

nature neuroscience

Science on the go

Mobile devices are emerging as a viable way to maximize time to read and search our ever-expanding body of scientific information. We encourage our readers to download and use our new nature.com app and to provide us with feedback.

Information overload is a ubiquitous problem in the twenty-first century and scientists have to navigate a rapidly growing literature. As an example, a recent study (Rosvall, M. & Bergstrom, C.T. *PLoS ONE* 5, e8694, 2010) used a novel method of journal citation pattern analysis to show the evolution of neuroscience into its own distinct field from its interdisciplinary roots in molecular and cellular cell biology, neurology and psychology. To do this, the authors analyzed an overwhelming 35,000,000 citations from more than 7,000 scientific journals. Mining of the scientific literature may be even more of a challenge for an interdisciplinary field like neuroscience, as neuroscientists face increasing pressure to nimbly navigate articles from diverse disciplines ranging from genetics and molecular biology to psychology and psychiatry. This information onslaught has in turn both changed the way we read and, in particular, transformed how we rely on new technologies to gather information and to mine the online environment more effectively. One such example is the metamorphosis of the cell phone into a powerful computer that allows scientists to keep up with their reading on the go. In response to this trend, the Nature Publishing Group has released an application for the iPhone to aid the searching and reading of nature.com content.

Mobile devices, including the many smartphones and e-readers now on the market, have rapidly transformed how scientists access information. Smartphones such as Apple's iPhone are wildly popular (since its debut in June 2007, there are now over 50 million iPhone users worldwide). Stanford University even offers its students a course on developing "apps" for the iPhone that is also available free online for the general public. There are seemingly unlimited apps available for the iPhone, and a number of these are specifically targeted towards scientists. There are apps to search online databases for papers and to store downloaded papers, vendor-released apps that offer tutorials about products, and even apps to help with benchwork such as preparing solutions.

Although it is not clear how many people use their smartphones to aid them in their day-to-day experiments, many scientists increasingly rely on them to mine the scientific literature. Perhaps because of the pressures to keep pace with a rapidly expanding literature, reading is for scientists a much more complex behavior than the term connotes. For example, a review of scientists' reading habits (Renear, A.H. & Palmer, C.L. *Science* 325, 828, 2009) concluded that although scientists have always read strategically (toggling among many articles to search, annotate and analyze content), they are increasingly engaging in strategic practices such as relying on abstracts and literature reviews

instead of full papers, and browsing for relevant content using different search strings, chaining through references, scanning the articles and the figures themselves by taking full advantage of hyperlinks, and saving the relevant information as they go. The same study concluded that while scientists are learning to 'read' more articles, they are also decreasing the time spent on a given article. Given this trend, it is unsurprising that scientists are using every device at their disposal to keep abreast of the information onslaught.

Skeptics may claim that the downside to the portability of mobile devices like smartphones is that their screens are too small to support a meaningful reading of the literature. However, strides are being made towards achieving support of scientists' reading habits on mobile devices. The newly released Nature Publishing Group app for the iPhone allows the user to tailor content searches, to readily access references and figures via hyperlink while reading the article text, and to save data for future reference. This app is freely available both from Apple's App Store and from <http://www.nature.com/mobileapps/>. Users of the iPhone and iPod Touch can browse, search, and read full text articles from *Nature* and *Nature News*. Furthermore, there are special views for references and figures, allowing readers to view them while reading the article and then return to their place in the text. For references, the app provides links to the publishers' websites. Figures are high resolution, use the iPhone's zoom feature, and even can be saved to the user's Photos. Entire articles can be saved to the device using the app, or emailed to friends, colleagues and collaborators. The app also allows users to search PubMed and to save abstracts and searches.

To encourage our readers to use the app, access to the full content of *Nature* and *Nature News* through the app is available for free until 30 April. Looking ahead, the app will also run on Apple's newly announced iPad. A similar application for phones that use the Android operating system (such as the Nexus One phone from Google) is expected to be released shortly, and Nature Publishing Group has also committed to nature.com supporting EPUB files, a file format that is compatible with several electronic readers.

We invite our readers to send us feedback about the nature.com app. Although *Nature Neuroscience* content is not directly supported in the nature.com application yet, Nature Publishing Group hopes—subject to reader feedback—to roll out access to other Nature-branded journals and publications in the near future. We urge our readers to take advantage of these new developments in mobile computing and to access science on the go. ■