

Advertising Age[®]

Your Data With Destiny

Bob Garfield Points the Way for Marketers in a Post-Advertising Age

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"I have the advantage of knowing your habits, my dear Watson," said he. "When your round is a short one you walk, and when it is a long one you use a hansom. As I perceive that your boots, although used, are by no means dirty, I cannot doubt that you are at present busy enough to justify the hansom."

"Excellent!" I cried.

"Elementary," said he. "It is one of those instances where the reasoner can produce an effect which seems remarkable to his neighbour, because the latter has missed the one little point which is the basis of the deduction."

-- Arthur Conan Doyle, 1893



Bob Garfield

Hey, Mark Zuckerberg, listen up: This is about how to monetize Facebook. The billion-dollar answer awaits you just below. Just hang on for about 5,000 words, and no skipping ahead, please. That'll just ruin the suspense.

For the moment, for all the other faces out there, a little review:

For the past three-plus years, I've been railing on and on about a post-advertising age, one in which mass marketing will not depend solely, or even much, on mass media. Pretend, for argument's sake, that I haven't entirely lost my mind. Without assaulting you with the latest network-TV-audience figures or rubbing your nose in the horrifying implosion of the newspaper industry, I ask you to give me the benefit of the doubt. Assume that, in the near future, connections between marketers and consumers will not be principally forged via display advertising but will be otherwise cultivated online. Assume that technology will offer more and more highly refined means for the marketer to learn about the consumer and the consumer to enjoy a real benefit in exchange -- search and widgets being exhibits A and B.

Thank you for so stipulating. But if the lingua franca of our online future is indeed personal information, where will that come from?

Data for value

Obviously, a staggering amount will come from consumers themselves. The quid pro quo between the marketer and the audience, for several centuries, has been free or subsidized media in exchange for inundation with ad messages. Madge didn't say "You're soaking in it" for nothing. In the Brave New World, and already in the last remnants of the cowardly old one, the value proposition will be similar but the barter items very different. A marketer needn't pay for episodes of "Gunsmoke" or "Married With Children" or "24"; it need only provide value -- whether in entertainment, information, discount or utility. In exchange, the consumer surrenders data.

This is already taking place on an enormous scale. Every online registration you fill out, every cookie you accept on your hard drive, every supermarket purchase you make with your discount card is a something-for-something transaction. This new data economy has obvious privacy implications, but privacy is not an absolute. It is increasingly a commodity -- one celebrities trade for fame, travelers trade for security and most all of us trade for a few pennies here and there, scarcely blinking an eye. We get 50¢ off a can of New England clam chowder, and Safeway finds out exactly how much Preparation H we buy and exactly how often. And this doesn't even begin to consider what kinds of intimate details we post on Facebook. It's a bit eerie when you think about it, but most of us don't think about it. We accept the trade-off, take the money -- or utility -- and run.

Volunteered data, priceless as it is, nonetheless takes a marketer only so far. To create a genuine bond, an intimate relationship, requires a thorough understanding of consumer behavior, consumer interests, consumer sentiments, consumer moods, consumer movements and so on -- not the sort of information that you can put in a sign-up form, even if anybody were patient or generous or honest or self-aware enough to part with it. This requires what Sherlock Holmes called deduction. Also a bit of

extrapolation, inference, intuition, divination, prediction and imputation. Or, put another way, guesswork.

It's the stuff of legend, the famous discovery by Wal-Mart that placing beer and diapers near one another in their stores increased sales of both items. Why? Because men on their way home from work, instructed by their wives to pick up a bundle of Pampers or whatever, also grabbed a six-pack. It is the quintessentially unexpected correlation, almost universally invoked to exemplify the rewards of data mining. Isn't it, after all, a superficially counterintuitive connection that makes absolutely perfect sense?

Of course it is. And here's something else it is: not true. The diapers 'n' beer anecdote is marketing apocrypha, a kind of M.B.A.'s urban legend, the gerbil-up-the-wazoo of data mining. Usually it is attributed to Wal-Mart, sometimes to 7-Eleven, but the provenance of the story has long since been tracked down. Back in 2002, Professor Daniel Power of the University of Northern Iowa traced the correlation to a 1992 data analysis by Teradata Corp. for Osco Drug -- an analysis that observed the purchase affinity, between 5 and 7 p.m., of the two apparently unrelated inventory items. Though Osco did not act on the observation in its store layout or promotional efforts, the striking simplicity of the example just begged for embellishment. "Beer and diapers" has since not only become the gerbil rumor of marketing, it has been enshrined as data mining's Isaac Newton and the falling apple or Archimedes in the bath. It simply shouts "Eureka."

