

Chapter 9: Maxwell's Demon and the Dwindling Supply of Consumer Attention

The physics concept of Maxwell's Demon provides an apt metaphor for the increasing demands on consumer attention levied by social media participation; consumers must continually sort relevant and irrelevant content and connections in order to make their participation worthwhile. As more marketers participate at a greater volume in social media, they face the threat of consumer exhaustion; how much of their dwindling supply of attention will consumers devote to brands? The Volunteer's Dilemma, in which players must set aside their short-term interests for the long-term good, illuminates this question. Marketers' increasing demand for quantifiable results can create a perverse incentive to maximize short-term gains, at the risk of alienating consumers in a cooperative arena. The use of "counterreinforcers" that hold marketers accountable to acceptable rules of engagement may prevent mutual defection.

Why is theoretical physics such a rich source of metaphors for describing the postmodern condition? In seminal postmodern works like Thomas Pynchon's *The Crying of Lot 49* or Terry Gilliam's *Brazil*, the protagonists deal with the problem of information overload: when confronted with more information than we can ever hope to sort through, how do we tell the difference between the useful and the useless, and how do we use information to tell the difference between our allies and those who plot against us? This dilemma is illuminated (though not resolved) by physics concepts like the relative truth of a thing based on the observer's position (Einstein's Theory of Relativity), the tendency to alter events just by observing them (Heisenberg's Uncertainty Principle), and the idea that multiple truth-claims can exist side-by-side in a multiple, infinite universe (Schrodinger's Cat). In other words, we're told that we live in a universe of infinite possibilities and no single, governing hierarchy, so we shouldn't be at all surprised when we can't find a decent steak house using Google Maps.

In my own hopelessly postmodern fashion, I also find it helpful to draw on theoretical physics to explain the problem of information overload in social media marketing. Therefore I offer a metaphor that (for me) reflects the razor's edge we currently walk between a utopian and dystopian future for social media: Maxwell's Demon.

Maxwell's Demon is a theoretical concept invented by the Scottish physicist James Maxwell in 1871. Maxwell was offering a challenge to Newton's Second Law of Thermodynamics, which describes entropy, i.e. the tendency of things to fall apart. He envisioned a box of hot and cold molecules bouncing around; under the Second Law, these highs and lows will eventually even out to an unremarkably lukewarm state, much like network television.

But Maxwell envisioned a creature, a "demon" in the box, whose sole job is to sort the hot molecules from the cold. If the energy the demon uses to sort molecules is less than the amount of energy retained by keeping hot molecules together, the demon can defy entropy and even create perpetual motion (Baeyer 1998). The big question that physicists continue to debate is this: how much energy is used in the act of sorting?

9.1 The Problem of Overtaxed Attention

For consumers and marketers alike, success or failure in their online experience entirely hinges on their ability to sort and isolate relevant information: finding your target audience among billions, joining with like-minded communities, locating relevant search results, finding your ex-classmates, and on and on. In this sense, the dominant company in the arena – Google – is nothing more or less than a giant Maxwell's Demon. It doesn't create content; it sorts it, and it enlists millions of lesser demons – you and me – to help it do that.

The utopian/dystopian dilemma for social media is this: if we can create ways to sort information that keep pace with the growth of information, we create a utopia of relevance and connectedness. If we fail to do so, then social media will eat itself: the demands of keeping up with the social stream will outweigh its relevance to users, and they will retreat to fragmented communities of deeper relevance but less connectedness.

Each moment that a user spends on the Web is spent as a Maxwell's Demon. When searching for content, the user must sort the relevant from the irrelevant and click on the best results. On Facebook, they must decide whose posts to read and whose to ignore. On YouTube, they review the popularity of video based on views and scores, then decide what's worth watching and what's not. If the demands of all of this sorting activity become

overwhelming, the user's limited and overtaxed attention begins to flag. They "friend" someone on Facebook that they'd rather not connect with. They ignore ads that are relevant to them while being inadvertently drawn in by ones that aren't, only to regret it afterwards. They become annoyed by all their friends' requests for them to view videos or enter contests, and they begin to ignore them. They later decide that their social media participation is more trouble than it's worth, and they begin to drop out.

