◆ *The Future of Scientific Publishing in the Electronic Age*

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The publishing crystal ball—in the form of Web-trend experts María Lebron, Michael Mabe, and Lorrin Garson—offers a plethora of predictions for the future of online science. The electronic medium is progressing but is far from perfect, and when Lebron quipped "Am I reading the tea leaves right?" the crowded conference room bubbled with laughter as empathetic listeners recognized that they were united in facing the Internet. The presenters agreed on one central point: Electronic publishing is here to stay, but its future is difficult to foretell.

One common desire is present among scientists and Internet users alike: to communicate any time, any place, and anywhere. Lebron emphasized the roles of technology, business models, and people in online science, explaining that although student Internet use, hand-held electronic devices, and wearable computers are on the rise, new publishing models and an unchanging human mental bandwidth will steer the course of online communication. Current issues with the Internet may continue to pose problems because of inherent nuances in the technology. Web sites require endless maintenance and revamping—constant "care and feeding", in Lebron's terms. Still, she forecasts that e-books will become a reality, given new business models and the computer literacy of up-and-coming generations.

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Honing technology and business paradigms is only part of the challenge. Lebron asserted that human behavior, such as the familiar "one-stop shopping" mentality, will determine the future of e-publishing. People dislike wasting time, and they quickly attach themselves to the ease of selecting search criteria and having information returned in seconds and in their own environment. In the ideal future, the information space of the Internet will be seamless. Nevertheless, Lebron's concluding anonymous quote, "The Internet is easier to build than to predict", is sobering.

Mabe introduced a behavioral-functional model that may be used as a predictive tool for developing journals and their functions—registration, dissemination, archiving information, and certification. After comparing the various needs of readers and authors, Mabe emphasized that the behavioral-functional model joins authors and readers on common ground—the journal. Authors wish to publish more, increase dissemination, and have access to competitive networks; readers want to read less but also want to obtain high-quality information. Multijournal e-platforms like ScienceDirect, which allow journals and article databases to coexist, might be the solution.

Mabe expects that paper journals and older techniques used in conjunction with new technology where it abets productivity will continue to exist, rather than there being a complete change in the system. He speculated that "desktop delivery" of information will become universal and Web editions definitive, that e-preprints and other efficiency tools will grow alongside journals but not replace them, that e-reviewing and article-by-article publishing will become standard, and that sales methods will include bulk subscriptions of specialized, selected batches of articles.

Indeed, said Garson, the ideal in electronic publishing is that "it's all there." Garson said that comprehensive content and various literary sources need to be integrated on the Internet and need to be fully connected and barrier-free. That means no geographic restrictions, no charge to individual users, no taxes or tariffs, and overall simple and fast methods of search and recall. The electronic publication ideals are a tall order: enriched Web functionality and media features, customizable preferences, security and reliability, guaranteed fast recovery from disasters, and, of course, funding. Garson joked that money will appear from somewhere, everyone will be delighted with the price, and we will all live happily ever after. In reality, fair and workable pricing models, expanding access to those who cannot pay, funding of the machine, copyright and "all that", preserving the digital archive, and measuring use and its implications are just a few of the complexities of electronic publishing.

Yes, we have only just begun to traipse down the electronic communication road. Undoubtedly there will be ideals, fears, and complications. But Garson prods us to remember that, as the Greek philosopher Heraclitus mused, "Change alone is unchanging." ◭