Centre for Information Design Research

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GOV.UK content principles: conventions and research background

We have assumed that GOV.UK's writing style guide should:

- align language usage with constraints imposed by reading on screen
- ensure that the content is as accessible to as many people as possible
- reflect current written language usage

The current GOV.UK style guide addresses both 'editorial' and 'user interface' style issues. Though there is overlap between the two, 'user interface' aspects are concerned with how reading on-line affects how language is structured and organised, whereas 'editorial' aspects of content presentation cover writing style and house style, regardless of medium.

See the distinction in these useful summaries of (mainly US) style guides
http://konigi.com/wiki/editorial-style-guides
http://konigi.com/wiki/user-interface-style-guides

One of the main difficulties in implementing a writing style guide, particularly when many people are originating content, is that people's age, and experiences in education affect how they organise their writing. Their background influences detailed decisions which may seem quite straightforward to agree on (for example about use of capital letters, abbreviations, formatting numbers and so on). While variation in language use is common, most people think that their way of doing things is the right one. In such circumstances introducing a style guide:

- *makes better use of writers' and editors' time*: a style guide provides quick answers to format, style and accuracy questions.
- *helps readers by being consistent*: rules and guidelines help to keep the work consistent, so that readers are not jarred by the varying, personal stylistic choices of different writers.
- *conveys the right 'look and feel'*: a style guide can help organisations enhance their external image by articulating a

style that reflects the values of the organization.

- *saves money*: a style guide reduces time spent writing, reviewing, and correcting documents; training costs may also be reduced.

If people are asked to use conventions that are not familiar they may want to know the reasons for them. It's not always easy to provide an answer beyond 'this is current good practice' and to remind them that standard reference works for writers and editors are regularly updated. Some research has tracked changing house style conventions over time, identifying the extent and nature of some changes in publishers' style manuals (Walker, 2001). But we are unaware of formal research that demonstrates that one convention is easier to read or understand than another. It is more a case of being aware of what is regarded as the standard, accepted form at a particular time. There are, however, a number of research studies that are helpful in showing how people read from screen, how information can be made more accessible, and how language can be more or less appropriate in particular circumstances of use, and for particular users.

Walker, S., (2001), *Typography and language in everyday life: prescriptions and practices,* Harlow: Pearson Education

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Do people read differently on screen and on paper?

F-shaped pattern for reading web pages

Research about how people read from screen has shown that most people don't read web pages word by word; they scan the page picking out the information that is relevant to them. So web pages need to be written and designed with this in mind.

Nielsen, J. (2006) 'F-shaped pattern for reading web content'

http://www.nngroup.com/articles/f-shaped-pattern-reading-web-content/

A well-known piece of research is the 'F-shaped pattern for reading web content'. This work, by the Nielsen Norman Group (2006) showed that:

- Users first read in a horizontal movement, usually across the upper part of the content area. This initial element forms the F's top bar.
- Next, users move down the page a bit and then read across in a second horizontal movement that typically covers a shorter area than the previous movement. This additional element forms the F's lower bar.
- Finally, users scan the content's left side in a vertical movement. Sometimes this is a fairly slow and systematic scan that appears as a solid stripe on an eyetracking heatmap. Other times users move faster, creating a spottier heatmap. This last element forms the F's stem.

And that the implications are that:

- Users won't read your text thoroughly in a word-by-word manner. Exhaustive reading is rare, especially when prospective customers are conducting their initial research to compile a shortlist of vendors. Yes, some people will read more, but most won't.
- The first two paragraphs must state the most important information. There's some hope that users will actually read this material, though they'll probably read more of the first paragraph than the second.
- Start subheads, paragraphs, and bullet points with information-carrying words that users will notice when scanning down the left side of your content in the final stem of their F-behavior. They'll read the third word on a line much less often than the first two words.

It is worth noting that these 'F patterns' are demonstrated on reasonably long web pages whereas (elsewhere) Nielsen recommends division of content up into short pages (see below p. 7). Although he doesn't make the link, it is plausible that spreading content over more, shorter pages will increase the chances of it being read (assuming that the content has been edited into meaningful sections).

Similarities and differences between reading from paper and reading from screen

Gregory, J. (2004) Writing for the web versus writing for print. Are they really so different?, *Technical communication*, 51, 2, pp. 276–85

Gregory (2004) compares guidelines for writing for print with guidelines for writing for the web, and concludes that many of the underlying principles for writing to both media. She argues that

structure and design, writing concisely, scannability, splitting information into coherent chunks and understanding that readers do not read text in the same order are relevant to writing for both print and web. She cites research that is relevant to these issues in both media.

