# Table of Contents

**WHAT IS BRAND?** ........................................................................................................................................ 1

**BRAND AND SCIENTIFIC JOURNALS** ........................................................................................................ 1

**FUNDAMENTAL SHIFTS IN BRANDING OPPORTUNITIES** ........................................................................... 3
  - Content Disaggregation .............................................................................................................................. 3
  - Expanded Sources of Value ........................................................................................................................ 4

**BRAND NEEDS TO STAY VISIBLE ACROSS DISTINCT INFORMATION PRACTICES ONLINE** ............. 8

**A CONTINUUM OF BRANDING STRATEGIES** ............................................................................................. 11

**CONCLUSION: IMPLICATIONS AND BRANDING OPPORTUNITIES** ............................................................ 12
  - Journal Publishers ....................................................................................................................................... 12
  - High Wire ................................................................................................................................................. 13
This memo discusses issues that e-journals raise for journal brand in the online environment. As printed and electronic media become more interdependent, stakeholders (publishers and aggregators) and producers of scientific literature need to understand the potential impacts of e-journals on their journal brand. Following are insights and issues that emerged from Institute for the Future (IFTF) ethnographic interviews and from an internal IFTF workshop that focused on brand and e-journals.

**WHAT IS BRAND?**

At its most basic, brand is information that a provider of products or services communicates about the value of its offerings to establish trust and build loyalty among its customers. Brand messages differentiate in the marketplace, acting as a filter for making choices. Brand communicates: “If you use my product/service, you will get X level and kind of value.” For product and service providers, brand is critical because it helps develop loyalty among the customer base and creates opportunities for cross-selling and for deeper sales within a product/service category. Consumers make decisions about products and distinguish among multiple offerings based partly on brand.

Brand is important in both for-profit companies and nonprofit organizations. Hospitals, universities, and public sector agencies communicate brand, because it creates trust through perceptions of consistency and reliability. Ultimately, an organization communicates its core values and identity—important factors for developing a loyal constituency and/or customer base—through brand.

**BRAND AND SCIENTIFIC JOURNALS**

Scientific journals also have strong brands. Journal publishers (scientific societies) articulate clear messages to both readers and authors about the quality of their content, their unique vision of scientific developments and debates, and their overall standards of excellence in scholarly communication. Publishers do this through a rigorous editorial process involving highly competitive review and selection by elite editorial boards. Scholars know which journals to use at various points in their practice because of brand, or the journal’s reputation and identity. Journals are the first filter in a rapidly growing body of literature, and scholars rely on the standards upheld by journal publishers. Strong journal brands help scientists quickly identify critical and credible sources of information.
With the availability of scientific literature online, users are experiencing a new context and format for journal content. First, the digitization of journal content allows for new ways of segmenting, structuring, and organizing content. Second, online access presents the opportunity for engaging with journal material in a different way—perhaps with more interactive forms of data, multimedia, and expanded data sets and with the broader tools of the Internet (hyperlinking, email, push and pull communication methods, and so on). Finally, traditional, peer-reviewed journal content coexists on the Internet with other types and sources of content that have different, or few, standards of review and selection for publication. All of these create new opportunities—and challenges—for publishers and others to establish and communicate journal brand.

In the emerging environment of online scientific information, the boundaries that have traditionally delineated a “journal” may begin to blur. Do core content, editorial expertise, and review processes distinguish scientific journals, or does the entire interactive online experience of that same journal content with all the features and functionality provided by the World Wide Web environment? What messages need to be communicated to users of scientific literature to help them effectively use journals at distinct moments of scholarly practice?

These are critical questions in the context of changing information and research practices. Internet functionality is evolving and shaping the expectations of what can be done online, albeit at uneven levels across the world, and young scientists are developing their formative research processes and scholarly habits in this Internet world. Their expectations and preferences will create strong demands. In addition, the personal computer is becoming a cornerstone of all manner of scholarly scientific research because of its computational power as well as its communications and connectivity capabilities. It supports the presentation of data in new forms of media—video, graphics, simulations, models—and creates new forums for engaging with that content.

