"The seven sins are all around us, easy to spot. But the designs that apply the underlying behavioral forces that underpin the sins are harder to discern. That's why we need this book."

From the foreword by Don Norman, author of Design of Everyday Things



/ Chris Nodder /

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Foreword

Sloth, Pride, Envy, Greed, Lust, Anger, Gluttony. What? I'm supposed to design for these traits? As a human-centered designer, I should be repelled by the thought of designing for such a list. What was Chris Nodder thinking? What was his publisher thinking? This is evil, amplified.

Although, come to think of it, those seven deadly sins are human traits. Want to know how people really behave? Just read the law books. Start with one of the most famous set of laws of all, the *Ten Commandments*. Every one of those commandments is about something that people actually did, and then prohibiting it. All laws are intended to stop or otherwise control human behavior. So, if you want to understand real human behavior, just see what the laws try to stop. The list of seven deadly sins provides a nice, tidy statement of fundamental human behavior, fundamental in the sense that from each of the deadly sins, one can derive a large list of less deadly ones.

But why should design be based on evil? Simple: Starting with evil means starting with real human behavior. This doesn't mean that the result is evil: It means that understanding what each sin represents adds to an understanding of people. And good design results from good understanding. This is Chris Nodder's great insight: Human frailty provides a great learning experience, illustrative examples that teach fundamental principles. And just as all fundamental principles can be used for good or evil, Nodder's principles can be used in either way.

There are obvious benefits to society in using the lessons learned from the sins to enhance design processes for the good of humankind. But there are also benefits to understanding how those who are less scrupulous than you or me use these same principles for nefarious purposes,

defrauding people, or perhaps just causing them to buy things they do not need at a price they cannot afford. What possible benefits? The more the tactics are understood, the more readily they can be identified and resisted, fought against, and defeated.

Nodder has done a superb job of distilling and explaining. Fun to read, insightful to contemplate. Maybe he did too good a job—I am now far better equipped to do evil than I was before I read the book. But I'm also better equipped to notice when others apply these principles to me; and they do, many times a day, as I browse the Internet, click links, or wander the streets of my little town in the Philistine area called Silicon Valley; resisting temptations of greed, lust, and gluttony as I watch the natives feeding at outdoor buying at fancy glass-encased stores tantalizing electronic sin toys; passing the offices of venture capitalists along the way, with fancy, unimaginably expensive and powerful automobiles parked in front (in a city where the speed limit is 25 miles per hour, and it is rare to go even that fast). Which sins are on constant display? Every one of them.

The seven sins are all around us, easy to spot. But the designs that apply the underlying behavioral forces that underpin the sins are harder to discern. That's why we need this book.

Thank you Chris for providing insight coupled with fun. Teaching deep insights into human behavior together with valuable guidelines and frameworks for applying them is a blessing—57 blessings, one for each design pattern that Nodder has derived from the seven sins. Learning from sins. Pleasure from sins. A wonderful combination.

So yes, buy the book. No, don't download it for free: That would be sinful.

Don Norman Nielsen Norman group

Author of *Design of Everyday Things*Palo Alto, California

Introduction

In Mark Twain's classic book, *The Adventures of Tom Sawyer*, Sawyer convinces others to do his work for him by making the chore of painting a fence seem instead a desirable job. His friends beg to be involved.

Tom said to himself that it was not such a hollow world, after all. He had discovered a great law of human action, without knowing it—namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to attain.

Mark Twain, The Adventures of Tom Sawyer, 1876
Designers work hard to control the emotions and behaviors of their users. Truly great websites—good or evil—use specific techniques to get users to perform the desired task time and time again. Success in web design is most often measured in terms of how many users beg to be involved; creating, sharing, commenting, or purchasing.

Evil designs and their virtuous counterparts

Design is about persuasion. Marketers first codified many of these persuasive behaviors in the mid-1930s. It took until the turn of the century for economic researchers and psychologists to work out why people respond to these behaviors in the way they do. Now you can learn how to apply this knowledge in interaction design.

Sites capitalize on our weaknesses. Sometimes their intentions are good, but mainly they do this for "evil"—in other words to profit at our expense. The best sites manage to make us feel good at the same time.

Learning from the best

Controlling people's behavior for financial gain is not a new concept. Casinos do it, politicians do it, and marketers do it. Here, we consider human foibles and the manner in which they can be exploited into the digital age: How do we influence behavior through the medium of software?

We will draw many examples from existing apps and websites. The creators of these products may have been unaware of the psychological underpinnings of their design decisions. Indeed, they may not have intended to be truly evil in their implementations. However, the end results are often wonderful advertisements for evil by design.

Like a good magic trick, the best examples are the ones where you don't even realize that people are being manipulated until it's pointed out to you. When you understand the reasons why users respond the way they do, you'll appreciate even more how clever some of these "tricks" actually are and marvel at the beauty of some of the evil designs.

Defining evil design

We must differentiate between evil design and plain stupidity. Often, a lazy or ill-thought-out design can infuriate us. However, it takes a truly well-conceived evil design to make us come back for more.

Stupidity isn't evil. People who create bad designs because they don't know any better or because they are lazy aren't being evil. Evil design must be intentional. In fact, as you'll see in the various chapters, there is often a lot of planning involved in creating an evil design that truly works.

The idea behind evil design is that people enter willingly into the deal, even when the terms are exposed to them. Confidence tricksters are another group who control

behavior for gain, but they take things a stage further than evil design by hiding the true outcome of the activity.