Research in the 1980s suggested that silent reading from screen is significantly slower than reading from paper. Figures varied according to means of calculation and experimental design but the evidence suggested a performance deficit of between 20% and 30% when reading from screen (Dillon, 1992). This work, though, was based on the use of CRTs which had some limitations as reading substrates compared to print on paper (character definition, contrast, flicker etc.).

Dillon, A. (1992) 'Reading from paper versus screens: a critical review of the empirical literature', *Ergonomics*, 35, 10, pp. 1297–1326
https://www.ischool.utexas.edu/~adillon/Journals/Reading.htm

More recent research presents a far more nuanced picture. Reading from screen may not be significantly slower than reading from paper. However, as implied by Nielsen, screen text and text on paper may be read in different ways. Readers may process text on screen in less detail due to the distraction of having to scroll, fewer fixed cues to content (spatial position of text within a paper spread supports recall of text information), and possibly due to different levels of application to the reading task in different substrates (readers may take paper documents more seriously than on-screen documents). There is some evidence that when reading 'functional' texts that may require reference back to content, people perform better when working from paper than screen. This effect is probably due to the limited cues to spatial position of information that are available on screen. The glare of modern computer displays is considerably reduced compared to CRTs, but there is possibly still some effect of glare and fatigue.

An excellent review of relevant research here is:
Jabr, F. (2013) 'The reading brain in the digital age: the science of paper versus screens', *Scientific American on-line*.
http://www.scientificamerican.com/article.cfm?id=reading-paper-screens

Organising writing for the web

Spyridakis, J. H. 'Guidelines for authoring comprehensible web pages and evaluating their success', *Technical Communication*, 2000, pp. 359–82. http://faculty.washington.edu/jansp/Publications/Authoring_Comprehensible_Web_Pages.pdf

Most of the discussion below is based on Jan Spyridakis' 'Guidelines for authoring comprehensible web pages and evaluating their success'. We have used her headings and have quoted from her paper, including her references to other relevant work in the section below.

Writing to help readers use relevant prior knowledge to comprehend new information

Readers have prior knowledge for both content and structure that influences how well they will understand new information. Spyridakis cites research to support this, and concludes:

> When readers possess a preexisting content or structure schema that is relevant to the information they are reading, the reading task is easier and more successful. They identify high level information and form hierarchical frameworks in memory for incoming information more easily. However, with hypertext – which lacks typical text structures – readers may need to develop new strategies to identify top-level structural information.

> Web pages, therefore, should contain some explicit content that helps readers to orient themselves; access relevant prior knowledge; access relevant content and structural schemata in LTM [long term memory], or construct new schemata; and identify content relationships within and across pages. [p. 361]

She identifies the following text features that can help orient readers:
- an informative title at the top of each page
- an introductory sentence that announces the topic and specifies the intended audience
- repetition of company (or department) names, redefining particular terminology, and spelling out acronyms on each page.

Minimise the amount of information on the page

Nielsen, J. (1997) 'Changes in web usability since 1994' http://www.nngroup.com/articles/changes-in-web-usability-since-1994/

Dee-Lucas, D. (1995), 'Study strategies for instructional hypertext: effects of text segmentation and task compatibility. *Educational Media and Hypermedia*. http://scholar.google.co.uk/scholar?cluster=135662471052203966&hl=en&as_sdt=0,5 [use the tugraz.at link]

There appears to be consensus that short web pages, generally, help readers. Nielsen's work is frequently cited to support this on the basis that

> users do not read online. Instead they scan the text, picking out highlights and hypertext links and only read selected paragraphs.

Spyridakis is critical of Nielsen's methods because he conflates many variables in his re-written test materials, but she supports his conclusions. She cites better research (Dee-Lucas, 1995) which does suggest that breaking down information into more, shorter pages leads to better understanding of page content than fewer, longer pages:

> Less information on a page – and hence more pages – allows users to more easily find the information they need and retain it than a site with a lot of information on a long page. However, a longer page can provide users with a wide range of content from which they can develop a broader view of the information, retaining a similar amount of information overall as readers of shorter pages. A writer must weigh these tradeoffs given a site's purpose, content and audience. [p. 363]

If content is presented in short pages the following techniques can be helpful:

- divide content into separate pages and provide links to those pages, as Dee-Lucas and Morkes and Nielsen did
- use summaries or abstracts with links to fuller discussions
- reduce examples and tightly edit the text.