Journal publishers and aggregators need to make careful decisions about how to operate in this emerging environment. Do they remain core content providers, provide the entire interactive experience, or offer pieces of both? Each of these choices has implications for defining, communicating, protecting, and expanding brand.
Two key questions guide the rest of this discussion:

- How does online interactivity and functionality shape or affect journal brand?
- What are new brandable opportunities for scientific literature publishers and other players?

**Fundamental Shifts in Branding Opportunities**

Two fundamental changes characterize the transformation of scientific literature from the printed to the electronic format: (1) content disaggregation and (2) expanded sources of value.

**Content Disaggregation**

In the electronic publishing environment, the journal article is no longer necessarily the standard unit of scientific knowledge. As Kircz and others have argued, the nature of the electronic format allows for the disaggregation of journal article content into independent knowledge “modules” (such as the abstract, methods section, or bibliography) that can be accessed and used in numerous ways.\(^1\) As IFTF qualitative research suggests, scholars do not always read articles in linear fashion from beginning to end; rather, they move around according to interest, perhaps starting with the methods section, then moving to results, the bibliography, and so on. In their reading practices, many scholars thus disaggregate journal article content, reordering sections of the article as they see fit. In the electronic format, these sections can be produced as discrete modules that can be linked or aggregated according to a user’s needs. With the disaggregation of content, therefore, the electronic environment can support not only everyday nonlinear reading practices, but also other scholarly activities involving search and navigation, organization and archiving, and peer-to-peer communications.

Significantly, as content is disaggregated, its use and meaning may also shift. The very nature of content may be expanding. New forms of evidence (film, 3-D animation, hyperlinks to external databases and to much larger, more complete data sets) will likely become a standard part of scientific argument, prompting scientists to interact with online content differently than they do today. In addition, flow-tracking technologies will eventually generate other forms of content: maps of the connections, or links, between bundles of information, which will provide insight into how scientists are turning that information into meaningful knowledge.

**Expanded Sources of Value**

Four core sources of value are associated with journals—content, navigation, archives, and community. Content is at the center, and yet it cannot exist without the others. Navigation, archives, and community are necessary if journal users are to fully realize the meaning and value of quality content. Printed journals, card catalogs, photo copiers, and library archives once enabled scholars to access, navigate, organize, and otherwise derive value from scientific research content; emerging Internet-enabled services are now augmenting or even replacing these traditional tools. For the content provider, the online infrastructure (tools and features) presents opportunities for a variety of players (aggregators, software providers, database developers, and so on) to provide branded offerings that will support content. For the user, the unbundled pieces are evermore interdependent. Journal publishers need to pay attention to how new configurations of information and infrastructure are expanding the sources of value that are associated with journals and scientific literature and are thus providing new areas of growth for defining and communicating brand.

In today’s online environment, other players are joining journal publishers to provide the mechanisms (infrastructures, tools, or features) to create or to broker these new information topographies, forms of evidence, and sources of value. Journal aggregators—not just publishers—can deliver journal content, for example. Other providers can create forums for the discussion of scholarly developments—via email, online listservs or forums, and informal or formal knowledge communities. These communities may have lasting qualities or may be temporary and emerge around important discoveries or events.
Such developments create new experiences as well as new content for the user, thereby affecting journal brand. Aggregators and other agents will compete based on their ability to provide different parts of an overall user experience and will develop their own branded offerings to coexist in the scientific literature market with journal brand. Journal content may be at center when it comes to value, but scholars need navigation, archives, and community to access and make meaning of that content. While publishers can brand a journal primarily on content, then, branding for content alone will not be enough for aggregators. Understanding the new terrain and anticipating new branding areas will help publishers and others protect and strengthen their brand.

