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# Web Analytics 2.0

[ THE ART OF ONLINE ACCOUNTABILITY  
& SCIENCE OF CUSTOMER CENTRICITY ]



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# The Bold New World of Web Analytics 2.0

# 1

*For years it has been clear that web analytics holds the promise to truly revolutionize how business is done on the Web. And why not? You can track every click of every person on your site. How can that not be actionable? Unfortunately, the revolution has not quite panned out. The root cause is that analysts and marketers have taken a very limited view of data on the Web and have restricted it just to clickstream data. In this chapter, I make the case for why you need to drastically rethink what it means to use data on the Web. The Web Analytics 2.0 strategy adapts to the evolution of the Web and dramatically expands the types of data available to help you achieve your strategic business objectives.*

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State of the Analytics Union

State of the Industry

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Change: Yes We Can!

## State of the Analytics Union

Let's start with a tale about the paradox of data. Professionally speaking, I grew up in the world of data warehousing and business intelligence (BI). I worked with massive amounts of enterprise data; multiterabytes; and sophisticated extract, transform, and load (ETL) middle layers—all fronted by complex business intelligence tools from companies such as MicroStrategy, Business Objects, and SAS. Although the whole operation was quite sophisticated and cool, the data set wasn't really that complex. Sure, we stored customer names and addresses, products purchased, and calls made, along with company metadata and prices. But not much data was involved. As a result, we made lots of great decisions for the company as we valiantly went to battle for insights.

But the lack of breadth and depth of data meant that often, and I say this only partly in jest, we could blame incompetence on the lack of *sufficient types* of data. So, we always had a get-out-of-jail-free card, something like, "Gosh darn it. If I knew our customers' underwear sizes, I could correlate that to their magazine subscriptions, and then we would know how to better sell them lightweight laptops."

I know, it sounds preposterous. But it really isn't.

With that context, you'll appreciate why I was ecstatic about the world of web analytics. Data, glorious data all around! Depth and breadth and length. Consider this: Yahoo! Web Analytics is a 100 percent free tool. It has approximately 110 standard reports, each with anywhere from 3 to 6 metrics each. That number of 110 excludes the ability to create custom reports covering even more metrics than God really intended humanity to have.

But after a few weeks in this world, I was shocked that even with all this data I was no closer to identifying actionable insights about how to improve our website or connect with our customers.

That's the paradox of data: a lack of it means you cannot make complete decisions, but even with a lot of data, you still get an infinitesimally small number of insights.

For the Web, the paradox of data is a lesson in humility: yes, there is a lot of data, but there are fundamental barriers to making intelligent decisions. The realization felt like such a letdown, especially for someone who had spent the prior seven years on the quest for more data.

But that's what this book's about: shedding old mental models and thinking differently about making decisions on the Web, realizing data is not the problem and that people might be, and focusing less on accuracy and more on precision. We will internalize the idea that the Web is an exquisitely unique animal, like nothing else out there at the moment, and it requires its own exquisitely unique approach to decision making. That's Web Analytics 2.0.

Before we go any further, let's first reflect on where we are as an industry today.

## State of the Industry

As I reflect upon where we are today, I see a lot that has *not* changed from the very early days of web analytics—all of about 15 years ago. The landscape is dominated by tools that primarily use data collected by web logs or JavaScript tags. Most companies use tools from Google Analytics, Omniture Site Catalyst, Webtrends, Clicktracks, or Xiti to understand what's happening on their websites.

However, one of the biggest changes in recent years was the introduction of a free robust web analytics tool, Google Analytics. Web analytics had been mostly the purview of the rich (translation: big companies that could afford to pay). Sure, a few free web log-based solutions existed, but they were hard to implement and needed a good deal of IT caring and feeding, presenting a high barrier to entry for most businesses.

Google Analytics' biggest impact was to create a massive data democracy. Anyone could quickly add a few lines of JavaScript code to the footer file on their website and possess an easy-to-use reporting tool. The number of people focusing on web analytics in the world went from a few thousand to hundreds of thousands very quickly, and it's still growing.