What we have here are two related problems: one practical, the other somewhat existential. The practical problem is whether advertisers can sustain the attention of consumers long enough or well enough to conduct the kinds of coordination games described in previous chapters. Doing so will also require advertisers to maintain a cooperative stance, i.e., to play by the still-evolving rules of these new media rather than to defect for short-term gain. The existential problem implicates the first: can consumers sustain sufficient attention and discernment for meaningful social media participation *at all*, let alone in interactions with marketers? I'll begin with the practical matter of how marketers sustain attention.

9.2 The Volunteer's Dilemma and the Tragedy of the Commons

I have outlined in previous chapters how social media marketing represents a shift from a cost-based signaling system to an attention-based signaling system, i.e., the brands that are most engaged with their consumers will, proportionally, gain more attention in social media than those that are not. This system is a boon to companies like Blendtec and Mountain Hardwear, who can now better interact with customers and prospects outside of the costly signaling system of paid advertising. But as the payoff tables make clear, *all* rational marketers want to get better results for less money, and this attention-based social media marketplace looks alluringly like an opportunity to get something for nothing. It is therefore replete with perverse incentives for bad behavior, as examples like Target's Rounders program clearly demonstrate.

This problem of how to get participants to behave themselves in a free and open system with no central governing authority is one that I have taken up in previous chapters in describing the *free rider* scenario, e.g., the person cutting in line in the bakery. You'll recall that the free rider problem crops up in the iterated prisoner's dilemma. To review that scenario: in a one-off prisoner's dilemma, the rational course of action is to defect, since the other player's course of action is unknown. But in the iterated prisoner's dilemma,

if the other player's repeated actions demonstrate a willingness to cooperate, then cooperation is the rational course of action, as the payoffs will be higher.

We can apply this same logic to collective scenarios, in which an individual can gain more in the short term by defecting from the group's collective interest, even though doing so ruins the group's long-term interests and hurts the individual as well. In game theory this problem has been called the Volunteer's Dilemma, which, like its close cousin the Iterated Prisoner's Dilemma, is mainly concerned with how to enforce cooperation wherever it serves participants' mutual long-term interests.

In the Volunteer's Dilemma, the participant must decide whether to make a short-term sacrifice in order to preserve a collective good that they themselves participate in. That sacrifice will cost the individual more in the short-term, and therein lies the dilemma: it is tempting to act as a free rider for short-term gain, especially since making a sacrifice is no guarantee that others will make the same sacrifice. Minding your place in line in the bakery is an apt example, but game theory offers more dramatic ones. The most famous is the "Tragedy of the Commons," first articulated in an article by Garret Hardin in *Science* in 1968.

Hardin invoked a 19th century philosophical tract contemplating the problem of overgrazing on lands held in common. When a herdsman decides whether to add another animal to his grazing flock, he reasons that the positive consequences – increased revenue – will accrue to him alone, while the negative consequences – overgrazing – will be shared in common with the other herdsman. He therefore rationally decides to add more animals, and could continue to do so into infinity, even though the resource itself is tragically finite. His fellow herdsman could be expected to follow the same logic and the same tragic course, until the common grazing ground is destroyed. As Hardin eloquently describes this outcome, "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all" (Hardin 1968).

In contemplating marketers' use of free social network resources like Facebook, YouTube, and Twitter, one might object that these resources are altogether different from shared grazing lands, in that they are as infinite as their owners' willingness to continue adding server capacity. In theory, bad behavior by some marketers will not remove or even reduce the ability of other marketers to get their message out in these forums, since access is, to date, unlimited. But as you have probably surmised, server capacity is not the finite resource at risk of overgrazing; the finite resource is the *consumer's attention*.

9.3 Social Media's Capacity Problem

Before considering how marketers will deal with the problem of the diminishing supply of consumer attention, I feel compelled to offer evidence of the problem itself. Let us count the ways: In June 2009, Nielsen reported that Twitter usage had grown 2,000% in one year's time. This anniversary coincided with what some predicted would be a meltdown of all Twitter-related applications, as the number of posts surpassed 2.1 billion, the maximum number of entries that most databases are equipped to handle (based on a 32-bit signed integer). Twitter has since been recoded to handle the additional capacity, and as of this writing, nearly 6 billion "tweets" have been posted.

While the growth in the number of new blogs being created has slowed (presumably because everyone has one now), Technorati reports that there are approximately 900,000 new blog posts added to the blogosphere *every 24 hours*.