That's because, in addition to being false, it is also true.

Mining expedition

Never mind that Osco at the time saw no advantage in rearranging its stores (Huggies in the refrigerator cases?) to accommodate a two-hour-per-day phenomenon. The fact remains that thick veins of unseen correlations lie just below the surface, begging to be chiseled out and exploited.

"Even though those are seemingly uncorrelated purchases, you can develop pictures of people," says Matt Ackley, VP-net marketing at eBay, where every ad buy and increasingly every individual user experience is informed by the user's previous behavior on the site.

Sometimes that manifests itself in an obvious way. "Let's say you'd been on eBay three days ago and searched for a particular term," Ackley says. "We store that in the user's cookie, so when we see that user out on the web again and we're serving an ad -- on Yahoo Mail, for instance -- we'll see that cookie. What we then do is pass that information to our banner ad. Now our banner ad is not a banner ad at all; it's a miniature application. And what it does is then goes to eBay and finds items that are like that keyword and pools them into the banner ad."

But beyond ad optimization, there is so much more going on. For instance, eBay algorithms intuit gender from the user's first name and age from the shopping categories chosen.

"We know young people buy iPods and older people buy Longaberger baskets. This is the type of information you can tease out. Well, if you know somebody's age and somebody's gender and what kind of categories they're active in, you can more or less predict what they might be looking for next."

Wanamaker's conundrum

In that way, he says, not only do the online ads change, the eBay experience itself will actually change based on who is logged in. "We know that for certain keywords in certain categories, people tend to be more value-conscious. EBay search has a sort order. There are different things you can sort on [price, auction deadline, auction vs. fixed price, new vs. used]. Well, if someone is value-conscious, we will drop them on a page that has lowest cost first. It's very rudimentary, but you can imagine as we go forward."

At a bare minimum, he says, the old saw about "half my advertising is wasted, but I don't know which half" -- attributed variously to John Wanamaker, Lord Leverhulme and F.W. Woolworth -- will be rendered irrelevant.

"I think we're getting close to solving Wanamaker's conundrum," Ackley says. "We can put that to rest."

We've stipulated already that display advertising as a marketing tool -- inefficient and universally resented as it is -- is headed toward near obsolescence. The key words in that sentence are "headed" and "near." This is a long process, and it would surely behoove marketers to maximize advertising's utility in the interim. They certainly have glommed on to search in a big way. At \$8.7 billion in 2007, according to the Interactive Advertising Bureau, search represented 41% of all online ad sales. And no wonder: It is geared to intent. If someone is searching for information on the Ford Mustang, duh, they're likely to be in the market for a Mustang. So Ford will serve them an ad on Google, Yahoo, Edmunds.com or whatever. This is what is often called a no-brainer.

But it's really a half-brainer. Because strangely enough, purchasing behavior is not necessarily guided by or even always correlated with shopping behavior. Rather often we buy on impulse, which is not nearly so impetuous or capricious as it sounds. It often boils down to being reminded, more or less serendipitously, that a product will fulfill a desire or need. Nobody ever Googled "sodium percarbonate stain removers," but Billy Mays hollered enough about it at 4 a.m. to sell bazillions worth of OxiClean and lots of other direct-response crap. The problem is, encountering Billy at just



Reed Hastings: Netflix CEO describes his company's philosophy: 'Harnessing the power of the community to generate better results for the individual.'

Photo Credit: Martin E Klimek

the right moment is a matter of chance. And the chances aren't especially good. Even the most finely

tuned traditional media buy is based on statistical projections of crude audience data and cruder-still assumptions about the proclivities of that presumed audience. In short, it's guesswork too, but -- as Wanamaker or whoever well understood -- it's a wild, wild, crazy-ass guess. No matter how loudly Billy screams, only the narrowest slice of the dazed actual viewership will undergo the epiphany of how handy and affordable a tub of OxiClean might be. *But here's an incredible offer you won't believe:*

"Now we have the ability to automate serendipity," says Dave Morgan, founder of Tacoda, the behavioral-marketing firm sold to AOL in 2007 for a reported \$275 million. "Consumers may know things they think they want, but they don't know for sure what they might want. They're not spending all their time hunting for those things."