Table 1 presents the sources of value in journals along with the infrastructure and features that enable users to realize those values in the printed and electronic journal environments. Current practice lies somewhere between the endpoints of this continuum, with the use of paper and electronic journals expected to coexist for the foreseeable future. The table shows how the infrastructure that supports journals is changing. The emerging infrastructure and features listed in the e-journal column represent branding opportunities for publishers and aggregators.
Table 1
Infrastructure and Features That Realize Value for Users of Scientific Literature

<table>
<thead>
<tr>
<th>Core Sources of Value</th>
<th>Traditional Printed Journal Infrastructure</th>
<th>Emerging E-journal Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content</strong></td>
<td>Printed content (text, tables, graphics)</td>
<td>Multimedia content, interactive data and simulations</td>
</tr>
<tr>
<td></td>
<td>Publisher’s editorial and review process to identify quality content</td>
<td>Agent-based filtering, informal and community-based filtering, informal peer review (e.g., LANL)</td>
</tr>
<tr>
<td></td>
<td>Publisher-provided article descriptors (e.g., journal name, author, institution, lab) to mark quality content</td>
<td>Metadata to describe content type and quality</td>
</tr>
<tr>
<td></td>
<td><strong>Navigation</strong></td>
<td>Clusters of searchable online journals, online archives of specific journals, bibliography applications (e.g., EndNote), digital object identification, personal electronic filing and retrieval systems</td>
</tr>
<tr>
<td></td>
<td>Librarian, card catalog, offline indexes, journal structure and format</td>
<td>Search engines, agent-based searches and hypersearches, electronic tables of content, alerts, hyperlinks, networks of linked knowledge</td>
</tr>
<tr>
<td><strong>Archives</strong></td>
<td>Publisher archives, offline databases, libraries, reprints, photocopies, personal paper filing systems</td>
<td><strong>Community</strong></td>
</tr>
<tr>
<td></td>
<td>Scientific societies, conferences, journal clubs, subscription services</td>
<td>Online knowledge communities, email communities, listservs, rapid-response letters to the editor, informal peer forums</td>
</tr>
</tbody>
</table>

Source: Institute for the Future

- **Content.** The identification and presentation of quality content is a primary source of value for scientific journals. Publishers of scholarly printed journals have achieved this value through a rigorous editorial and review process and through a set of article descriptors (journal name, author name, institution or lab). Given the exploding volume of information online, the increasing pace
of the emergence of that information, and the development of new scientific subfields or niches, a publisher or aggregator’s ability to guarantee a clear and reliable level of quality—to filter out the wheat from the chaff—will be evermore important as a brand message. Clarifying the type of material contained in a given journal (cutting edge, non–peer reviewed, works-in-progress, commercial, clinical, second- or third-tier, and so on) is also critical. These activities currently are in the domain of brand for journal publishers. Emerging features to filter content include metadata that further describe content for filtering and evaluation, automated agent-based filters, community-based filters, informal peer review and filtering (e.g., LANL), and technologies that track and analyze webs of links as new forms of value-laden content.

- **Navigation.** Rather than memorizing what they read, scholars locate and retrieve content—or navigate through content—when they need it. Customized and automated agent-based searches, hyperlinks, electronic tables of contents, alerts (based on author, subject, keywords), and so on make up the navigational infrastructure of the e-journal environment. The online environment creates the potential for innovative linkages across discrete information domains and for the establishment of more useful, flexible channels of information flow. This new navigational infrastructure offers many opportunities to establish, communicate, and maintain brand identity.

- **Archives.** The organization and permanent documentation of scientific discovery provides direction for current research and constitutes the scientific community’s collective memory. In the printed journal environment, archives are maintained through journals, photocopies, reprints, indexes, and subscriptions. Journal organization itself structures the organization of these archives. The online environment provides many new possibilities for the storage and organization of data as journals, clusters of journals, articles, and smaller knowledge modules. It also provides new mechanisms for accessing data: tailored clusters of journals, customized searches, links to bibliography applications (e.g., EndNote), and so on. Individual journals or aggregators might brand on the basis of the historical depth of their archives or on their ability to organize content in specific ways. Interfaces or portals that mediate
organization and archiving across electronic and paper worlds could also be branded.

