Meaningless Web Design

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Sept. 10th, 2007

Thesis

Meaning is a necessity of design and nearly all Web design, at present, is meaningless.

Outline

1. Introduction
    1. Emphatically state that design must convey meaning, and state that the Web has done a terrible job at it.
    2. Shortly describe why design must convey meaning.
    3. Bring up Tim Berners-Lee's *The Semantic Web* and state that it matters.
    4. State that the future of design, both in general and in the Web, must follow the semantics of its given field.
2. Meaning in Design (Answers: What is design?)
    1. What makes art differ from design: the point, its meaning.
        1. Art is often self-expression, and it being understood is not its main goal.
        2. Design conveys meaning, first and foremost, through language, visuals, and sound
    2. A look at good design and its infusion of meaning.
        1. Successful design conveys information intentionally.
        2. Wit can be well-formed and convey meaning—not at the beginning, but as soon as the consumer catches on.
        3. The phrase "Meeting at 7:15am" conveys meaning quickly through language, whereas an image of a Daily Calendar and a red "X" at the 7:15 mark conveys information quickly visually.
    3. A look at bad design and its lack of meaning.
        1. Poor design *can* convey meaning, but it may be a risky business. If the designers are unsure of what they are *trying* to convey, or lack the skill necessary to infuse their design, the design fails. With an unsuccessful Web site, this may range from using improper colors for the feel of the site (greys on a children's clown site) to weighing down the site with far too much text to simply making the site illegible in some Web browsers.
3. The Semantic Web
    1. Specific to Web and other Computer-based platforms: the two-fold problem of designing for humans and designing for computers.

1. Meaning is not necessarily intended only for a human audience. Within the realm of Computing, what may mean something to a human, may be meaningless to a machine. For example, a well-designed invitation to this year's Stumptown Comic Fest with beautiful typography, compelling imagery and inspired copy, saved out as an image and emailed to many humans can be read by the humans, but generally means nothing to the computer. At this point in technology, data in images cannot be understood by computers, and thus, computers can do nothing with that data. They *know* the image exists, they can read its pixels, show it on a screen, and even modify it in image editing application, but they don't get *what* it's about.
2. Computers require *meta*, information about information. Typically *meta data* is stored in plain text, which Computers have long been able to *comprehend.* With this information, Web sites can live up their full potential.

2. Tim Berners-Lee's concept of the connected web, utilizing not only design for humans, but homogeneous design for computers as well.
    1. The Web, contrary to some thought, was not a replacement for print media. The Web was meant to connect people and machines on a level unattainable before; allowing seamless comprehension of data for all users.
    2. The current Web *looks* good, and it is even starting to function well, but it still lacks underlying meaning, necessary for its ultimate purpose: a design mechanism unlike any other.
        1. Web sites used to be designed with tables. By manipulating the size and content in different table cells, and by nesting tables within tables, *designers* could get a page to look how they wanted it to. For sighted individuals using the right Web browser, this tended to work. Information, or meaning, was often shared easily for this one group. However, as the Web began to expand rapidly before the turn of the 21st century, concerns arose. The trouble with using tables for design is that the underlying code of Web sites was becoming startlingly unruly. Screen readers, which utilize text-to-speech voice modulators could not accurately explain what a Web site meant to individuals with vision impairments, and other computers, such as Search Engines, could not ascertain the meaning either, disallowing users to search for and locate informa-

tion, even if that information was painfully obvious to sighted users, with the right browsers, that knew the exact location of the Web site.

4. The responsibility of designers (Answers: What is the role of a designer?)
    1. The designer must always give thought to what their decisions mean to the realm in which they work. What does a color convey in addition to the fact that it's *pretty*? Specific to the Web, when is text a paragraph, and when is it a label or span?
    2. Web designers should feel a commitment to the *machine* that is doing their bidding. This is not to say that they should forget about their target audience (generally humans). But, as conveying meaning to their audience is a given, decisions should be made that convey meaning to the computer, as well as everyone else. When the computer *understands* what it is a design is trying to accomplish, it helps. For example, with good Mark-up, Search Engines, Browsers, Web servers, and even some code-loving humans can all ascertain *what* a design is doing. The look, feel, and functionality can be built on top of a core of meta which serves not only the target audience, but the Web's greater good: creating and understanding a Web of data that is wholly interconnected.
    3. Subtlety in design should convey *more* meaning, not less.
    4. Metadata is the heart and soul of multi-sensorial design, enabling multiple senses to be covered by a single design, allowing for the power of universal design to take root.
    5. Currnent Textual-based Web content is atrocious.
        1. Bring up A List Apart articles talking about reviving it.
        2. Explain its important to through the whole design process.
        3.
5. Conclusion, It's up to you
    1. Charge that the future of design is in the user's capable hands
        1. The Web is still quite young, but it's potential, if taken and run with, can create a level of interconnectedness never before seen. When Web sites and applications properly share their meaning with all the other sites and applications, the experience of the Internet will move from being handy to consumers, to handle *everything* in their digital lives—from when doctor's appointments are to how much your last paycheck was to when you need to purchase milk from the store. (And we should just ignore the *scary* factor.)