Journey to flat-panel purchase

Take, for instance, flat-panel TVs. In 2006 Tacoda did a project for Panasonic in which it scrutinized the online behavior of millions of internet users -- not a sample of 1,200 subjects to project a result against the whole population within a statistical margin of error; this was actual millions. Then it broke down that population's surfing behavior according to 400-some criteria: media choices, last site visited, search terms, etc. It then ranked all of those behaviors according to correlation with flat-screen-TV purchase.

In that list, "shopping online for flat-panel TVs" ranked 22nd -- 18 places below "consumed 'Miami travel' content." Miami travel?

"Not Chicago travel," Morgan says. "Not Europe travel. Not business travel. Don't ask me why. But here's the incredible thing: No. 1 -- and significantly above the others -- was people looking at military content. It made no sense. Then I talked to a friend of mine who had been an officer in the first Iraq war. I said, 'What's going on?' He said, 'That's easy. The kids in the military are huge video-gamers. They get big, fat signing bonuses, and their housing is free. They don't need cars. So they buy big TVs.'"

Morgan followed up because he was curious and felt the need for this counterintuitive association to have an explanation. But he needn't have. Why ask why? The whole point is that data mining takes us to a realm beyond obviousness and common sense. The data speak for themselves.

This message was hammered home in research the same year for Budget Rent A Car's weekend-rental promotion. "Shopping for a rental car" was the No. 4 correlation. No. 1 was "recently read an online obituary." Try to connect the dots if you wish; meantime, go read some online obits and see what ads show up on the page.

"We no longer have to rely on old cultural prophecies as to who is the right consumer for the right message," Morgan says. "It no longer has to be microsample-based [à la Nielsen or Simmons]. We now have [total-population] data, and that changes everything. With [those] data, you can know essentially everything. You can find out all the things that are nonintuitive or counterintuitive that are excellent predictors. ... There's a lot of power in that."

Yes, and also benefits all around.

Flicked off

Here we are in the Silicon Valley -- Los Gatos, to be exact -- and an intersection of Winchester Circle and California 85 that is nobody's idea of Future World. No shiny glass and steel edifice, no robots, no ports for hovercraft. It's nondescript, latte-colored Spanish stucco soaring a majestic three stories high, across the street from the freeway on-ramp. The chain-link fence on the perimeter of the office park is decidedly low-tech, but it needs to be there; otherwise, pedestrians would be put at risk every Friday at 2:30 p.m., when, on the parallel Southern Pacific Railroad tracks, a coal train goes chugging by.

What valley is this again? Ohio?

Enter the corporate headquarters here, and there's still no way to get a firm fix. It's the usual warren of cubicles spiraling around floor after open floor. As you wend around the maze of cubes, the only sounds you hear are the muted clicks of industrious fingers on unseen keyboards. The eerie quiet is easily explained: Most of the company's actual operations don't take place here; they're spread among 55 warehouses (not virtual warehouses, just warehouses) around the country. So, yeah, everything about the place screams "typical back office." You could be in the sales hub of a cooling-tower manufacturer in Akron or a claims-processing center in Hartford or some far-flung auditing gulag of the IRS. If it weren't for the red popcorn wagon in the ground-floor reception area and the little conference rooms dotting the place with names such as "Batman," "Jaws" and "Apocalypse Now," the environment would tell you nothing at all.

Unless you closed your eyes and felt the rhythm.

I mean, the algorithm. This is Netflix, which built a substantial business by delivering movie DVDs overnight for a flat fee and built a gargantuan business by recommending to customers -- via the miracle of collaborative-filtering software -- movies they'd like to see. Be not misled by the stucco and ugly, teal industrial carpeting. This is a technology company to its core.

"Harnessing the power of the community to generate better results for the individual."

ABCs

That's Reed Hastings, founder and CEO of Netflix, who is describing not only his company's methods but also the essence of collaborative filtering, which is one of the "ABCs of predictive marketing." B is behavioral: tracking your path online. C is contextual: paying attention to keywords, and A is associative: divining your tastes and interests based on patterns established by people like you.