- **Community.** Scientific community is created and maintained simultaneously at many levels, including the lab, the department, the institution, the society, the nation, the subfield, and so on. Through subscription services, publishers disseminate quality content and create a community based on readership. The community coalescence provided by scientific societies is often focused on the journal and conferences; at the local level, there are journal clubs, lectures, and mini conferences. Informally, community is maintained through personal interactions, whether face-to-face, online, through the mail, or on the phone. Just as the online infrastructure provides opportunities for the formation of new channels of content flow, navigation, and archiving, it also provides expanded opportunities for communication and relationship building—some of which could be branded. Incorporating features such as e-mail listservs, contact-the-author features, and enlarged scientific knowledge environments (SKEs) into the journal infrastructure are just a few of the possibilities.

### BRAND NEEDS TO STAY VISIBLE ACROSS DISTINCT INFORMATION PRACTICES ONLINE

Table 1 raises a question: When do these core values of scientific journals become more or less important and more or less visible? IFTF has identified six different domains of general information practice, or ways that researchers use scientific literature to further their scholarly goals.² Like traditional printed editions, e-journals are useful to scholars for different reasons at different moments, depending on the scholars’ information needs. Many opportunities for establishing and communicating brand in the online environment are attached to features that meet these information needs. Communicating brand across these different practices is a challenge, however: Awareness of journal and aggregator brand is erratic and is shaped by the user’s relationship to the literature within a given practice.

- **Monitoring and reviewing content.** Scholars generally do what they call “regular monitoring and reviewing to keep current,” within the environment of specific journals. They may follow the content of anywhere from a couple to more than a dozen journals each week or month. IFTF qualitative research

² These are discussed further in IFTF’s qualitative report and information practices memo.
suggests that scientists use a mix of electronic and paper formats for this purpose, perhaps monitoring one journal through an electronic table of contents and another at home in its printed edition. Importantly, scholars doing regular review are looking for content only within unique, branded journals. They want to interact directly with individual journals. Journal publishers and aggregators should consider how to take advantage of this practice to regularly communicate brand, perhaps by offering special features that facilitate navigation, browsing, and reading behaviors.

- **Conducting focused research for retrieval.** Scientists often use e-journals for what they call “my real professional activity” or “the real information retrieval”—focused searches with clear desired outcomes. In this practice, users rely on a variety of search engines to access e-journal articles. With few exceptions, scholars with this goal are driven by a search for categories of content found across a spectrum of sources. The focus on rigorous information gathering and retrieval means that the relationship with individual journals is weak at best. Journal publishers have an opportunity to make their brand more visible at two points in the retrieval process: (1) when a scholar evaluates the list of search results and (2) when searchers foray out from their search results and dip into individual journals to retrieve articles.

- **Studying and reading intensively.** When scholars study and read intensively to extract knowledge, they again find themselves within the individual journal container. Often they choose specific articles after browsing and evaluating the results of a focused search. IFTF qualitative research suggests that many scientists prefer to read paper copies (either from the printed edition or printed from the electronic edition) to study in-depth. This type of interaction with an individual e-journal for scholars who do not read online is brief, focused on convenient, fast access and retrieval in print. Journals have the opportunity to maintain brand across this transition from electronic to paper edition by establishing a recognizable logo and style in the printable formats of their electronic publications and by facilitating printing practices in general (e.g., customizable printing options to repackage content).

- **Circulating and exchanging content.** The circulation of knowledge and the exchange of information through peer networks are important means for establishing presence and credibility in a field of research and for furthering
scientific discovery. The e-journal, in its enriched Web context, offers a new forum for information exchange among scholars. Tools such as e-mail with URL or PDF attachments, lab Web sites, and distributed, flexible printing have given scholars a new basis for interacting around specific journal content. Other online features can easily bring together societies, authors, and readers and can facilitate the creation of SKEs and e-mail listservs geared to society members or journal readers. Trusted journals can “curate,” or host, various kinds of discussion forums, with known editors moderating, in the same way that scientific societies sponsor discussions at conferences. That is, journals can extend their brand presence into the networking and information exchange that are essential scholarly practices.