2. State that The Semantic Web is just the tip of the iceberg for computer metadata.
    1. The Semantic Web is not the only place where meta data matters, other applications, all built with different programming languages for different systems and different circumstances, can rely on Meta data. The trick with the Web is that once the World Wide Network is open and exchanging data all over, formal desktop applications will then be able to jump on board, making sense of all the World's data.

Meaning is a necessity of design and nearly all Web design, at present, is meaningless. Web designs (and designers, therein) oft favor aesthetics over meaning, negating a key element that makes design *design*. Through atrocious mark-up, inaccessible functionality, and poorly conceived content, the Web and its humble designers show their infancy. Thankfully, all is not lost. Purposed concepts, such as Tim Berners-Lee's Semantic Web, and the continued growth of the Web as a viable business option coupled with better education for and from Web professionals may usher in both meaning and aesthetics to the World Wide Web.

At its core, design must convey meaning effectively. This is not to say all meaning must be obvious, but intentional. When a book, a poster, a Web site, or any other thing that can be designed is designed, thought must be given to how it is useful. In the case of a poster is intended to make observers aware of a concept coming up on Saturday at 9:00pm, it must be designed in a way to actually give that information to the onlooker. Design conveys meaning, first and foremost, through language, visuals, sound, and all other meaning-conveying methods. In some cases, meaning can be implied, or withheld until the designer chooses to let the purpose of the design be known. This can be seen in many television commercials, where the message of the spot is not known until the end, or possibly even after the commercial has ended. The important part is that the way the information is being shared is a known decision the designer, or designers, made as they create the advertisement.

In Andy Rutledge's essay *Contrast and Meaning*, he asserts, “If you’re a designer, you work to communicate and convey meaning. So it’s important that you understand the mechanisms by which things and ideas acquire meaning. (Rutledge)” Specifically to the Web, many designers are self-taught and lack a formal education in design. Rutledge encourages designers to not only convey meaning, but to know *how* that meaning is

conveyed. Resources are available around every corner of the Web and, as Rutledge assures us, “Your work will be better for it. (Rutledge)”

Poor design can convey meaning, but it may be a risky business. If the designers are unsure of what they are trying to convey, or lack the skill necessary to infuse their design, the design fails. With an unsuccessful Web site, this may range from using improper colors for the feel of the site (greys on a children's clown site) to weighing down the site with far too much text to simply making the site illegible in some Web browsers. In disciplines beyond the Web, such as print and film, poor design is often spotted easily and removed quickly. These industries have been around far longer than the Web and have both had time to weed out poor design, requiring a higher level of experience to enter the field. With the Web, and its absolutely open nature, "bad" design is far more reaching, and more difficult to remove. Thankfully, as the Web is open, much of this content is irrelevant to Design. Much as desktop publishing with Microsoft Word, amateur designs do not necessitate a total re-thinking of the industry. However, amateur Web design is not where the true problem lies; it is far deeper.

The Web, contrary to some popular thought, was not a replacement for print media. The Web was meant to connect people and machines on a level unattainable before, allowing seamless comprehension of data for all users. The current Web looks good, and is even starting to function well, but it still lacks underlying meaning, necessary for its ultimate purpose: connecting all the world's information in relationships humans and computers can use for their benefit.