This process was only accelerated by Yahoo!'s acquisition of IndexTools in mid-2008. Yahoo! took a commercial enterprise web analytics tool, cleverly rebranded it as Yahoo! Web Analytics, and released it into the wild for free (at this time only to Yahoo! customers).

Other free tools also arrived, including small innovators such as Crazy Egg, free open source tools such as Piwik and Open Web Analytics, or niche tools such as MochiBot to track your Flash files. Some very affordable tools also entered the market, such as the very pretty and focused Mint, which costs just \$30 and uses your web logs to report data.

A search on Google today for *free web analytics tools* results in 49 million results, a testament to the popularity of all these types of tools. All these free tools have put the squeeze on the commercial web analytics vendors, pushing them to become better and more differentiated. Some have struggled to keep up, a few have gone under, but those that remain today have become more sophisticated or offer a multitude of associative solutions.

Omniture is a good example of a competitive vendor. SiteCatalyst, its flagship web analytics tool, is now just one of its core offerings. Omniture now also provides Test&Target, which is a multivariate testing and behavior targeting solution, and the company entered the search bid management and optimization business with SearchCenter. It also offers website surveys, and it can now power ecommerce services through its acquisition of Mercado. Pretty soon Omniture will be able to wake you up with a gentle tap and help you into your work clothes! As a result of this competitive strategy, Omniture has done very well for itself and its shareholders thus far.

Beyond web analytics, I am personally gratified to see so many other tools that exploit the Trinity strategy of Experience, Behavior, and Outcomes, which I presented in my first book, *Web Analytics: An Hour a Day* (Sybex, 2007).

We can now move beyond the limits of measuring Outcomes from web analytics tools, or *conversions*, to measuring more robust Outcomes, say our social media efforts. Obvious examples of this are using FeedBurner to measure Outcomes from blogs and using the diverse ecosystem of tools for Twitter to measure the success of your happy tweeting existence. We are inching—OK, scraping—closer toward the Holy Grail of integrated online and offline Outcomes measurement.

The Behavior element of the strategy has not been neglected either. Inexpensive online tools allow you to do card sorts (an expensive option offline) to get rapid customer input into redesigns on your websites' information architecture (IA). A huge number of free survey tools are now available; allow me to selfishly highlight 4Q, which is a free on-exit survey from iPerceptions that was based on one of my blog posts ("The Three Greatest Survey Questions Ever"; <http://sn.im/ak3gsqe>).

Then there is the adorable world of competitive intelligence. It did not have an official place in the Trinity strategy (though it was covered in *Web Analytics: An Hour A Day*) because of the limited (and expensive) options in the market at that time. We have had a massive explosion in this area in the past two years with tools that can transform your business, such as Compete, Google's Ad Planner and Insights for Search, Quantcast...and I am just scratching the surface.

Reflecting on the early days of web analytics, I am very excited about the progress the industry has made since the publication of my last book a couple years ago.

I am confident massive glory awaits the marketer, analyst, site owner, or CEO who can harness the power of these free or commercial tools to understand customer experience and competitive opportunities.

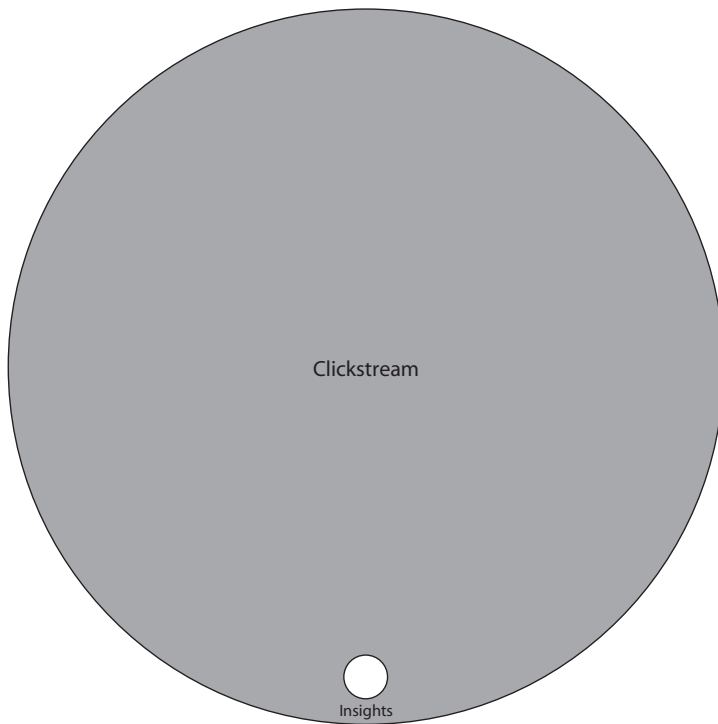
## Rethinking Web Analytics: Meet Web Analytics 2.0

