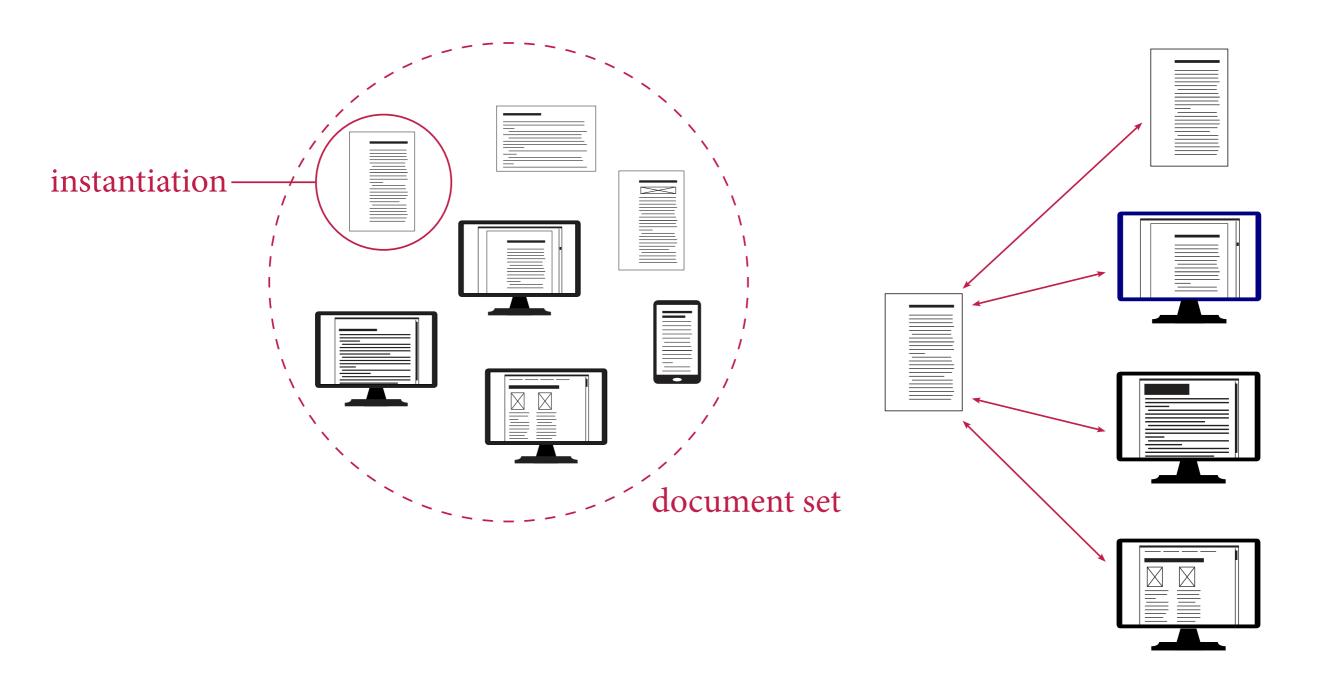
Daniel Taylor | 1127 words

2% Next Article: David Cameron is being urged to hale up, like a Hollywood

told police Khan had lost control of t car while driving at about 55mph. "T people were sleeping on the footpat Salman and [his cousin] Kamaal ran aw from the spot," said the constable, w died in 2007 of tuberculosis.

One of the injured sleepers adde "Salman was so drunk he fell. He sto but he fell again and then he ... ran awa Khan has consistently denied bei





BOOK

Design Perspectives on Multimodal Documents

2016

Feb - thesis passed viva

April - started proposal aimed at Routledge

May - contacted series editor

Sept - submitted monograph proposal to Routledge

2017

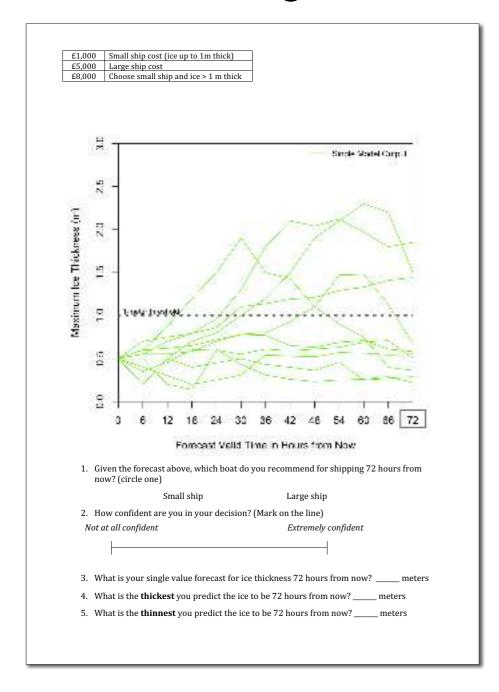
Feb/March - reviewer responses for comment, then accepted

2018

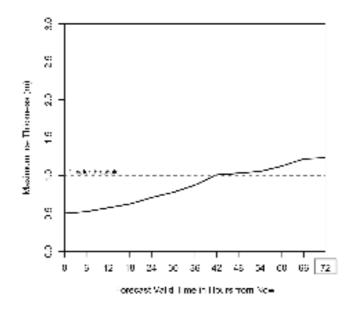
July - final manuscript due

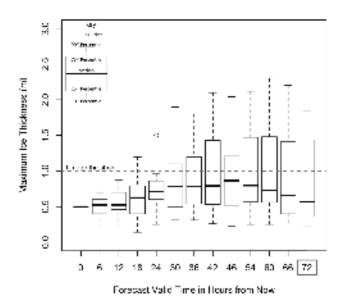
PDRA roles with NERC funded research projects, 2015/17 three projects all with links to:

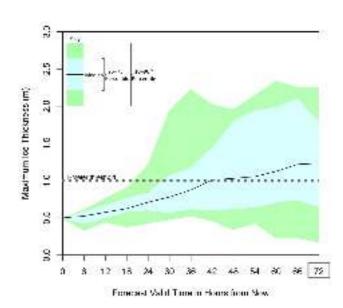
decision making and uncertainty communication



















... AND THE FUTURE: TENSE