Ordering information in a paragraph or page

Research supports two different approaches to organizing information within a paragraph, and these may not always be compatible
– writing paragraphs as 'inverted pyramids' i.e. presenting the conclusion first
– putting information the reader is likely to know before new information (within sentences and pages as well as paragraphs)

Dee-Lucas, D, and J. Larkin (1990), 'Organisation and comprehensibility in scientific proofs, or 'consider a particle p. . .', *Journal of Educational Psychology*, 82, 4, pp. 701–14

Kieras, D. (1978), 'Good and bad structure in simple paragraphs: effects on apparent theme, reading time and recall'. *Journal of verbal learning and verbal behaviour*, 19, pp. 13–28

Lorch, R. and E. Lorch, (1985), 'Topic structure representation and text recall', *Journal of Educational Psychology*, 77, 2, pp. 137–48

Inverted pyramids encourage deductive reading. The concluding, important information is given first and then readers can work through the paragraph in detail to gather more, contextual information. Spyridakis cites research suggesting this structure improves reading speed, comprehension and recall (Dee-Lucas and Larkin, 1990; Kieras, 1978; and Lorch and Lorch, 1985).

In contrast, putting information that is likely to be familiar in the first sentence of a paragraph helps orient readers to the information that follows. Spyridakis (p. 366) cites research demonstrating that sentences which relate to previous context are processed more quickly and remembered better than those that do not. This ordered approach, which builds on existing knowledge, is likely to be particularly relevant when people are 'reading to do'. (See discussion of 'reading to do' on p. 9).

Morkes and Nielsen (1997) 'Concise, SCANNABLE, and objective: how to write for the web' http://www.nngroup.com/articles /concise-scannable-and-objective-how-to-write-for-the-web/

Spyridakis notes Morkes and Nielsen's (1997) study showing people's tendency to read only the first sentence of paragraphs and comments that this behavior is to be expected in search tasks:

> Logically though, with so many readers scanning Web sites before they read, deductively organized paragraphs would best facilitate successful searching. And once a reader is in a paragraph, the topic sentence should serve as an anchor to which readers link upcoming information, just as they do with printed texts. This

anchor could be quite critical for hypertext readers who may follow links in the middle of a paragraph and never get very far past the first sentence. [p. 366]

Nielsen (1996), 'Inverted pyramids in cyberspace' http://www.nngroup.com/articles/inverted-pyramids-in-cyberspace/

While Spyridakis seems to favour Nielsen's (1996) recommendation for an inverted pyramid approach it is likely that it only works well for relatively straightforward and short paragraphs, where the connection between initial information and subsequent detail is clear.

Klöckner, K., N. Wirschum, et al. (2004), Depth- and breadth-first processing of search result lists. *CHI '04 Extended Abstracts on Human Factors in Computing Systems*. Vienna, Austria, ACM: 1539–1539

Joachims, T., L. Granka, et al (2005), Accurately interpreting clickthrough data as implicit feedback. *Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*. Salvador, Brazil, ACM: 154–61

The significance of the opening sentence of paragraphs is also implicit in Klöckner et al, 2004 and Joachims et al, 2005 studies that show that web users tend to engage in depth-based search rather than breadth-based search. This means that when they first see information that appears to be relevant they will investigate it in detail rather than continuing to review a page for other relevant information. Readers therefore may not get to the end of a web page, or may take some time to do so, if cues from the first sentences of paragraphs, encourage them to abandon a search for further information. It's therefore worthwhile reviewing the first sentences of a multiple paragraph page as a sequence to make sure they are distinctive enough to guide the reader to the content they need.

As mentioned above, a possible consequence of people's depth-based approach to searching on the web is that paragraphs at the end of a page may never be read. GOV.UK may need to consider whether putting information about alternative sources of information or routes to access services at the end of a page (as it seems to do currently) is appropriate. It may be missed by people who find reading difficult who are less likely than fluent readers to scan web pages as a whole (see discussion on page 14).