When the World Wide Web exploded in the early-to-mid '90s, the technology was so new, very few people knew what it was meant for, let alone how to effectively use it. As it

gained popularity, designers looked for a way to harness not only the connectedness of the Web, but also its layout. To this end, designers found tables. Tables, much like those worked with in word processors, such as Microsoft Word, allowed designers to fill their rows and columns with *anything*. The table's intent was for tabular data, much like a spreadsheet, but rules were added into the language of HTML (Hypertext Markup Language, the code for creating Web sites) to allow non-tabular data such as images, blank spaces, and any amount of text to be inserted. With this allowance, designers could coerce their Web sites into resembling print layouts, at the cost of using HTML correctly. At the 2003 Seybold Senimars conference, developers Bill Merikallio of Scott Design, Inc. and Adam Pratt of Adobe Systems Incorporated summed up the issue in this way:

> Tables existed in HTML for one reason: To display tabular data. But then border="0" [, a way of hiding a table's default border,] made it possible for designers to have a grid upon which to lay out images and text. Still the most dominant means of designing visually rich Web sites, the use of tables is now actually interfering with building a better, more accessible, flexible, and functional Web. (Merikallio)

The “better, more accessible, flexible, and functional Web” they speak of is exactly what we're after, and the reasons that the current Web is so much less productive are plentiful. With table-based design in the mid-1990s, sighted individuals using the *right* Web browser, tended to get the information from a given Web site. Information, or meaning, was often shared easily for this one group. However, as the Web began to expand rapidly right before the turn of the 21st century, concerns arose. The trouble with using tables for design is that the underlying code of Web sites was becoming startlingly unruly. Screen readers,

which utilize text-to-speech voice modulators, could not accurately explain what a Web site meant to individuals with vision impairments, and other computers, such as Search Engines, could not ascertain the meaning themselves, disallowing users to search for and locate information, even if that information was painfully obvious to sighted users, with the right browser, that knew the exact location of the Web site.

Meaning is not necessarily intended only for a human audience. Within the realm of Computing, what may mean something to a human, may be meaningless to a machine. For example, a well-designed invitation to this year's Stumptown Comic Fest with beautiful typography, compelling imagery and inspired copy, saved out as an image and emailed to many humans can be read by the humans, but generally means nothing to the computer. At this point in technology, data in images cannot be understood by computers, and thus, computers can do nothing with that data. They know the image exists, they can read its pixels, show it on a screen, and even modify it in image editing application, but they don't get what it's about.

Computers require meta data—the information about information. An example of meta data would be the Genre of an mp3 that exists in your iTunes playlist ; the computer cannot understand what genre an mp3 may be, so this data is stored along with the mp3, to allow the computer to better understand what the mp3 is. Typically meta data is stored in plain text, which Computers have long been able to comprehend. With this information on the Web, Web sites can live up to their full potential.

Tim Berners-Lee, who most consider to the be the true inventory of the World Wide Web, along with two colleagues, developed a concept they dubbed the Semantic Web. The

concept being that that through properly creating Web sites, with valid and semantic (meaningful) meta data, the Web can grow to be completely connected, where computers understand what is being displayed in your browser, and can utilize this information to understand where in the World Wide Web this data belongs, and what it means for the user. Berners-Lee is quick to point out that:

> The Semantic Web is not a separate Web but an extension of the current one, in which information is given well-defined meaning, better enabling computers and people to work in cooperation. The first steps in weaving the Semantic Web into the structure of the existing Web are already under way. In the near future, these developments will usher in significant new functionality as machines become much better able to process and "understand" the data that they merely display at present. (Berners-Lee)

Thankfully, the World Wide Web is simple enough that massive changes to its core can be made quickly, and, as Berners-Lee states, the first steps are already well underway, “Two important technologies for developing the Semantic Web are already in place: eXtensible Markup Language (XML) and the Resource Description Framework (RDF).” With these two technologies, designers have the ability to accurately describe much of the existing Web. With XML, much like HTML, designers can describe what something is on their Web site, such as a car, with the code:

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<car>Saturn Ion</car>
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Then, utilizing RDF, the designer can explain what the car is, who it belongs to, or any number of things. Once the car has been described, users can visit the Web site with any number of technologies, from a Web browser to an iPhone to a text-to-speech engine and

each of them will understand what the car is and accurately explain this to the user. For the sighted user on the Web browser, a picture may be displayed, much like is currently accomplished on the Web, and for the blind user, it may read, “The Saturn Ion car belongs to Peter Wooley,” something requiring a ton of work on today's Web. And the best part? All of this will be possible faster and more easily than designing current Web sites. As meaning is infused on the Web with these upcoming technologies, models and standards will arise for designers to hook into, requiring less work for a more robust and meaningful design.