Of course, users may reduce their Web usage in order to spend more time on their mobile devices, but they won't escape content saturation there; the number of mobile applications is expected to reach 100,000 by the end of 2010, and 10 million by 2020. The number of text messages sent in the U.S. alone in 2008 is estimated at 95 billion.

With so much social content available, perhaps users can rely on expert guidance – a social media guru – to help sort it all out. But one must first sort out the gurus: there are 5,855 self-proclaimed social media experts on Twitter alone (Ochman 2009). One of the consequences of instantly available information is that one does not need to pay the costly signal of earned experience in social media in order to attain guru status; redistributing information is sometimes enough.

I share these numbers to give some sense of the scale of competition for consumers' attention; that competition, in turn, creates the overgrazing problem. It would be possible, in fact, to plot out this overgrazing mathematically, given the right data set. For instance, Nielsen's most recent report of Web usage shows that the average Facebook user spends a bit over 5 hours per month on the network. Suppose that average user is connected to 5 brands through Facebook, and they spend 1 out of 5 of their Facebook hours reading updates from those brands.

The problem for the brand is that their allotted attention from that user is likely to decrease as the user's Facebook usage increases. As the user increases the number of brands that they connect with, the average attention given to each brand declines. The user may increase their total time on Facebook, but they cannot increase it indefinitely, and time spent on

brands will inevitably lose out to time spent on friends and family as the user increases their number of personal connections. The brand continues to push updates, offering links to discounts and other costly enticements, but the user's attention still declines, as it must, which in turn makes the brand more aggressive. We are in the familiar death spiral of mutual defection; death means the user de-friends the brand, and the connection is lost.

9.4 The Risks of Quantification

This problem is greatly exacerbated by the current land rush to *quantify* the success of social media, which inevitably harms the cause of promoting quality. Consider another hypothetical scenario: a marketing manager convinces her VP that the brand could deepen their customer engagement using Twitter. The VP agrees, but demands that the manager establish a goal of 1,000 Twitter followers in the first quarter. Since the process of acquiring Twitter followers is largely organic, i.e., consumers encounter the brand's Twitter feed and decide it is worth following, then the only way for the marketer to achieve this rapid-results goal is to offer an incentive for sign-ups through an online promotion.

The promotion succeeds in garnering the requisite Twitter follower count, but because these users signed up mainly to get the incentive, their engagement level is low. The marketer, in turn, is under pressure to monetize the channel, so she tries to counter low responsiveness with more frequent offers, which causes annoyed users to "un-follow" the brand. The VP concludes that social media has failed the brand, when, in fact, the brand has failed social media.

In this scenario, the Twitter strategy failed because it contained *perverse incentives*, i.e., it induced consumers to sign up for reasons that were at variance with the brand's actual goal for being on Twitter. Consumers signed up for a prize or a discount irrespective of their long-term interest in connecting with the brand, and so the brand traded the *quality* of its followers for a *quantity* of followers that would look attractive on paper. The ultimate cost to the brand was far greater than if it had never been on Twitter at all.

Lest it appear that I am throwing the quantitative baby out with the perverse incentive bathwater, let me acknowledge that it is entirely reasonable for marketers to find ways to quantify the effects of social media, and it is self-evidently reasonable to set a goal of increasing one's quantity of social media followers. In an economic downturn, the ability to quantify results is often what gets a marketing initiative funded, and funding social media initiatives can bring marketers closer to the 4-4 equilibrium.

The danger lies in treating quantification in absolute rather than relative terms, e.g., an arbitrary goal of x followers rather than gradually building a following over time. The absolutist approach is what leads to the problem of overgrazing; one can privilege quantity or quality, but never both at the same time. Hardin makes this point emphatically, citing game theory founder John von Neumann: “*It is not mathematically possible to maximize for two (or more) variables at the same time*” (emphasis mine).

I will take the risk of belaboring this point because many marketers in the current climate seem determined to do what is mathematically impossible. The rush toward monetization of social media marketing creates perverse incentives for overgrazing; a case in point is the recent emergence of paid tweeting, i.e., the practice of paying an influential social networker to tout a product on Twitter in the context of their everyday tweeting. A *New York Times* article on the practice describes one influential Twitter user with 50,000 followers being paid to endorse personalized M&Ms candy (Stone 2009). This is a textbook example of trying to maximize both variables: the influencer is prized by the marketer for his/her large following, which is the result of their authenticity and credibility. But paid tweeting diminishes their authenticity and credibility, and once the payola is revealed or even suspected, the influencer will lose followers and credibility – both the quantity and the quality of the engagement are diminished.