Remember the paradox of data? Just a few pages ago? So much data, so few insights. That paradox led me to create the Trinity strategy for web analytics when I was working at Intuit, and it has now led me to introduce Web Analytics 2.0.

Most businesses that focus on web analytics (and sadly there are still not enough of them) think of analytics simply as the art of collecting and analyzing clickstream data, data from Yahoo! Web Analytics, Omniture, or Mint.

This is a good start. But very quickly a realization dawns, as illustrated in Figure 1.1.

The big circle is the amount of data you have. Lots! After a few months, though, you realize the zit at the bottom of the circle is the amount of *actionable* insight you get from that data. Why?



**Figure 1.1** The old paradigm of Web Analytics 1.0

You have so little actionable insight because clickstream data is great at the *what*, but not at the *why*. That is one of the limits of clickstream data. We know every click that everyone ever makes and more. We have the *what*: What pages did people view on our website? What products did people purchase? What was the average time spent? What sources did they come from? What keywords or campaigns produced clicks? What this, and what that, and what not?

All this *what* data is missing the *why*. It's important to know what happened, but it is even more critical to know why people do the things they do on your site. This was the prime motivation behind my redefinition of web analytics. For thorough web analytics, we need to include not just the *why* but also key questions that can help us make intelligent decisions about our web presence.

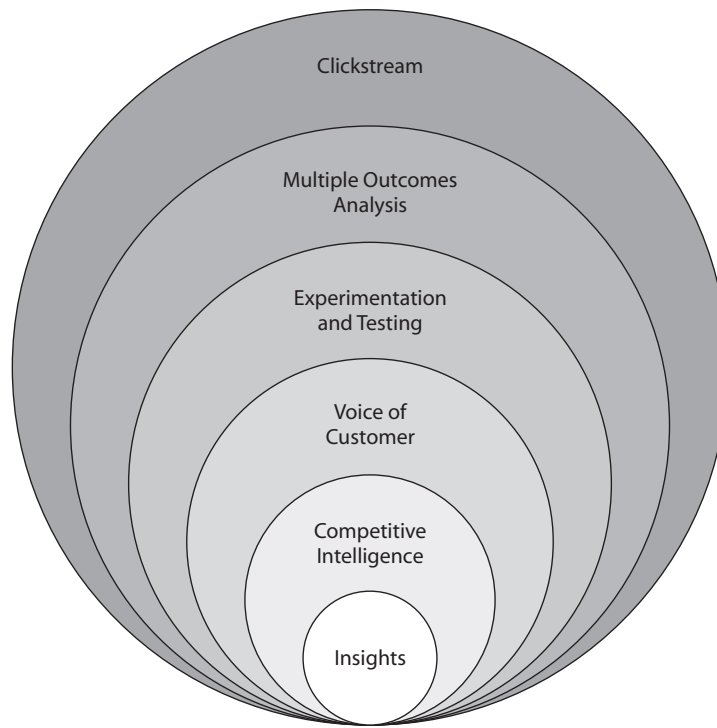
Web Analytics 2.0 is:

the analysis of qualitative and quantitative data from your website and the competition,

to drive a continual improvement of the online experience that your customers, and potential customers have,

which translates into your desired outcomes (online and offline).

This definition is specific, it's modern, and it results in rethinking how to identify actionable insights. Figure 1.2 illustrates Web Analytics 2.0.