The designer must always give thought to what her decisions mean to the realm in which they work. What does a color convey in addition to the fact that it’s beautiful? When is text a paragraph, and when is it a heading?

Web designers should feel a commitment to the machine that is doing their bidding. This is not to say that they should forget about their target audience (generally humans). But, as conveying meaning to their audience is a given, decisions should be made that convey meaning to the computer, as well as everyone else. When the computer understands what it is a design is trying to accomplish, it can contribute to that end. For example, with the technologies of XML and RDF, described above, Search Engines, Browsers, Web servers, and even some code-loving humans can all ascertain what a design is doing. The look, feel, and functionality can be built on top of a core of meta which serves not only the target audience, but the Web's greater good: creating and understanding a Web of data that is wholly interconnected.

While less specific to the greater good, content on the Internet, especially textual content, can easily be called “Anorexic” and in need of revival (Simmons). With slow Internet connections, inpatient users, and no one defending compelling copy, Web writing

has withered away and has all but died. The fault can be squarely place on we, the designers, and it is the designer's responsibility to breath life back into our faithful companion—text.

To start, all content must be considered at the center of any design. The design must serve the content, and that requires the content exist during the design process. Amber Simmons describes, in her essay *Riving Anorexic Web* Writing, a common problem where clients want the design before content and ask, "'Can't we just add that later, once the design is finished?'" Simmons responds with a striking analogy, "'Sorry; can't do it. The content is the heart of the website. I can't build you a body until you give me a heart. (Simmons)" Giving credence to content is the first step.

To go beyond, the idea that user's have ridiculously short attention spans must be gotten rid of. While users of any technology only spend so much time before moving on, the user is not to blame. With short, stunted, and boring content, no one in their right mind would stick around. It is a combination of clients and Web designers who have lowered the common Web user's attention span. By ignoring the fundamental element of language and putting up "happy text" with no meaning whatsoever, users waste time when they do spend the time to read the text. In her article, *Better Writing Through Design*, Bronwyn Jones explains how to better Web content by approaching it with design in mind:

> Design a voice for your site and you do more than make words and images play nice. You engage your users in a discussion you both want to carry on. So if you find yourself laboring to craft the perfect written sentence, improvise. Speak what you want to say, then write it. Email it to a colleague. Chat it. Text it. (Jones)

By intentionally designing content alongside visuals, the overall design can only benefit. In addition, since text can be understood, in some part, by Search Engines and other automated technologies, the Web benefits that much more from it.

The Web is still quite young, but its potential, if taken and run with, can create a level of interconnectedness never before seen. When Web sites and applications properly share their meaning with all the other sites and applications, the experience of the Internet will move from being handy to consumers, to handle everything in their digital lives—from when doctor's appointments are to how much your last paycheck was to when you need to purchase milk from the store. (And we should just ignore the scary factor.)

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Jones, Bronwyn. "Better Writing Through Design." A List Apart: For People Who Make Websites. No. 424 (31 Jul. 2007). 28 Aug. 2007 <http://alistapart.com/articles/betterwritingthroughdesign>.

Merikallio, Bill, and Pratt, Adam. “Why tables for layout is stupid: problems defined, solutions offered.” Scott Design Inc.. 2003. 26 Aug. 2007 <http://www.hotdesign.com/seybold/>

Rutledge, Andy. “Contrast and Meaning.” A List Apart: For People Who Make Websites. No. 236 (24 Apr. 2007). 28 Aug. 2007 <http://alistapart.com/articles/contrastandmeaning/>.

Simmons, Amber. "Reviving Anorexic Web Writing." A List Apart: For People Who Make Websites. No. 242 (31 Jul. 2007). 28 Aug. 2007 <http://alistapart.com/articles/revivinganorexicwebwriting>.

Annotated Bibliography

Berners-Lee, T., Hendler, J., and Lassila, O. "The Semantic Web." Scientific American (May 2001).

As the creator of the World Wide Web, as we know it, Tim Berners-Lee has a fair amount of clout to throw around. In the case of The Semantic Web, Berners-Lee, along with James Hendler and Ora Lassila, explores what the Web should be—a truly connected Web of data, where information is connected and accessible to the rest of the Web. While the current incantation of the Web is something like that, it misses the mark by several points, including true Semantics in the design of Web sites and applications. With Berners-Lee's World Wide Web Consortium (the W3C) active in shaping the future of Web capabilities, it is with what he has written about the Semantics of the Web that Web designers must use to make their sites and applications not only visually meaningful, but computationally meaningful.