But as with the overgrazers in Hardin’s metaphor, a single act of defection is easy to justify, because the single act alone will not ruin Twitter’s credibility, and the cost of its diminished credibility is born by the whole community, not by the solo defector. That defector cannot be blamed when the problem has become chronic across the network, and users abandon in droves.

It has been argued that as long as sponsors provide “transparency,” i.e., that they acknowledge when a message is sponsored, that users will not abandon the venue; they can simply choose to ignore or discount the message as they would any other advertising. But then what, actually, is the point? If social connections between marketers and consumers bear the promise of a 4-4 equilibrium, but they are instead used like any other ad medium, what has either player gained? We would, in fact, see the same continuous performance decline in click-based Twitter or Facebook sponsorships as we did in banner advertising, in a cycle of mutual defection. In the *New York Times* piece, an owner of one of the social media sponsorship companies denied that sponsorships would diminish trust in social network connections, saying, ““All we are trying to do is get consumers to become marketers for us.””

Therein lies the problem. Consumers are not marketers. As this study has tried to show, consumers and marketers are mutually dependent adversaries in the marketing game; each cannot do what the other does. When consumers naturally enthuse about brands in social media, their credibility comes from the fact that they are *not marketers*. Turning them into paid marketers destroys their credibility and ruins the system.

A marketer who read the *New York Times* article on Twitter with the slightest degree of hindsight would probably recognize the potential for ruination through overgrazing, because the problem is strongly reminiscent of the over-saturation of banner advertising in the name of quantification in the late 90's, and the resultant consumer defection. But then what might the marketer conclude on the basis of this insight? I suggest there are two plausible responses:

- 1) "If this trend continues, Twitter sponsorships won't be viable for very long. I had better take advantage now, while consumers are still responsive."
- 2) "If this trend continues, Twitter sponsorships won't be viable for very long. I'm going to refrain from contributing to the problem."

What I wish to point out is that *neither of these responses solves the problem*. The first response is obviously an outright defection that will accelerate the decline of the medium as surely as pop-under ads did in banner advertising. The second response is noble, cooperative, and forward-looking in its view that restraint is necessary to preserve the long-term good, but self-restraint will not prevent others from abusing the system. In order to prevent overgrazing of social media marketing, there must be behavioral controls in place that go beyond individual restraint.

9.5 Social Traps and Counterreinforcers in Social Media

The question of what kinds of behavioral controls would prevent overgrazing is the subject of "Social Traps," a breakthrough study by John Platt that analyzes the problem of reconciling individual self-interest to the collective good from the perspective of behavioral psychology. Platt builds on the groundwork laid by Garrett Hardin and Thomas Schelling in analyzing the volunteer's dilemma, and he brings in Skinnerian behavioral psychology's emphasis on how positive or negative behaviors are reinforced. In Platt's simple and compelling formulation, social traps occur when a given behavior produces positive results for the individual and negative results for the

group. As long as the individual is only accountable to themselves, the negative behavior is self-reinforcing, resulting in “locked-in behavior,” even though the individual’s long-term interests are imperiled by the behavior. This occurs because social traps typically involve a delay between the short-term gain and the long-term loss; a farmer may get several years of good grazing from the commons before it is destroyed. This problem of “individual goods and collective bads” can’t be solved by the sacrifice of one or two heroes; positive group behavior must somehow be enforced (Platt 1973).

Platt offers several ways out of the social trap, some of which are applicable to the current social media marketing dilemma. The most important of these is the notion of “counterreinforcers.” Since destructive behavior is self-reinforcing in the social trap, counterreinforcers discourage this behavior by offer some negative consequence that the player must evaluate before taking the action. For instance, if the herdsmen on the commons instituted a fee for every grazing animal added beyond a certain quota, then any herdsman acting in his short-term interest would have to weigh this cost against the profitability of adding another animal.