**Figure 1.2** The updated paradigm of Web Analytics 2.0

With this definition, I wanted to expand the questions that could be answered by redefining what it meant to do web analytics, what sources an analyst or online marketer would access, and what tools would be put to use.

Clickstream answers the *what*. Multiple Outcomes Analysis answers the *how much*; Experimentation and Testing help explain the *why* (albeit analytically, Voice of Customer also contributes to the *why*), this time with direct customer input; and lastly Competitive Intelligence answers the *what else*, which is perhaps the most underappreciated data on the Web.

Figure 1.3 outlines how each of these four important questions map into each source of data/element of the Web Analytics 2.0 strategy.

Ain't that sweet? Now let's look at each element briefly; I will cover them in more detail in the upcoming chapters of the book.



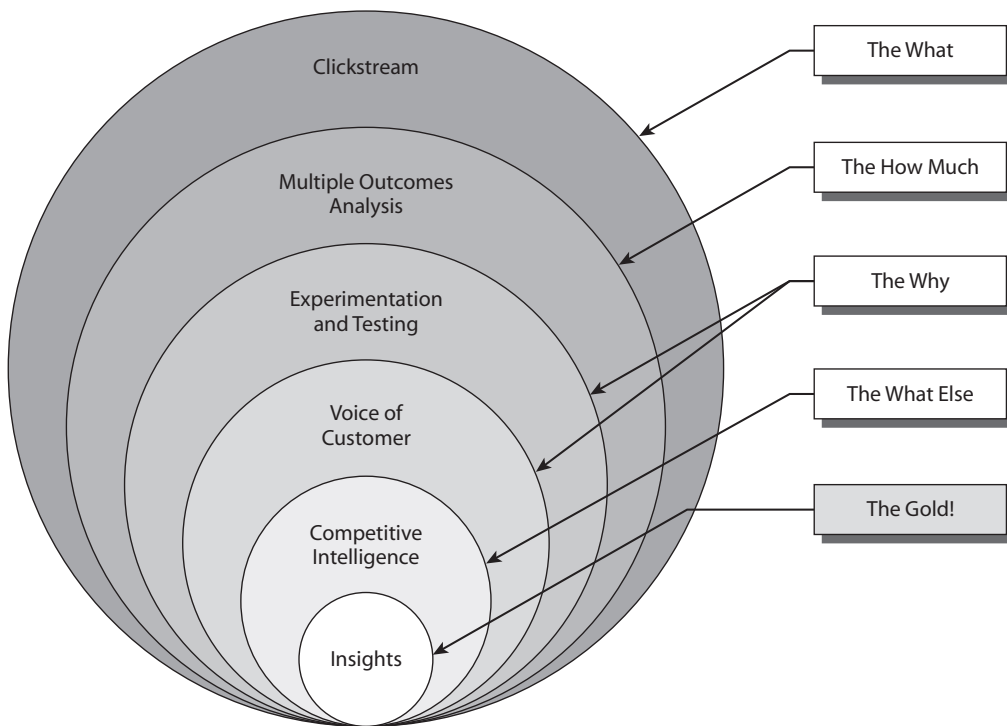


Figure 1.3 Key questions associated with Web Analytics 2.0

### The What: Clickstream

The *what* of Clickstream is straightforward. If you have a web analytics solution hosted in-house, then the *what* is collecting, storing, processing, and analyzing your website's click-level data. If, like most people, you have a web analytics solution hosted externally or hosted by a vendor, then the *what* is simply collecting and analyzing the click-level data.

Click-level data is data you get from Webtrends, Google Analytics, and other Clickstream tools. You will have a lot of data—in the order of gigabytes in a few months and more if you store history.

Clickstream is also foundational data; it helps you measure pages and campaigns and helps you analyze all kinds of site behavior: Visits, Visitors, Time on Site, Page Views, Bounce Rate, Sources, and more.