Bernstein, Mark. "10 Tips on Writing the Living Web." A List Apart: For People Who Make Websites. No. 149 (16 Aug. 2002). 28 Aug. 2007 <http://alistapart.com/articles/writeliving>.

Mark Bernstein a developer *and* designer. He's created a "personal content system" called Tinderbox that allow you manage and understand notes. With that, he's picked up a lot of ideas on usability, writing with purpose, and experimental user interface design.

Cederholm, Dan. SimpleBits. <http://simplebits.com/>.

Dan Cedarholm is a Standards-based Web designer and author that has worked with such notable clients as Google, Fast Company, and the AIGA. He speaks at several events and created a social networking called Cork'd for wine aficionados. His design style is simplistic as is his approach to writing.

Jones, Bronwyn. "Better Writing Through Design." A List Apart: For People Who Make Websites. No. 424 (31 Jul. 2007). 28 Aug. 2007 <http://alistapart.com/articles/betterwritingthroughdesign>.

Bronwyn Jones is a writer whose work is most notable work has been on the latest Apple.com redesign. Compelling content mixed with technical specifications have always been the flavor of Apple, and her work is shown beautifully. She also writes a blog that is compelling enough to come back to time and time again. Crafting a story and holding an audience is her forte.

Joy, Bill. "Why the future doesn't need us." Wired 8.04 (2000). 19 Aug. 2007 <http://www.wired.com/wired/archive/8.04/joy_pr.html>.

Joy Bill is a programmer form the early days of modern computing,. He single-handedly wrote the VI text editor, which is still in common use today, and co-founded Sun Microsystems along with several colleagues. His understanding of computing and developer usability is among the finest available and he has a deep understanding of today's computing, including the implications of the Web and its impact on the future of computing.

Malik, O., Zelenka, A., Sohn, J., Gunderloy M., and Aaron, S. Web Worker Daily. <http://www.webworkerdaily.com/>

Web Worker Daily (a play on communist tendency) provides excellent coverage in the realm of Web professionalism and what it means to be a Web designer. Much time is taken into examining how and why designers go about designing for the Web —both what is successful and what isn't.

Merikallio, Bill, and Pratt, Adam. "Why tables for layout is stupid: problems defined, solutions offered." Scott Design Inc.. 2003. 26 Aug. 2007 <http://www.hotdesign.com/seybold/>

Together, Bill Marikallio and Adam Pratt approach confrontation in a fun and enjoyable way. As the Web evolves to utilize Web standards and leave Table-based layouts behind, something needed to come about to instruct designers, developers, Bosses and Boards to know *why*. Pratt and Marikallio do that with their commanding understanding of what makes Tables so appealing and why Web standards are *better*. With the presentation, they present imagery and text that is just the right amount of insulting—not too much, but just enough to push for some change.

Rutledge, Andy. "Contrast and Meaning." A List Apart: For People Who Make Websites. No. 236 (24 Apr. 2007). 28 Aug. 2007 <http://alistapart.com/articles/contrastandmeaning/>.

Andy Rutledge is me—if I was a few years older and had the design experience he has. As a Web designer, he focuses on the simplistic approach and beautiful

minimalism. His writings, which are vast, are most often written toward designers and do an excellent job at warding off bad habits early and entertaining both the eye and mind.

Simmons, Amber. "Reviving Anorexic Web Writing." A List Apart: For People Who Make Websites. No. 242 (31 Jul. 2007). 28 Aug. 2007 <http://alistapart.com/articles/revivinganorexicwebwriting>.

Amber Simmons is a Web designer and freelance writer who appears to be able to delve more deeply into the minutia of good writing than I could ever hope to, all while approaching it with the meticulous attention of a wise and seasoned designer.

Shadbolt, N., Berners-Lee, T. and Hall, W. (2006) The Semantic Web Revisited. IEEE Intelligent Systems 21(3) pp. 96-101.

Wendy Hall is a professor of Computer Science at Southampton University. Along with Tim Berners-Lee and Nigel Shadbolt, she's revisited the concepts of the Semantic Web five years later and is quite active in the development of several Semantic Web-based applications.