By social media’s very nature, the formation of such formal rules of collective engagement is rare, but counter-reinforcement is not. In any online community, implicit rules of engagement spring up very quickly, and they tend to be rigorously reinforced by its membership. You’ll recall the analysis of the psychological rewards of punishing bad behavior covered in Chapter 4; social media allows participants to go the extra mile in doling out punishment – particularly in the form of verbal castigation – at very little cost. Those who participated in the piling-on of negative reactions to the Motrin video paid very little: an investment of less than 5 minutes in viewing the offending video and responding on Twitter.

In this respect, the risks of a death spiral in social media are very different than they are in, say, banner advertising, where the marketer’s level of control allows them to heap on more and more ad impressions, chasing the elusive click. In social media marketing, consumers exert great control over their level of exposure to brands and can easily dole out punishment in a variety of ways: negative feedback, de-friending, etc. It has often been noted that consumers in social media “vote with their feet,” i.e., they quickly and easily drop social connections with brands that don’t pay off for them.

We could imagine, for instance, celebrities and/or influencers who engage in sponsored tweets being “un-followed” if the implicit rules of the community decreed that sponsored tweets are obnoxious and unwanted. Fearing for the integrity of their own personal brand in the face of this counter-reinforcement, the celebrity would have a strong incentive to drop the sponsorship. The consumer facing an unwanted marketing intrusion into,

say, their movie-watching experience largely stands alone; their negative reaction never surfaces as a counter-reinforcer, and so the bad behavior continues. But an individual negative reaction on Twitter can be mustered into collective outrage in a matter of minutes. Thus unlike a common grazing ground, social media is a common ground with a built-in set of constraints against bad behavior; it's very easy to get kicked of the collective. Marketers have a greater incentive to play by the rules.

9.6 Voting with their Feet: Why Quality Matters in Social Media

But marketers' implicit agreement not to be obnoxious is a rather low bar to set for a medium that offers opportunities for deep engagement, and indeed, winning the attention game will require more than avoiding bad behavior. Competing for a consumer's declining attention on a social network demands an emphasis on *quality*. If a consumer's increasingly divided attention span on Twitter means that they will only follow a handful of brands that provide them with valuable content, then there is a built-in incentive for brands to solve the problem with higher-quality Twitter content. If a consumer will only watch 1 out of every 100 brand-sponsored videos on YouTube, then *quality*, as measured in votes and popularity, will be the deciding factor. If the consumer's attention further subdivides to the point at which they will only watch 1 out of every 1000 brand videos, then quality must increase accordingly. The loss of attention raises the cost of the signal that brands rely on to connect through social media, so that only brands able to pay the social cost of deep engagement will succeed. Brands that persist in the "something for nothing" view of social media will simply be squeezed out as available attention declines.

Given the social media acceleration I have outlined, it is axiomatic that consumers will become much more selective about their brand engagements in social media, even as most brands are still getting their sea legs. Does this mean that some brands will simply fail at social media? It does. In fact, given the potential dangers of saturation, it is *necessary* that some brands fail at social media, so that others can succeed. Defining success on the basis of quality rather than quantity is social media marketing's best chance at becoming a mature marketing medium.

Because analysis of social media marketing is still in its Unbridled Enthusiasm stage, in which every new venue is treated as the next big thing, very little attention has been paid to the qualitative factors that determine a brand's success in the space. As I have already noted, the popularity-based

system of costly signaling will allow some brands to succeed at lower cost than others. But how does social media separate the wheat from the chaff?

The best work recognizing the importance of attention as a limited commodity in the social media game is an overlooked study from HPLaboratories' Social Computing Lab, "Crowdsourcing, Attention and Productivity." The study's subject is the relationship between popularity and productivity in YouTube videos, but its findings are broadly applicable to social media marketing. The study's authors raise the question of whether a "tragedy of the commons" is unfolding on YouTube, where over-competition for user attention discourages users from producing new content. In marketing terms, this would impact both brands' willingness to provide content and users' willingness to produce their own brand-related content (such as the Starbucks fan's chronicle of his efforts to visit every Manhattan Starbucks).

The study found that attention was indeed the valued commodity that YouTube uploaders pursued, independent of financial gain. The attention paid by other users, measured in views and comments, very strongly correlated to the likelihood that users would produce more content, and lack of attention had the inverse effect, to the point where users that lacked attention would stop producing videos (Huberman 2009). In other words, the factor that hedges against oversaturation and the tragedy of the commons is the phenomenon of users "voting with their feet"; contributors and brands that don't achieve good quality scores – in the forms of views, comments, and votes – will decide that the costly signal of popularity is too dear. The resultant equilibrium will indeed exclude some brands and force all participating brands to work harder to gain popularity, but the tragedy of the commons can be averted.