### The How Much: Multiple Outcomes Analysis

If you have heard me speak at a conference, you have heard this story. At my first web analytics job, the company was using Webtrends (a wonderful robust tool). I was new. I

asked a lot of questions about the use of data and the 200 Webtrends reports that were being produced. At the end of two weeks, I turned off Webtrends.

For three weeks, not a single human being called about their missing 200 reports. 200! In a multibillion-dollar company!

After some reflection, I realized the root cause of this “unmissing” data was that none of these 200 reports focused on measuring Outcomes. A million visits to the site. So what? What were the Outcomes for the company? For the marketer?

Focusing deeply and specifically on measuring Outcomes means connecting customer behavior to the bottom line of the company. The most impactful thing you will do with web analytics is to tie Outcomes to profits and to the bonuses of your report recipients.

A website attempts to deliver just three types of Outcomes:

- Increase revenue.
- Reduce cost.
- Improve customer satisfaction/loyalty.

That’s it. Three simple things.

Everything you do on your website needs to deliver against these three Outcomes, regardless of whether your website is for ecommerce, tech support, social media, or just general propaganda. You’ll use your Clickstream tools, you’ll use your enterprise resource planning (ERP) systems, you’ll use surveys, you’ll use Technorati, and more.

If you want the love of your senior management, you need to focus on Multiple Outcomes Analysis.

### **The Why: Experimentation and Testing**

I believe that most websites suck because HiPPOs create them. HiPPO is an acronym for the “Highest Paid Person’s Opinion.”

You know how it goes. Someone presents a great idea, but the HiPPO decides what actually happens. If she or he wants the dancing monkey on the home page, well, then the dancing monkey goes on the home page.

The reality is that usually the HiPPO is 10 steps removed from the site, has never visited a Wal-Mart, and is too close to the business. The HiPPO is a poor stand-in for what customers want.

By leveraging the power of Experimentation and Testing tools such as the free Google Website Optimizer or commercial tools such as Omniture’s Test&Target, Autonomy’s Optimost, or SiteSpect, you can change your strategy. Rather than launching a site with one idea (the HiPPO’s idea, of course), you can run experiments live on your site with various ideas and let your customers tell you what works best. So sweet. I call it the “revenge of the customers!”

There is a powerful hidden reason to be best friends forever (BFF) with your testing tool: you fail faster. It is very expensive to fail in all other channels, such as TV, radio, magazines, or big stores. But failing online is cheap and fast.

Consider launching a new product on Walmart.com vs. a Wal-Mart store. For example, why not launch a new product on Walmart.com first rather than at a Wal-Mart store and see how it does? Why not experiment with a few different promotional offers via email or search ads before you finalize your strategy and launch it using print, catalog, or TV ads? In each scenario you can take a bigger risk, launch faster, fail or succeed significantly faster online!

That is a massive strategic advantage. It is also the reason I am fond of saying “Experiment or die.”

### **The Why: Voice of Customer**

For me, a mechanical engineer with an MBA, the *why*—or the power and value of qualitative data—was a tough lesson. Consider this simple question: can you look at the Top Pages Viewed report from your web analytics tool and for your site—say, [www.zappos.com](http://www.zappos.com)—and understand the content visitors were most interested in?

How would you know which of the top pages visitors *actually wanted to see*? Maybe they could not find the pages because of a missing internal site search engine or the broken navigation on your site? You have no idea. Your web analytics tool can report only what it can record. What your customers wanted but did not see was not recorded.

That’s why Voice of Customer (VOC) is so important. Through surveys, lab usability testing, remote usability testing, card sorts, and more, you can get direct feedback from customers on your website or from your target customer base.

I have had so many “aha” moments reading open-text VOC from website surveys. “Oh, this is why they abandoned” or “Darn, that’s why no one is buying this product” or, usually, “Why was something so obvious hidden from us?”

If you marry the *what* with the *why*, you’ll have a lifetime of happiness. I guarantee it.

### **The What Else: Competitive Intelligence**

Of all the surprises on my web analytics journey, Competitive Intelligence was the biggest one. In the traditional world of enterprise resource planning, customer relationship management (CRM), and deep back-end enterprise systems, all you had was your data. You had very little information about your competitors. On the Web, though, you can gather tons of information about your direct or indirect competitors! And usually that info is free!