When Hastings and partner Marc Randolph started the company in 1998, it was an a la carte DVD-by-mail service at \$4 per rental, with free shipping and no late fees. This was reasonably successful, since many Americans were paying, like, \$34,000 per month to Blockbuster for a VHS of "Pretty Woman" lodged under the minivan seat. The business picked up substantially a year and a half later, when Netflix introduced the subscription model: (most popularly) three titles at a time, for as long as you wish, for \$16.99 per month. But it truly leapt forward when, in 2000, it incorporated its

proprietary Cinematch recommendation engine, which scans users' rental histories, their ratings of those films and their ratings on an ongoing Netflix survey to suggest movies they'd likely enjoy. Anybody who has ever browsed the video store for an hour and walked out empty-handed -- or, dispiritedly, with a DVD of "Mr. and Mrs. Smith" -- will immediately understand the benefit. My personal Netflix recommendations fall into two categories: movies I've seen and loved and movies that I haven't seen but sure will make it my business to, because the algorithm has clearly anticipated my tastes.

If Netflix can figure out I admire "Manhattan," "Strictly Ballroom," "Happiness," "The Girl in the Café" and "Downfall," how badly can "Rabbit Proof Fence" and "Fitzcarraldo" disappoint me? The consequence is a great boon to me: easier selection process, fewer duds. It's an obvious boon to Netflix, which had 239,000 subscribers when Cinematch was launched vs. 8.4 million today. And it is a veritable godsend to the movie industry -- not to the Hollywood-studio part of the industry; "Spider-Man 17" or whatever will do just fine on its own. Netflix's impact is on cinema's everything else, the so-called Long Tail of moviemaking.

The Long Tail is the coinage of Wired Editor Chris Anderson, whose seminal 2004 magazine article on the subject yielded an ongoing blog about it, which in turn yielded a best-selling 2006 book about it -- the "it" being how digital technology has ended the near-monopoly on distribution enjoyed since the Industrial Revolution by mainstream blockbusters at the expense of niche goods and services. The fat head of the Long Tail is "Spider-Man." Way, way, wayyyy down in the skinny middle is "Fitzcarraldo." But now I can rent them both in one click.

This is a testament, of course, to the internet's vaunted democratization of everything. At the point of online rental, "Spider-Man's" \$100 million production budget confers no particular advantage. Maybe at (the aptly named) Blockbuster, which fills its shelves with 4,000 copies each of eight new releases and no copies at all of "Rabbit Proof Fence," the fat head still rules. But Anderson's thesis is that in an online universe, the fat head inevitably will get thinner, and the Long Tail will plump right up. And right in the middle of the transformation is collaborative filtering, because in terms of connecting consumers with what they actually want, it is simply a better mousetrap.

'Nobody knows anything'

Till now, when our choices were (as a practical matter) limited to what The Powers That Be said our choices would be, filtering wasn't collaborative; it was unilateral -- or, as Anderson describes it, "prefiltering." That meant experts -- record labels, movie studios, publishing houses and so on -- bringing experience, instinct and time-tested judgment to bear on the process of selecting content for the public. Whoever signed the deals for "Titanic," the Beatles, "Cats" and "The Da Vinci Code" were obviously shrewd judges of quality, or at least mass tastes. But here's the thing: Experience, expertise and judgment aren't the same thing as clairvoyance, even when the geniuses also command de facto monopolies on production and distribution. More or less the same class of visionaries also invested in Broadway's legendarily unwatchable "Moose Murders," O.J. Simpson's aborted literary meditation "If I Did It," backup dancer Kevin Federline (the ex-Mr. Britney Spears) as a solo recording artist and, in the same year as "Titanic," Kevin Costner's calamitous vanity pic "The Postman." Hence, the famous Hollywood axiom is "Nobody knows anything," which aims to explain, for example, how Warner Bros. could have spent \$120 million on production and \$60 million on marketing for "Speed Racer."

Furthermore, the financial pressure to be right forced the Judgment Gods to err on the side of (presumed) mass appeal, which is also called the lowest common denominator. That phenomenon does explain why "Independence Day," by many orders of magnitude the worst movie ever made, was green-lighted by 20th Century Fox. It also explains why it was a big hit worldwide. Many people on earth are dumber than average, but they still get to buy movie tickets -- a structural reality that has historically worked against those of us with a taste for Kurosawa and documentaries and, for that matter, for those with a taste for anime or Christian romance. In other words, economic necessity created a marketplace that not only limited distribution of niche products but suppressed their production altogether.

Compare prefiltering, then, to post-filtering -- collaborative filtering -- which, with the ultimate benefit of hindsight (it operates only in hindsight), knows *everything*. This is especially useful in a digital, Long Tail universe of seemingly infinite choices. Like my friends, former Soviet refugees, who walked into their first American supermarket and burst into tears, we are easily overwhelmed by the astonishing array of items on the internet's virtual shelves. This phenomenon is often described as "information overload," but Clay Shirky, author of "Here Comes Everybody" and professor of new media at New York University, says that's not quite right. We suffer, he says, "not from information overload but filtering failure. The minute people are exposed to reality, they freak out. What collaborative filtering does is replace categorizations with preference."