9.7 Pancake People and the Problem of Information Overload

There are promising signs, then, that sufficient counter-reinforcement will deter marketer defection in social media marketing, and thus prevent a tragedy of the commons. This leaves us with the more existential problem of information overload in social media. The exponential demands on a user's attention created by the explosion of content raise the question of how users will maintain a sufficient level of discernment to find useful information. This is a critical issue for social media marketing: as consumers become more reliant on peer content to make decisions about brands, their ability to discern differences between high and low quality, truth and fiction, and relevance and irrelevance will greatly shape their purchase decisions. As a Maxwell's Demon tasked with sorting valuable and non-valuable content in

every single Web interaction, will the consumer ultimately be empowered or overwhelmed?

This complex problem boils down to a simple question: are our powers of discernment waxing or waning? As my final analogy in this study, I wish to borrow the playwright Richard Foreman's concept of the "pancake people." In an essay in the cultural studies journal *Edge*, Foreman laments the loss of depth we suffer when knowledge becomes instantly available. We become "spread wide and thin as we connect with that vast network of information accessed by the mere touch of a button." Foreman contrasts this condition with the traditional "cathedral" structure of knowledge, in which individuals acquired information in layers, as they acquired the skills to make sense of that information. In a traditional course of study, analysis of political systems, for instance, would proceed from a basic understanding of forms of government to their ideological permutations. Today, countless political opinions can be accessed at a keystroke, with no prerequisite to understand their ideological basis, and no built-in method for discerning informed opinions from the dangerously uninformed.

Still, respondents to Foreman's lament argued, we may be better off as pancake people, having replaced one form of ignorance – limited access to knowledge – with a less debilitating one: too much knowledge. If we can have our cake and eat it too – that is, if we can develop powers of discernment that allow us to sort information rationally while having instant access to this vast array of information – then we'll be vastly better off. Previous epochs in which the availability of information suddenly surged, e.g., the advent of the printing press, created similar anxieties, but ultimately the greater supply of knowledge had a positive impact on human culture.

While we may indeed evolve to this best of all possible information epochs, we are clearly not there yet. A 2007 study by the British Library on the "information behavior" of Generation Y college students convincingly showed that we have not yet developed the discernment skills necessary to make good use of the glut of available information. The study showed, for instance, an alarming lack of in-depth reading: about 60 percent of e-journal readers consume no more than three pages; the average time spent on e-book and e-journal sites are "four and eight minutes respectively." Users also spent as long searching for information as they did consuming it – a sure sign that Maxwell's Demon is failing. Most alarmingly, the study found that the so-called "Google Generation" struggles with constructing Google searches that accurately reflect the information they're seeking, and then struggles again with discerning relevant search results from irrelevant ones. If the generation raised on Google can't use it properly, what hope is there?

9.8 Social Media's Answer to Google's Flattening Effects

The hope may, in fact, lie with social media. Even as user-generated content like blogs, wikis, and forums add significantly to the information glut, they also provide alternative means of accessing information, adding new dimension and perspective to an epistemological scenario that was entirely dominated by Google just half a decade ago. Instead of merely sorting through endless search results as a beset-upon Maxwell's demon, I can locate content through experts on message boards, through primary sources pre-sorted on Wikipedia, through Amazon lists created by reviewers I trust, through Facebook peers, experts on Twitter, and on and on. These resources replace the lonely, dimensionless, pancake-like search with multiple, competing perspectives that demand the use of my critical thinking skills, even as they simplify the information-gathering process.

The media theorist Douglas Rushkoff makes a similar argument in response to Foreman; he argues that the great leap forward in information-gathering is our ability to tap into collective intelligence in a way that shows us multiple perspectives all at once. While the changes in information-gathering have indeed undermined traditional informational authority, we gain the ability to sort through multiple authorities without privileging one over another; thus "our capacity to contend with multiple dimensions is increased." One can see this multi-perspective balance in play in coverage of major news events, such as the 2009 post-election protests in Iran. In similar past events, such as the Tiananmen Square protests in China in 1989, the public's access to information was constrained to major media outlets, whose access was easily constrained by the Chinese government. In the Iran protests, those same constraints on major outlets were in place, but the public had an astonishing degree of real-time access through Twitter feeds, blog posts, and Web videos transmitted from cell phones. The media consumer had the opportunity to weigh these perspectives against official accounts, and the net gain in comprehension of the event is beyond dispute.