At [www.compete.com](http://www.compete.com), you can type in the URLs of your competitors and within seconds compare your performance with theirs. You can see how long people spend on your site vs. theirs. You can see repeat visits, page views per visitor, growth, and so on.

So, why should you really care about this?

Consider this simple analogy. If you are using your web analytics tool to measure your website, then it's like sitting in a car and watching the dashboard to see that you are going exactly 70 mph. But your windshield and windows are all blacked out. You can't see outside.

Using Competitive Intelligence data is like scraping off that black paint and being able to see outside. Now you can see you are in a race (unknown to you), and you can see that while you are driving at 70 mph, everyone else is racing past at 160 mph. Unless you make drastic changes, you'll be irrelevant.

That's the power of Competitive Intelligence data. Knowing how you are performing is good. Knowing how you are performing against your competition is priceless—it helps you improve, it helps you identify new opportunities, and it helps you stay relevant.

In this book, I will cover how you can use free and commercial tools to get Competitive Intelligence related to audience (demographic and psychographic) attributes, keywords, traffic sources, website customer behavior, and more.

That's the magnificent world of Web Analytics 2.0. This world is broader than you imagined. It is sexier than you imagined. It is all about focusing on the customer.

## Change: Yes We Can!

You will need to make two critical changes to succeed in the world of Web Analytics 2.0. The first is a strategic shift—a change to the mental model you apply. The second is a tactical shift—one that will challenge your current thinking about tools and how to use them.

### The Strategic Imperative

The big challenge for crossing any modern chasm is rarely technology or tools. The challenge is entrenched mind-sets. For all of us, the biggest challenge to changing our web analytics strategy will be to evolve our mind-set to think 2.0.

Figure 1.4 illustrates the mind-set evolution that you absolutely need to move you or your organization to Web Analytics 2.0.

In the world of Web Analytics 2.0, clicks don't rule; rather, the combination of the “head and the heart” rules. When you are ruled by the head and the heart, you care equally about what happens on your website as you do about what happens on your competitor's. All the while you are automating as much decision making as you can to eliminate reporting and even some analysis. Your world is one of continuous actions (that is, surveys, testing, behavior targeting, keyword optimization) and continuous improvements, where customers, not HiPPOs, rule.

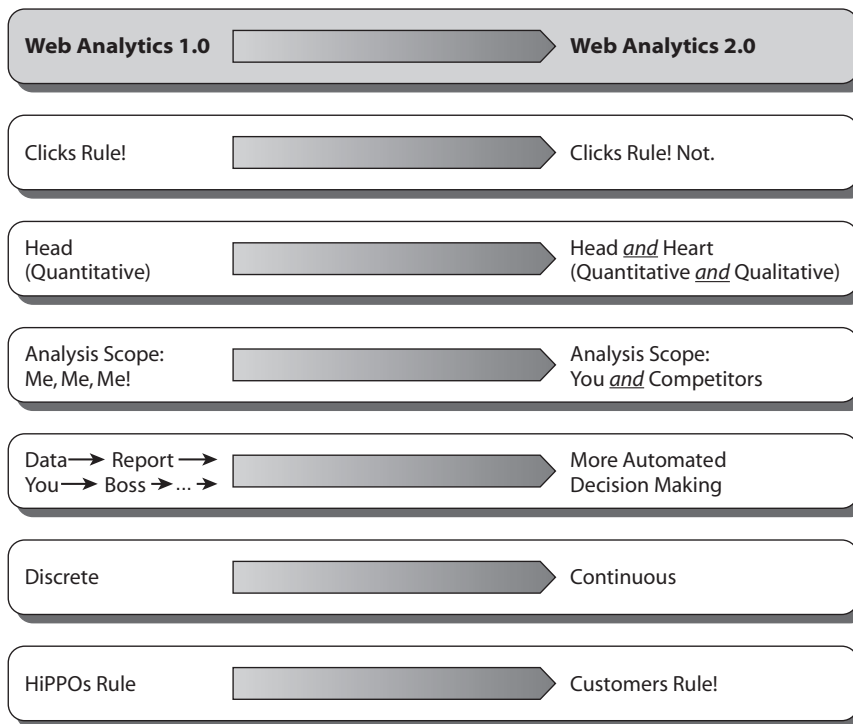


Figure 1.4 Mind-set evolution mandated by Web Analytics 2.0

### The Tactical Shift

With the second change, you embrace a fantastic, now mandatory, concept of Multiplicity.