Use organizational cues to make text visually accessible and scannable

Spyradakis cites research that has shown that organizational aids such as headings, introductions, overview sentences, tables of contents, and lists have helped readers' comprehension, speed and search tasks in print documents.
She says that organizational cues help readers:
- select information to encode
- understand content relationships
- perceive information importance
- build hierarchical frameworks in memory
- call on relevant schemata for understanding incoming information

Morkes, J. and J. Nielsen, (1997) 'Concise, SCANNABLE, and objective: how to write for the web'
http://www.nngroup.com/articles/concise-scannable-and-objective-how-to-write-for-the-web/

Nielsen, J. (1997b) 'Be succinct! (Writing for the web)'
http://www.nngroup.com/articles/be-succinct-writing-for-the-web/

Morkes and Nielsen (1997) found that 'extremely scannable' text, that is with bulleted lists, bold highlighted key words, short text sections and more headings, helped people perform tasks faster with fewer errors and better information recall. Their test findings were based on a site with promotional content but has nevertheless contributed to Nielsen's general recommendations for scannable text:
– highlighted key words (for example, using bold type or colour)
– subheads
– bulleted lists
– clear paragraph organisation
– concise language.

Spyradakis, however, cautions against the use of highlighted words suggesting that they may interrupt flow of reading and thus interfere with meaning; and that readers may be distracted by trying to work out why words have been highlighted. Some readers may mistake highlighted words for links.

Link text

Text showing links should be meaningful, not click here or more. Actions should start with a verb: Chadwick-Dias, McNulty and Tullis (2003), cited in Redish (2012) found that users, especially older ones, hesitated on links like Accounts, but less so with Go to accounts

Chadwick-Dias, A., McNulty, M and Tulllis, T. (2003), Web usability and age. How design changes can improve performance, *Proceeding of ACM conference on universal usability*, November, pp. 30–7

Lynch, C. (1997), 'Identifiers and their roles in networked information applications' in *ARL: A bimonthly newsletter of research library issues and actions*, 194, Washington, DC: Association of Research Libraries

Research by Lynch (1997) cited in Spyradakis cautions against the use of links embedded in the middle of a sentence. He suggested that embedded (associative) links can distract the reader. He says that such links may slow down readers who are scanning because they will need to stop and read text surrounding the embedded link. This suggests that authors should place such links at the end of a sentence where they will least disrupt the syntax.
Redish, however, notes that embedded definition links that open a small window and don't change the screen are not disruptive.

Organising writing for 'reading to do'

Redish, J. C. (1989), 'Reading to learn to do'. *IEEE Transactions*, 32, 4, pp. 289–93

A significant part of GOV.UK content needs to be acted upon, or interacted with. It tells people what to do and how they should do it. As Redish has pointed out, there is a difference between 'reading to learn' and 'reading to do', and much of GOV.UK content will be about the latter. People are notoriously reluctant to read instructions, even less so when they already have some knowledge of a process (Wright, 1981), so their willingness to focus on detail when reading to do will be less than reading to learn.

Wright, P. (1981) 'The instructions clearly state . . . Can't people read?', *Applied Ergonomics*, 12, 131–142

The recommendations mentioned already support 'reading to do' but there are additional considerations when drafting procedural or instructional text.

Lists

Bulleted lists

'Bullets' (which may be any shape) identify items in a list when the order does not matter. Presenting information as a list helps readers to get an idea of how many items there are in a list, as well as aiding scanning to find a particular item (Joshi, 2003). Bullets can be used to help organise information, as sub-lists, in numbered lists.

Joshi, Y. (2003), *Communicating in style*. New Delhi: The Energy and Resources Institute

Numbered lists or steps

Redish, J. (2012) *Letting go of the words*, Boston: Morgan Kaufmann

Redish (2012) has a clear explanation of a numbered list:

> Tasks sometimes require instructions. Instructions imply sequence. Sequence = numbered steps. [p. 231]

She goes on to list the advantages for web site users:

> With a numbered list, site visitors can
> - see at a glance how many steps there are
> - check off steps (mentally, even if they can't write on screen)
> - read one step, do it, and find the next step easily when they come back to the list
> - do the steps in the correct order
> - do all the steps (without inadvertently missing one).

Redish recommends keeping lists short (5–10 items) for unfamiliar items, and suggests that if lists are longer they should be grouped into shorter lists each with its own sub-heading.

Jansen, C. and M. Steehouder (1997). 'Designing procedures as a foundation for instructions', *Professional Communication Conference, 1997. IPCC '97 Proceedings. Crossroads in Communication*. IEEE International

Dixon, P. (1987). 'The processing of organizational and component step information in written directions', *Journal of Memory and Language*, 26, pp. 24–35.

Loorbach, N., J. Karreman, and M. Steehouder, (2007a) 'The effects of adding motivational elements to user instructions. *Professional Communication Conference Proceedings*, 2007. IPCC 2007. IEEE International.