In the example of Netflix, like at bricks-and-mortar video stores, the Cinematch recommendations are divided by genre: drama, comedy, foreign and so on. But within those genres, they aren't sorted by alphabetical order, like the titles at Blockbuster; they're broken down by your stated preferences, your viewing history and the preferences of people with viewing histories much like yours. And by no means is that technique limited to movie rentals. It is the mathematical basis for Amazon's book recommendations, for Match.com's e-yenta service and every "people who bought lox also bought bagels" message you've ever seen on an e-commerce site.

"If you give us all of your content," says Paul Martino, founder of the data-mining provider Aggregate Knowledge, "I'll put it in front of the right person at the right time." It's an interesting boast, because he's not speaking merely of Amazon recommending books based on the book-purchasing behavior of you and people with tastes like yours. He's talking about recommending barbecue grills and newspaper stories and hair-care products based on your book-purchasing behavior and that of people like you. "It's not just books for books," he says. "It's *anything* matching with anything else."

Mark Zuckerberg, hold that thought.

As Billy Mays might say ...

But wait! There's more.

In some applications, collaborative filtering is useful but insufficient. Think about video sites. Considering that videos usually lack metadata -- underlying searchable text -- beyond a couple of keyword "tags" volunteered by the uploader, it would seem that "people who watched that also watched this" would be the core of any recommendation system. But that ain't necessarily so. Since

most sites prominently display thumbnails of their most popular videos, and since that practice results in a further snowballing of popularity, a pure collaborative filtering approach likely would wind up recommending the same handful of videos again and again. To most publishers, who want users to stay on the site longer and longer so they can be served more and more ads, there is little benefit to a dog chasing its own tail. So how to intuit what, beyond the big hits, a given user would be most interested in seeing?



Facebook CEO Mark Zuckerberg

Visit Israel, on a journey of discovery.

Tucked away in one of the Tel Aviv R&D Center's many unsightly office-building monstrosities is Taboola, a 2006 start-up that -- like many of its neighbors -- seeks to exploit data-mining techniques of the country's legendary security apparatus for commercial applications. But instead of trying to divine the intentions of Iran or Hamas, it is devoted to doing the same for someone who has clicked on, for instance, 5min.com to watch how-to videos for do-it-yourselfers. Founder Adam Singolda, who commanded a data-mining team for the Israeli Defense Forces and National Security Agency, says it's all about "pattern recognition ... the hidden factors that lead you to perform your actions, that you didn't know yourself."

Some of this does involve collaborative filtering; people who watch circular-saw demos may well be recommended videos favored by other people who watch circular-saw demos. Also considered are textual cues, à la search, matching the most-likely sparse metadata in one video with the most-likely sparse metadata from another. That process also employs so-called data enrichment, in which certain keywords trigger associated keywords from the Taboola lexicon. For instance, though an iPod video may be tagged merely "iPod," or not tagged at all, clicking on it may well get you a recommendation for a video -- or may get you served an ad -- about MP3 players or about Apple. But the most critical function, Singolda says, is to observe a user's behavior on the site -- "if you close a video quickly, if you skipped past the first three recommended, if you hovered over a thumbnail before choosing it, if you hovered over one without choosing it, if you commented, if you commented twice." All of those behavioral clues are crunched to constantly refine the recommendations.

At 5min, one of Taboola's guinea pigs, the results have been striking: 30% more video views, 41% more views of entire videos and a 50% increase in the average user session on the site. Moreover, the same predictors of relevance and intent are applied to ads served to the site. For competitive reasons and, it says, scientific caution, Taboola refuses to disclose click-through rates -- apart from asserting, based on very preliminary results, that they have increased across the board.

All of this is to say the utility of any of these technologies is impressive. The potential in combining them is simply staggering.

Prioritizing for you

Let's consider another Israeli start-up, this one called My6Sense. Situated in the Herzliya Pituach tech corridor, My6Sense has created a message-ranking engine that facilitates "user discovery" of content based on associative, behavioral and contextual connections but also a fourth dimension: location. The goal is to consolidate all the various information streams coming in to your mobile phone (RSS feeds, news headlines, e-mails, text messages, Facebook activities, Twitter tweets and judiciously served ads) and list them for you in order of priority -- not *your* sense of priority but the algorithm's sense of your priority.