- **Creating context and relevance.** Once they retrieve journal articles and other types of information, scholars spend time and energy creating complex systems for organizing and categorizing so that they can easily access and share information. Cataloging paper and electronic content is an important activity for scholars because it places retrieved content into a larger context for analysis and reflection. Given that much of what they are organizing is in the form of journal articles, features that enable scholars to maintain accessibility to specific journals or clusters of journals within their personal libraries present opportunities for branding. When writing articles, for example, scholars could search or scan their own electronic library system by journal or by a cluster of journals for articles to cite. The search and retrieval functions available in the online environment thus need to be transferable to the researcher’s personal library. Storage in formats that maintain visible journal logos could sustain brand awareness throughout the research cycle. As new channels are established between new kinds of data, scholars will look for assistance in managing evermore complex cataloging practices.

- **Documenting original content.** The essential scholarly activity of documenting original content involves writing and publishing. E-journals facilitate documentation in two ways: by seamlessly linking the searching and writing processes and by speeding up the time between submission and formal publication of an article. Writing often cycles scholars back to the search process—either to fill a research hole, to retrieve a missing citation, or to locate some specific piece of information to complete an article, lecture, or...
grant proposal. Archived and current journal articles are fundamental to this writing process. The branding opportunities mentioned in relation to searching, organization, and storage practices are thus relevant for writing practices as well.

In the publishing arena, submission to journals has been transformed in the online environment, where the time between submission and publication is shorter than in the print environment and where information is being transferred across more media. These information transfers—requiring special formatting and the uploading and downloading of complex, data-rich documents—present opportunities for branding. Publishers or aggregators could build brand through (1) effective, seamless online submission processes and (2) alert features that help scholars keep up with the faster pace of journal publishing.

**A Continuum of Branding Strategies**

Following are three general branding strategies for the online publication arena. These strategies range from a focused brand promise of selecting and generating top-quality content to an expanded and enhanced brand message that promises a complete interactive experience with fellow scholars around quality content.

- *Provide high-quality content.* Most journal publishers today follow this strategy, with a strong focus on delivering the best-quality content through rigorous review and selection processes.

- *Provide quality content plus.* This option adds a limited set of other content-enhancing offerings to a core brand promise of reliable quality content. Offerings strongly support the core content brand and could include conferences, conference proceedings online, society membership benefits, a Web site with online access to articles, and limited interactivity.

- *Provide highly interactive, multimedia engagement with quality content and its scholars.* This most comprehensive brand promise leverages Internet functionality and creates new forums for engaging scholars around data and scholarship. It also allows users to flexibly select modes of engaging with
content and peers that support media preferences for individual scholarly practices.
This spectrum of brand options reflects an increasingly complex market and technological environment. Publishers and aggregators may want to move from content to highly interactive engagement as they confront an increasingly fragmented market. More players in the market lead to more partnerships and co-branding strategies. As journal publishers and aggregators move along the branding continuum, they will need an even stronger brand identity to maintain user awareness.

CONCLUSION: IMPLICATIONS AND BRANDING OPPORTUNITIES

Journal Publishers

Scientific societies are a major conduit for the publication of scientific literature. As these societies move their content—in the form of discrete printed journals—to online environments, they enter a domain in which presentation, navigation, and delivery of that content are transformed. Journal brand, then, should connect with users across multiple formats, services, interfaces, and features. As players other than publishers themselves increasingly come to control this terrain, publishers will want to ally themselves with partners who can help them realize their brand strategy.