Loorbach, N., J. Karreman and M. Steehouder, (2007b), 'Adding motivational elements to an instruction manual for seniors: effects on usability and motivation', *Technical Communication*, 54, 3, 343–58

Research has suggested setting out the things the user needs to have or do first in order to be able to carry out a transaction reduces the risk of transaction failure (Jansen and Steehouder, 1997). Dixon's (1987) research supports this and he proposes that giving general organising information at the top of a list of procedural directions helps people mentally organise subsequent information in steps. In lists of steps people try to guess the relationships between steps as they read them, so an explanation at the beginning reduces the need for guessing.

Loorbach et al (2007a and b) have reported that motivation for reading instructions (in their case printed instructions for a mobile phone) may be improved through the use of summaries that explain the relevance of the task, and also motivational statements that tell the user how far they have got and how much there is to go. The study is not 'clean' in that it combines multiple modifications in the experimental condition. However, they found that summaries, engagement of the user etc. improve the *performance* (accuracy and completion) of older users (60–70) while having no effect on younger users. These factors influence the *satisfaction* of younger users but have no impact on older user satisfaction.

Mayer, R. et al (2004) 'Cognitive constraints on multimedia learning: when presenting more material results in less understanding', *Journal of Educational Psychology*, 93, 1, pp. 187–98

Although presenting organising information at the beginning of paragraphs or sections is generally regarded as helpful for users Mayer (2004) has recommended avoiding redundancy as anything that distracts from the main focus of attention may reduce processing of the focal information. The writer needs to balance the need for prior organisation against demands for attention.

Plain English and 'tone of voice'

There is some confusion in the GOV.UK guidelines between Plain English and Tone of Voice, which can be addressed by reorganising the content and changing the headings.

Plain English

Plain English is generic – a set of principles for writing clearly. The principles are:
- use short sentences and paragraphs
- don't use jargon
- use simple, everyday words rather than complex words
- be specific rather than general
- use active verbs
- think of your audience and use words that are appropriate to them

A good description of Plain English, illustrated with examples, is http://www.clearest.co.uk/editorsoftware/plain-english/index.html It also has examples of savings that have been made by governments, councils, multinationals and industry bodies that have adopted plain English principles.

Tone of voice

Delin, J. (2005), 'Brand tone of voice: a linguistic analysis of brand positions', *Journal of Applied Linguistics*, 2, 1, pp. 1–44

'Tone of voice' is particular to a company, service or other organisation. It represents their values and works with elements of visual presentation, such as typefaces and use of typographic styles, as well as vocabulary, mode of address, and other linguistic considerations. Delin (2005) describes tone of voice as helpful in engaging people with content 'perhaps about products and services they wish to buy but also about benefits and services that they are invited to take part in or claims, such as pensions, tax credits, or advice, health services and screenings, safety information and more'.

Carliner, S. (1990). 'Elements of editorial style for computer-delivered information', *Professional Communication*, IEEE Transactions, 33 (1): 38–45

Evans, M. B., A. A. McBride, et al. (2004), 'The effect of style and typography on perceptions of document tone', *Professional Communication Conference Proceedings*, 2004

Much research on writing for the web supports an informal, conversational style of writing, including contractions and personal pronouns, that has evolved from the tradition of computer dialog between computer and reader (Carliner, 1990; Evans and McBride, 2004).

Despite recommendations for relative informality, Delin's reference to work with an unnamed (for confidentiality reasons) government department indicates some of the challenges in finding the right tone of voice. Participants in her small survey

thought that information presented in the simplest terms was too friendly for a government agency – and therefore came across as false. They did not want to see contractions such as *you're* and *we'll*; they preferred *please call us* to *give us a ring*; they liked *you are likely to be entitled to a further amount* but thought that *you can get more money* was offensive because it suggested they were childish and greedy. The study participants preferred language that was *direct but not too chatty*. They preferred, for example: *complete* to *fill in; receive* to *get.*

Delin's work suggests that readers may be particularly sensitive to words that are used, in relation to benefits or transactions with government. She draws attention to the challenges of writing in a way that is intended to be direct and conversational, yet might be perceived as too colloquial and therefore inappropriate. One study has suggested, for example, that some ethnic groups may be offended by use of direct 'you' (Rose, 1981), and recommends not repeating 'you' if usage seems to be getting very insistent. Black and Stanbridge (2012) have found users can also react negatively to a writing style that over-uses motivational features and can interpret this as patronising or inappropriate style. A balance is needed that takes into account the different levels of understanding and expectations readers bring to a text.