The means by which the contemporary media consumer apprehends world events is analogous to the means by which they will apprehend marketing content. Traditional advertising will continue to provide the "official" account, while consumer perspectives on the brand will provide additional dimensions. Advertisers wishing to influence those perspectives will participate in these channels as well. The savvy consumer will not uncritically accept any single one of these perspectives, but will take ownership of a multi-dimensional perspective that represents a net gain in their ability to make smart purchase decisions.

Social media's potential as an antidote to information overload may ultimately lie in its capacity for list-making. The linguist Umberto Eco's affectionate history of list-making, *The Vertigo of Lists*, argues that Western Civilization's penchant for lists has been a critical means of organizing knowledge and seizing control of one's environment. In an interview with *Der Spiegel*, Eco laments the flattening effects of the Google epistemology in a critique reminiscent of Foreman's "pancake people." Eco argues that for young consumers not raised on traditional epistemologies, "Google is a tragedy. Schools ought to teach the high art of how to be discriminating" (Beyer 2009).

Eco is not alone in his view that education has a responsibility to deal with the pancake problem. The concept of "information literacy" has steadily been gaining ground among educators since the advent of the Web; its purpose is to promote methodologies for organizing, synthesizing, and evaluating information, most particularly the unorganized, non-synthesized, and non-evaluated content indexed by the Web. While such skills are obviously important, the movement is controversial, because it attempts to impose standards of competence on one's ability to use an ever-changing medium, and because it is spearheaded by the American Library Association, which, it could be argued, has a vested interest in maintaining libraries' traditional control over information retrieval. The question is whether such a movement is necessary, if in fact the Web can evolve its own capacity for list-making that enhances users' ability to sort and evaluate knowledge.

There is growing evidence that the Web can evolve such a capacity. The online encyclopedia Wikipedia, the content of which is produced and edited by volunteers, was found by the journal *Nature* to have a degree of accuracy comparable to the *Encyclopedia Britannica* (Giles 2005). Wikipedia effectively overcomes much of the indeterminacy of multiple and competing Web-based perspectives by funneling those perspectives into a rigorous peer-based editorial process that demand reliable citations but allows conflicting points of view to co-exist, provided they meet the citation criteria.

The growth of content aggregators like Digg and StumbleUpon are also indicative of the evolution of a list-making capacity. As noted previously, such services add a significant dimension to popularity-based signaling by allowing users to apply peer judgment – even narrowing down their selections to trusted peers only – to their content sorting process. As social media participation increases, i.e., users who were once content consumers only evolve to become content producers, the quality of the sifting will improve, and users will be able to "unflatten" their perspective. In my search for material on game theory, for instance, I could expand my point of view to everything Google produces, or I could confine it to the recommendations of

a handful of recognized, pedigreed experts. In combining the two, I would be accomplishing exactly what Rushkoff advocates: the ability to conditionally hold multiple perspectives at once, with a resulting enrichment of my knowledge of the subject.

Where does all of this leave the age-old, mutually dependent conflict between marketers and consumers? I will end with a set of predictions:

Consumer empowerment through social media is inevitable and permanent, irrespective of the specific channel or technology; the freedom of information that comes with increasingly reliance on peer perspectives cannot be reversed. It is axiomatic that marketing itself will continue to evolve to accommodate these changes, as a simple matter of increased payoffs.

This does not mean, however, that every marketer will participate, or that all who participate will reach the 4-4 equilibrium of mutual collaboration. Traditional advertising will persist for as long as free, sponsored content remains desirable, which is to say, indefinitely. The criteria for successful social media participation by marketers will become more stringent, not less, as demand on consumer attention increases. Persistent consumer backlash against marketers' overstepping in social media will gradually evolve a set of norms for that participation, and many brands will choose not to pay for that costly signal. The evolution of these standards for quality, collaboration, and transparency will allow social media marketing to survive and thrive.