Publishers can work to increase users’ awareness of journal brand through the options previously presented. They can focus on communicating and specifying the quality of their content and on using reputation tools such as citation indexes, as well as on other filtering, sorting, and ranking tools. Evaluation and trust of content quality are especially important and brandable when scholars are conducting focused searches for information. Alternatively, publishers can communicate a journal brand that provides “content plus.” Here the brand message remains targeted on quality of content but offers a limited set of features that enhance the content by, for example, fostering community through the sharing of society conference proceedings online. Finally, publishers may choose to provide those core sources of value that surround content directly, through pioneering relationships with providers of navigation, archives, community and delivery systems. This approach allows the widest possible extension of journal brand across fragmented online information domains and markets. In this case, the journal brand can come to represent a comprehensive scholarly experience.
Take-home messages for journal publishers include the following:

- **Develop a clear brand message in a rapidly evolving market.** Choose an option and stick with it. The more that scholars can associate a particular journal with a set of traits that distinguish the content of that journal, the more they can trust it as a source of information that reliably delivers what it promises.

- **Identify appropriate domains for brand visibility.** Build brand awareness by identifying the moments and places in the online environment where it makes sense to surface journal brand.

- **Figure out how to communicate brand across information practices.** Users access and manipulate content differently depending on their information goals. Tailor brand messages and formats to specific information practices.

- **Don’t muddy the brand online.** Don’t try to do “content plus” or more without an expert as a partner. A poor online presence may dilute brand impact.

- **Investigate the growing importance of markers of quality content as the volume of online literature grows.** Faced with an increasingly “noisy” information environment, scholars will count on trusted sources even more.

- **Pay attention to the growing importance of markers of quality content as content is delivered through more, and different, channels.** Scholars will face a burgeoning set of choices about search engines, navigational tools, organization and archiving tools, and ways of accessing and circulating content. The position of journal publishers as content generators should become more important, whether or not these publishers choose to offer other services and features.

**HighWire**

With the advent of electronic journals, aggregators have become critically important players in the scientific journal distribution network. They operate as agents for journal publishers, as vehicles or conduits for delivery of content, and as supporters of the research, retrieval, study, writing, and publishing needs of scholars and clinicians.
HighWire can best promote its brand by working in the arena of interactive and multimedia engagement with quality content and scholars. Because HighWire manipulates rather than produces content, it will do best to emphasize content enhancement and a seamless user experience. In this way, it can support rather than compete with the journal brands that it hosts. HighWire can enhance and transform content by taking advantage of the linkages and infrastructure provided by the World Wide Web. It should emphasize the services it can provide across a range of content domains and scholarly activities. Explore/investigate

Take-home messages include the following:

- **Be aware that agentry will become more important as literature volume grows.** In the online environment, researchers confront a wide array of information, often without clear markers of quality. Electronic agents that can wade through data to meet the researcher’s specific information needs with trustworthy quality will be essential tools. HighWire’s brand could include a strong message about being the scientific scholar’s information agent of choice.

- **Don’t compete with journals for content generation.** Rather than competing with journals to generate content, aggregators can support individual journal brands and emphasize other features such as broad coverage of a content domain, delivery systems, agentry, and others. HighWire’s brand should communicate the infrastructure and tools it provides that enhance content for scholars.

- **Brand the experience as part of the product.** The online functionality that surrounds content and gives it meaning must be communicated as part of the HighWire brand. Emphasize HighWire’s searchability as well as the quantity and quality of content, for instance—or its role as a librarian, not just as a card catalog.

- **Look for value-added plays.** Focus on what adds value to the content experience (navigation, archiving, community). HighWire could increase the value of navigation, archiving, and community by providing delivery systems that alleviate the burdens of the search and retrieval tasks on which scholars
spend time, by strengthening archives, and by creating features that facilitate the development of SKEs and peer-to-peer communication.

- **Develop cobranding with publishers to enhance HighWire’s visibility.** Partner with publishers to enhance both brands. Demonstrate to publishers how the HighWire platform can strengthen or protect the publisher’s brand.

- **Identify ways to help societies strengthen their membership and communications infrastructure.** Faced with declining subscriptions and society memberships, publishers are looking for ways to convert readers to members and to come up with alternative models of membership benefits. HighWire can address both issues by providing reporting and statistical tools and software packages that add value to the member or user experience.

- **Position HighWire as the R&D function for publishers.** Publishers will increasingly rely on agents to alert them to the complex changes taking place in electronic publication. Clarify HighWire’s role as a new technology scout for publishers.