Rose, A. (1981), 'Problems in public documents'. *Information Design Journal*, 2/3, 4, pp. 179–96

Black, A. and K. Stanbridge, (2012), 'Documents as 'critical incidents' in organization to consumer communication'., *Visible Language*, 46, 3, pp. 246–281

Choosing the right words

Avoid jargon

Most people agree that jargon-filled text leads to breakdown of understanding and loss of trust. Jargon operates not just at word level but at sentence level. Joiner (2002) gives this example tested with spoken financial advice texts:

Joiner, T.A. (2002), 'Technical language, advice understandability, and perceptions of expertise and trustworthiness: the case of the financial planner', *Australian Journal of Management*, 27, 1, pp. 25–45

> *you should also consider a diversified share portfolio that would offer capital growth as well as a small dividend income—this will also give the benefits of imputation credits on the dividends. Of course, some or all of the shares could be sold to satisfy your liquidity needs.*
> is harder to understand than
> *I suggest that you buy shares which will grow in value, give you a small dividend and can be sold any time that you need the cash.*

Masson, M.E.J. and M.A. Waldron, (1994), 'Comprehension of legal contracts by non-experts: effectiveness of plain language redrafting. , , .', *Applied Cognitive Psychology,* 8,19

A similar point is raised by Masson and Waldron (1994) who argue that understanding legal documents is not only compromised by vocabulary difficulty, but also by sentence structure and complexity/unfamiliarity of underlying context. Communication breakdown is particularly likely where the public need to understand legal or financial processes that are not are part of everyday life.

Corbett , M. Z. (1990), Clearing the air: some thoughts on gender-neutral writing, *IEEE Transactions on Professional Communication*, 3, 2, pp. 2–6

Use gender neutral words

Corbett (1990) discusses gender-neutral writing (though without reference to research), and there is a full summary of the issues with relevant links at
http://en.wikipedia.org/wiki/Gender_neutrality_in_English
The Canadian government 'Language portal of Canada' has helpful guidelines, with examples of how sentences can be re-written appropriately:
http://www.noslangues-ourlanguages.gc.ca/bien-well/fra-eng/style/nonsexistguidelines-eng.html

Writing using the active voice

Street, J. and E. Dabrowska (2010) 'More individual difference in language attainment: how much do adult native speakers know about passives and quantifiers', *Lingua*, 120, pp. 2080–94. Summarised at http://www.sciencedaily.com/releases/2010/07/100706082156.htm]

Rose, A. (1981), 'Problems in public documents'. *Information Design Journal*, 2/3, 4, pp. 179–196

Much research indicates that using the active voice makes content livelier and easier to read and understand, especially for web pages. The active voice makes it clear who is doing what. Research has shown that people find text written in the active voice easier to understand than the same text written in the passive voice (Street and Dabrowska, 2010). Rose (1981) reported that passive sentences contain more words than active and take longer to read. In her discussion of writing for the web Spyradakis notes:

> While the literature on the effect of active versus passive voice is mixed, active voice can be effectively used in Web writing. Not only do readers move more quickly through active voice text, but they prefer it and feel more familiar with it. Readers may even encode passive voice text in active voice. Writers can save space on the page and mental effort for the reader by using active voice when it suits the content's purpose. [p. 369]

Waller, R. (2011), 'What makes a good document? The criteria we use', *Simplification Centre Technical paper no. 2*, Reading: University of Reading

Waller (2011) provides an explanation of the differing impact of 'active' and 'passive' voices on the reader:

> the passive sentence 'a refund will be sent' implies that someone will send it and someone will receive it, but neither party is identified. 'You will be sent a refund' identifies the recipient, while 'we will send you a refund' is even more informative because it identifies the sender as well. [p.6]

Flower, L., Hayes J. R., and Swarts, H. (1983), 'Revising functional documents: the scenario principle', in P. V. Anderson, R. J. Brockman and C. R. Miller (eds) *New essays in technical and scientific communication: research, theory and practice*, Farmingdale, NY: Baywood Publishing Co, pp. 109–36

In an American study, people who had to interpret federal regulation language spontaneously translated passive sentences into active sentences in order to form an understanding of the regulations (Flower, Hayes and Swarts, 1983). Strong verbs also help the user know who is acting and what is being acted upon.