"We don't believe that people actually know their own preferences," says co-founder and CEO Avinoam Rubinstain.

He cites a classic psychological experiment, the "hat test." Asked whether they prefer a green hat or a white hat, most people will *assert* they prefer the green hat. But given an opportunity to actually choose a favorite, the majority will *select* a white one. In the same way, users asked to prioritize their various mobile-phone feeds may not know their own minds, or at least their own impulses -- especially since the relative value of some information changes with location. An English businessman might, for instance, be keen on being alerted "if there's a traffic jam in London. But he doesn't care if he's in Israel," Rubinstain said.

I asked him if his algorithm synthesizes urgency. He shook his head, and reminded me that various mobile-alert systems failed because urgency is a subjective matter and pretty much the ultimate moving target. Then he smiled: "We synthesize relevance."

Impressive, no? That's why these technologies are transforming marketing. Or, anyway, some of them are. Search is a monster getting more monstrous with every fiscal quarter. Behavioral targeting has become a basic tool of the trade. Collaborative filtering, though, for some reason lags. Yes, Amazon and Netflix are high-profile applications, and online-retail recommendations are more or less ubiquitous, but collaborative filtering as a technology is, for the moment, running in place -- especially in the social-networking arena, where it would seem to hold limitless possibilities. This even though social networking is itself a direct outgrowth of collaborative filtering.

Firefly

In 1992, scientists at MIT wished to a) advance the art of programming and b) help the chief researcher with her playlist. "I was interested in getting recommendations for music I might like, and my tastes are very eclectic," says professor Pattie Maes of MIT's Media Lab. "It was really simple stuff, to make my life a little easier.

"We've built many variants of the algorithm," she says. "In the commercial system we built, called Firefly, we actually made it possible to send e-mails to people who had similar tastes. And there were even marriages that came out of it. We weren't trying to make a matchmaking service. We just thought it would be a fun component of the website."

Yeah, and Jed Clampett thought he was hunting possum when he struck oil. As NYU's Shirky explains it, the researchers had the concept backward: "The classic [collaborative-filtering] paradigm," he says, "is to use *people* you know to find *things* you like. But it turns out that *people* are far more interested in using *things* you know to find people you like." Facebookers, for instance, make and cultivate connections based on common affiliations -- chiefly professional and educational -- and on mutual affinities for books, music, TV, social causes and so on. That brings us, finally, back to the 24-year-old wunderkind Mark Zuckerberg. Dude, blessed as you are with the megaphenomenon called Facebook, why are you just another popular utility in search of a business model? Could it be that you're fixated on the notion that your revenue must come from typical advertising? Haven't we agreed that advertising is problematic, because users are suspicious of it, resent it and employ every means to avoid it? Yes, we have. Yet the same people 1) love goods and services; 2) crave information; and 3) are so fabulously self-involved that they display every last detail about themselves, their tastes, their preferences, their favorites, their hobbies, their embarrassing drunken photos, their damn near everything *right on your site*.

So why in the world do you not have a big honking box on the bottom of every Facebook page titled "What You'll Like" or "YouStuff" or "The Mirror" with a category-by-category selection of books, music, films, videos, news articles, websites, tennis gear, shoes, power tools, specialty foods, flea and tick protection, you name it?

Not advertising

Yeah, to online denizens, increasingly all advertising is spam -- but *this wouldn't be advertising*. It would be a set of objective recommendations informed by all of the associative, behavioral and contextual technologies mentioned above. In other words: content. The Mirror would be an application, a house-brand überwidget. And it would be valued by users in approximately the way the Playboy Advisor was valued by generations of striving young men -- but exponentially more, because these recommendations wouldn't be crude guesses based on some broad demographic data, advertiser pay-for-play strong-arming and the editors' tastes. They would be extraordinarily educated guesses based on the most granular personal data ever gathered and analyzed. And they would quickly prove to be indispensable, because from the very first trial, users would think, "Yo! I do like that. I *do* want that. Cool!"

It will be "Rabbit Proof Fence," in other words, times every product category in the world.

Naturally, you wouldn't charge users. Nor would you charge any manufacturer or retailer or other provider for the listing. But you certainly would charge them for the hyperlink.

The links, Mark. The *links*.

Good luck, young fellow. But guess what: No need to thank me. It's no big revelation. Really, it's as simple as ABC -- or, put another way: elementary, my dear Zuckerberg, elementary.