In the traditional business intelligence world, we were taught to seek the “single source of the truth.” Bring all data into one place; build massive systems, usually over multiple years; and celebrate. Sadly, this strategy is toxic on the Web.

At the eMetrics summit in 2003, Guy Creese presented the concept of Multiplicity. The concept was brutal in its simplicity: multiple constituencies, tools, and types of data sources make it much harder to do effective analytics.

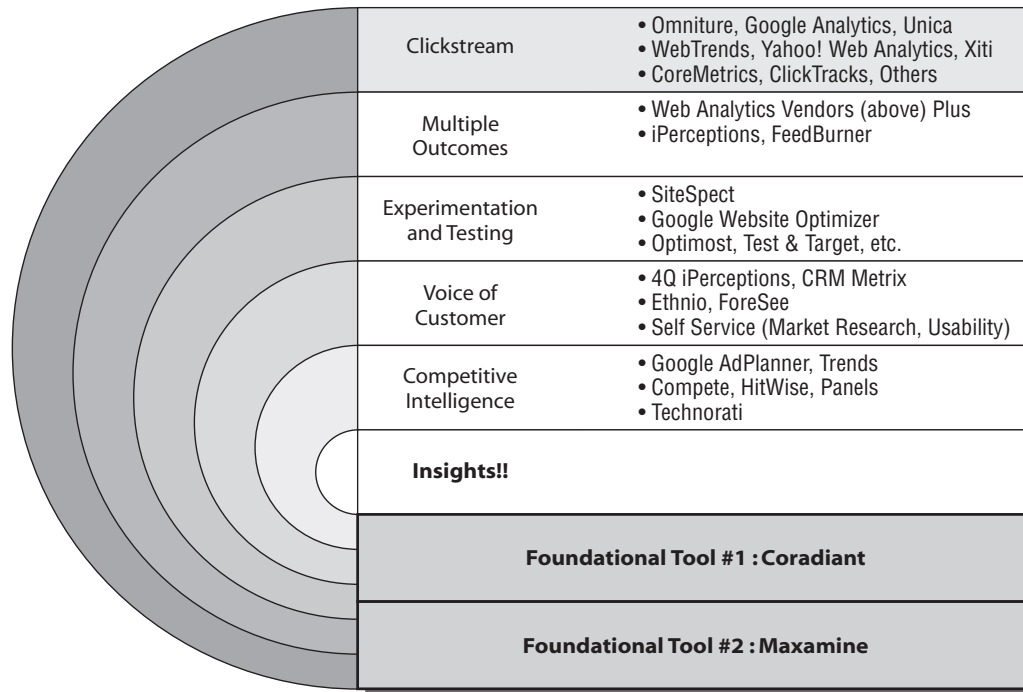
I have come to believe that Multiplicity is the core reason for the awesomeness of the Web. Consumption of data is vastly more democratic for your web business; everyone needs access to data now. You have a wealth of effective tools to do jobs that you never thought possible. You have not just a lot more data, as in clicks, but a lot more data types (qualitative and quantitative) that make life worth living!

Multiplicity is the only way for you to be successful at Web Analytics 2.0.

As Figure 1.2 illustrated, Web Analytics 2.0 gives you a holistic picture of your website performance. Under that strategy, every solid web decision-making program (call it *web analytics* or *web insights* or *digital customer insights*) in a company

will need to solve for the Five Pillars: Clickstream, Multiple Outcomes Analysis, Experimentation and Testing, Voice of Customer, and Competitive Intelligence.

Figure 1.5 shows the approach your tools strategy must take to meet the need of Multiplicity.