Supporting particular user groups

Kodagoda, N., B. L. W. Wong, et al. (2010), 'Information seeking behaviour model as a theoretical lens: high and low literate users behaviour process analysed', *Proceedings of the 28th annual European conference on cognitive ergonomics*. Delft, Netherlands, ACM, pp. 117–24

http://www.rnib.org.uk/professionals/webaccessibility/designbuild/text/Pages/writing_for_the_web.aspx

http://www.autism.org.uk/working-with/leisure-and-environments/designing-websites-suitable-for-people-with-autism-spectrum-disorders.aspx

McCarthy, J. Dyslexia and accessibility/usability: a research review, 2006. http://wps.pearsoncustom.com/wps/media/objects/13920/14254101/_images4portersite/dyslexaccess_mccarthy.pdf

Summers, K. and M. Summers (2005), 'Reading and navigational strategies of web users with lower literacy skills, *Proceedings from ASIS&T*,

Taylor, T. and Rose, J. (2005), 'Bridging the divide: older learners and new technologies', Brisbane, Australia: 2005. PDF available at http://avetra.org.au/documents/PA028Taylor.pdf

Arch, A. (2008), Web accessibility for older users: a literature review, W3C Working Draft 14 May 2008 http://www.w3.org/TR/wai-age-literature/]

Kadoga, Wong and Kahn (2010) studied small groups of low and high literacy users (5 of each) using information resources in UK Citizens' Advice Bureaux and reported that the low literacy group engaged in word by word reading, rather than scanning through headings and paragraphs. Generally they tended to have a narrower field of view (not noticing information above or below where they were reading). They assumed that the first reference they came across would answer their query and found it hard to recover if that was not the information they needed, hence tending to abandon searches for information. Users with higher levels of literacy, on the other hand, had consistent patterns of organization and prediction whilst reading. The implications of this are

- minimize the amount of text to reduce cognitive load,
- use simple sentences and bullet points,
- use colour coding to show links between related text sections,
- make access structures (e.g. breadcrumbs) more prominent than in many typical web pages.

Notes, also that low literacy users may be particularly likely to need alternative routes to information (as discussed on p. 7)

The RNIB and the National Autistic Society advise against the use of jargon and complex technical language and suggests following Plain English principles.

McCarthy (2006) makes recommendations for dyslexic readers including: avoid complicated language, keep sentences and paragraphs short, include pictures and visual representations where possible. The research that he refers to suggests that these principles are helpful for others with reading difficulties.

Many of the 'rules' for writing for the web: short sentences and plain words, numbered or bulleted lists and so on support both low-literacy and high-literacy readers. Summers et al (cited by Redish) revised a health-related web site to take account of comprehension problems that low-literacy web users had encountered and found that both low- and high-literacy users were able to find information they needed faster and more accurately.

Some research has shown that older people have particular requirements, possibly because they are less used to reading from screen. See for example: Taylor, T. and Rose, J. (2005). Arch (2008) provides an excellent summary of research about web accessibility

for older users, including guidelines for on-line forms design for older people. Some of this research has shown that though older people may lack skills for and experience of reading on screen, they are often highly motivated in searching for information and in using on-line services.

Style: conventions and rules

A particular rule or convention may be determined by usage, clarity or overall 'look and feel' of a document. There is very little research that underpins the choice of one convention over another.

Usage: change over time

Change in language is affected by usage – which is why style guides have to be updated regularly. As conventions become more widely used the way they are presented visually may change. Some of the changes are very small. Walker (2001, pp.105–9) gives the following examples from *Hart's Rules*, the house style manual for Oxford University Press, which has been produced in at least 39 editions since 1893:

Walker, S., (2001), *Typography and language in everyday life: prescriptions and practices*, Harlow: Pearson Education

> The use of a full point as in Mrs. Mr. and Dr. was prescribed until the 1978 edition of the Rules, when it was decided that full points were not necessary because the contraction contained the first and last letter of the word, and Mr, Mrs and Dr

> The date written as May 19, 1893 was prescribed until the 1925 edition when the form 19 May 1925.

Individual words can also change as a result of usage:

> *e-mail* became *email*
>
> *web site* became *website*

The new Oxford style manual (2012), Oxford: OUP combines the former *Hart's Rules* and *Oxford dictionary for writers and editors*

Joshi, Y. (2003), *Communicating in style*. New Delhi: The Energy and Resources Institute

The only way to be sure you are using the up-to-date form is to check in an up-to-date authoritative dictionary or style manual such as that produced by Oxford University Press. Joshi (2003, pp. 219– 24) provides a useful summary 'Authority for spellings'.

'Look and feel' and clarity

Capital letters

One of the gradual changes in the 'look and feel' of documents, both on paper and on-line, has been reduction in the use of capital letters. This gives pages an uncluttered feel, as well as supporting informality.

The RNIB guidelines for writing for the web are explicit about capitals:

> Capitals used for whole phrases, sentence and paragraphs can be difficult to read for some users (the shapes of the lower case letters are easier to see) and, in the context of online communication, whole words in capitals appear TO BE VERY LOUD, creating the feeling of being shouted at.

Initial capital letters

There has been a gradual move since around the 1970s towards limiting initial capital letters to the first word and proper nouns only for headings and titles. Using initial capitals for all important words in a title looks old fashioned.

Contractions and abbreviations

Generally, overuse of full-points to denote abbreviated forms is old-fashioned, and some of the conventions have changed over time (Walker, 2001). Not using full points in sets of initials: DVLA rather than D.V.L.A. is up-to-date practice.

However, here is an underlying rule that abbreviations that are contracted (ie that retain the first and last letter in the word – as Mister [Mr] – do not take a full point, whereas 'suspended' abbreviations do – as Reverend [Rev.]. In practice, though, it is better to be consistent, and on web pages where there are relatively small amounts of text full points do not need to be used for most abbreviated forms.

Dates and times

There are many rules for the presentation of dates and times, affected by the nature of the text and whether, for example, it is for use in the UK or the US.

UK: 13 February 2013
US: February 13, 2013

UK the full point as 4.30
US the colon as 4:30

[The colon is also used for the 24-hour clock 14:30]

Numbers

National Numeracy statistics March 2012 (http://www.nationalnumeracy.org.uk/news/16/index.html)

Peters, E., D. Västfjäll, et al. (2006), 'Numeracy and decision making', *Psychological Science*, 17(5), pp. 407–413

Peters, E., N. Dieckmann, et al, (2007), 'Less is more in presenting quality information to consumers', *Medical Care Research and Review*, 64 (2), pp.169–190.

Numeracy levels in UK are low. In 2011, 42% of UK GCSE students failed to get A*– C. People with low numeracy skills experience difficulty in reading and understanding numbers. Those who reach a C grade may still have difficulty interpreting percentages or fractions (National Numeracy statistics, March 2012).

Peters, Västfjäll, et al (2006) Peters, Dieckmann, et al. (2007) found that percentages and probabilities were particularly difficult for people with low numeracy to handle e.g. in comparisons. Gigerenzer has shown that even rather everyday use of probabilities, such as probability of rain, are misinterpreted by many people (e.g. 50% chance of rain interpreted as 'It will rain half the day'). Writing 7 out of 10 people rather than 70% can be

helpful in some contexts, even though it makes the text longer.

Number sequences

The correct rule for sequences of numbers is either to use 'from . . . . to . . . ', or to use dashes '26–8'. The use of 'from . . . . to . . . ' is clearer.

Gigerenzer, G., Hertwig, R., van den Broek, E., Fasolo, B., & Katsikopoulos, K.V. (2005). "A 30% chance of rain tomorrow": How does the public understand probabilistic weather forecasts?, *Risk Analysis*, 25, 623–629

> from 10 November to 21 December
> from 10.00 to 11.00 am

Differentiating parts of the text: italic, bold and quotation marks

In printed documents italic is used for book, film and play titles, and for stressed or foreign words. Following this convention on web sites is not likely to disrupt people's reading.

Section sub-heads work well in bold because the type contrasts with that used for the body type. Using bold in this way does not disrupt reading according to Lynch and Horton.

Lynch, P. and S. Horton, *Web style guide*
http://webstyleguide.com/wsg3/8-typography/5-typographic-emphasis.html

The UK convention is for single quotation marks for quoted material with double quotation marks for a quote within a quote (the US convention is double quotation marks)

Double spaces after full points

Using additional space after a full points (usually a double word space) is a typing convention (Walker, 2001). This convention is not used in contemporary printed documents and does not need to be used on web sites because it introduces variation in horizontal spacing. There is some evidence that the variation in spacing that occurs when text is justified and that can lead to variable word spacing from line to line affects eye movements in reading (saccades).

Walker, S., (2001), *Typography and language in everyday life: prescriptions and practices*, Harlow: Pearson Education

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