**Figure 1.5** The Web Analytics 2.0 Multiplicity strategy and tools

As clearly illustrated in Figure 1.5, you'll need a specialized tool to solve for each element of Web Analytics 2.0.

**Clickstream** You'll use Omniture tools, Google Analytics, Unica's NetInsight, Webtrends, Yahoo! Web Analytics, Lyris HQ (formerly ClickTracks), Coremetrics, and so on.

**Multiple Outcomes** You'll use your web analytics tools mentioned for Clickstream but also the likes of iPerceptions (to measure Task Completion Rate!), FeedBurner (to track Subscribers), and various other tools to measure social media success (your traditional web analytics tools are not very good at this last one).

**Experimentation and Testing** You'll use Google Website Optimizer, Omniture's Test&Target, SiteSpect, Optimost, and so on.

**Voice of Customer** You'll use iPerceptions, CRM Metrix, Ethnio, ForeSee, and self-service options such as Lab Usability.

**Competitive Intelligence** You'll use Google Ad Planner, Insights for Search, Compete, Hitwise, Technorati, and so on.

For optimal success, you'll need only one tool from each of the previous categories to cover the base for each of the Five Pillars. That's Multiplicity.

Data from each tool is not meant to duplicate the other areas or relate to the other areas. Each tool provides insights that, taken together, give you the data you need to succeed.

### **Don't feel overwhelmed by the Multiplicity strategy.**

Notice that in each row in Figure 1.5 you have an option for a free tool, so don't worry about cost right away. Mercifully you also don't have to do everything right away. Your company's size, needs, and sophistication will help you determine your personal strategy.

The following is my list of the must-have elements that different businesses should consider to join the Web Analytics 2.0 world; they are ranked by priority and show the minimal areas that should be addressed:

- **Small businesses:** 1. Clickstream, 2. Outcomes, 3. Voice of Customer.
- **Medium-sized businesses:** 1. Outcomes, 2. Clickstream, 3. Voice of Customer, 4. Testing.
- **Large, huge businesses:** 1. Voice of Customer, 2. Outcomes, 3. Clickstream, 4. Testing, 5. Competitive Intelligence, 6. Deep back-end analysis (Coradient), 7. Site structure and gaps (Maxamine).

For each category, just choose a free or commercial tool listed in Figure 1.5.

### **Bonus Analytics**

You probably noticed two tools at the very bottom of Figure 1.5. They are bonus items.

When we talk about web analytics, we typically don't think of Maxamine and Coradient first. For large companies, Fortune 1,000 especially, both of these tools are almost mandatory. Neither measures what a traditional web analytics tool does, so there is no overlap, but each brings its unique strengths to the business of web data.

You should use Maxamine because it gives you critical data relating to search engine optimization gaps, missing JavaScript tags, duplicative content, broken website functionality (yes, broken links and "bad" forms), security and privacy compliance, black holes not crawled by your internal search engine, and more. Maxamine essentially provides everything you need to know, measure, and report about the existence of your website itself. Another competitive option is ObservePoint.

You should use Coradient because it gives you critical data, down to an individual user level, about the "matrix" that powers your website—that is, the bits and bytes, the pages and packets. (Disclosure: I am currently on the Advisory Board of Coradient.) Coradient includes every single thing you can imagine going out from your

web servers (anywhere in the world) to your customers. You can find problems on your website quickly and hold yourself and your IT teams accountable.

With Coradiant, you can also understand why, for example, your conversion rates are down. Is it because suddenly your cart and checkout pages were slow and not making it to your customers? Or is it because of 404 errors on your important pages? These are key questions that traditional tools have a hard time answering, if at all.

That's the Multiplicity strategy: Clickstream data, a better view of the landscape through Multiple Outcomes, and quicker paths to failure and success through Experimentation and Testing. These are the basic steps toward tackling a competitive industry. And don't forget to adopt the mental model of "heart and mind," where you are as vigilant of your competitor's web activity as you are of your own (outlined in Figure 1.4). Multiplicity provides you with the keys to go out and change the world. Rock on!