Stupidity is sloppily coded error messages that don't explain what's wrong, or how to fix it. Those dialog boxes are frustrating but benign. A con is software that promises to remove viruses but instead infects your computer. This is evil masquerading as good—and if users manage to see behind the mask, they will be dismayed. Evil design works on a different level, by convincing customers that the value proposition is in their best interest (financially or emotionally) and by persuading customers to participate even if they are aware of the imbalance in the outcome.

So evil design is that which creates purposefully designed interfaces that make users emotionally involved in doing something that benefits the designer more than them.

Human weakness: The seven deadly sins, and how sites leverage them

It seems only fitting to lay out the contents of this book according to the vices that sites exploit to attract and engage with users. Thus, the subsequent chapters group design techniques under the headings of the Seven Deadly Sins.

Throughout history, philosophers and religious scholars have categorized human weakness as a set of "sins." The Seven Deadly (unforgivable) Sins are Pride, Sloth, Gluttony, Anger, Envy, Lust, and Greed. Each chapter in this book addresses one of these sins, pointing out the human characteristics that enable software designers to create persuasive interfaces that appeal to each weakness. Using examples from contemporary web design, you will be able to see how the sin is exploited both for good and for evil.

Each characteristic is accompanied by design patterns that give you simple rules to apply these same techniques in your own work.

This book concludes with a discussion about ethics. Not the heart-wrenching moral dilemma of whether to use any of these evil-by-design patterns, but instead an acceptance that they are being used already today. Knowing how to recognize these patterns enables you to turn them to your advantage both as a consumer and as a designer of software and websites.

Pride

Humility makes men like angels; Pride turns angels into devils.

Saint Augustine

Pride isn't the sin it used to be. In the 4th Century, Evagrius of Pontus claimed that pride was the primary sin among the seven, and the one from which all others stemmed. By the time of Thomas Aquinas in the 13th Century, it was seen in a more measured manner—some pride was acceptable, but a surfeit was still a sin. In the 21st century, with the advent of social media, it appears that we more often ask, "Have you no pride?" when confronted with yet more drunken party photos, as if pride is a positive attribute that arbitrates in matters of taste.

These days, the sense in which pride is bad is probably best summed up by the word **hubris**—arrogance, loss of touch with reality, overestimating one's capabilities, thinking that you can do no wrong. In the Greek tragedies, hubris leads the hero to pick a fight with the gods and thus be punished with death for his insolence. These days, it's called overextending your credit.

Of course, the aim in this book isn't to be moan the lack of humility in modern society but to see how sites leverage this human weakness.

Misplaced pride causes cognitive dissonance

Harold Camping, the owner of familyradio.com, has been wrong a couple of times in the past. He predicted that the

world would end on May 21, 1988—then again on September 7, 1994, and subsequently on May 21, 2011, before settling for October 21, 2011. After the world steadfastly refused to stop turning on each of these dates, you'd think that Harold would call it quits and stop believing that the Rapture was imminent. You'd also think that the large number of his followers who sold or gave away all their possessions or spent their life savings on advertisements for the event(s) would be embarrassed or upset. Although a small minority expressed disappointment each time, most continued to believe Harold. Why?

It's all about how the brain manages to rationalize or resolve two conflicting concepts: a state called **cognitive dissonance**. For example, people know that smoking kills, but they continue to smoke. These dissonant thoughts don't work well together. People resolve the issue by removing one of the two conflicting concepts. Quitting tobacco is much harder than rationalizing that smoking is unlikely to kill you because you are a healthy individual, and anyway, everyone dies of something. In other words, changing your opinion (that smoking can kill you) is much easier than changing your behavior (smoking). So the dissonance is resolved by rationalizing your opinions, even if that leaves you believing something strange.

In Harold's case, each time he could demonstrate how his calculations (based on interpretation of scripture) had been slightly wrong. By admitting a small personal failing, he managed to refocus his followers' actions around the new date. For his followers, it was much easier to accept that their leader had forgotten to add a couple of years in his equation than to believe that their Rapture-targeted behaviors were misaligned or even laughable. The deeper they were involved in Harold's prophecies, the more pride they had at stake, the more cognitive dissonance they had

to resolve, and so the more likely they would be to grasp on to any explanation that Harold could provide.

However, after his October 21, 2011 prophecy, Harold stopped providing new dates and seemed to be somewhat chastened.

The question constantly arises, where do we go from here? Many of us expected the Lord's return a few months ago, and obviously we are still here. Family Radio is still operating. What should be our thinking now? What is God teaching us? In our Bible study over the past few years, we came to the conclusion that May 21 and October 21 were very important dates in the Biblical calendar. We now believe God led us to those dates, but did not give us complete understanding. In fact, we did not understand at all the correct significance of those two dates. We are waiting upon the Lord, and in His mercy He may give us understanding in the future regarding the significance of those two dates.

Maybe this new outlook is partially due to his award of the 2011 Ig Nobel mathematics prize (jointly with several other prophets) for "teaching the world to be careful when making mathematical assumptions and calculations."



Provide reasons for people to use

If you expect that users will be conflicted about the product or service you offer, provide them with many reasons they can use to resolve cognitive dissonance and keep their pride intact.

Online, cognitive dissonance can be brought about by effects such as *buyer's remorse*, in which the purchaser struggles to justify the high purchase price and their desire for an item in comparison to their subsequent feelings of the item's worth.

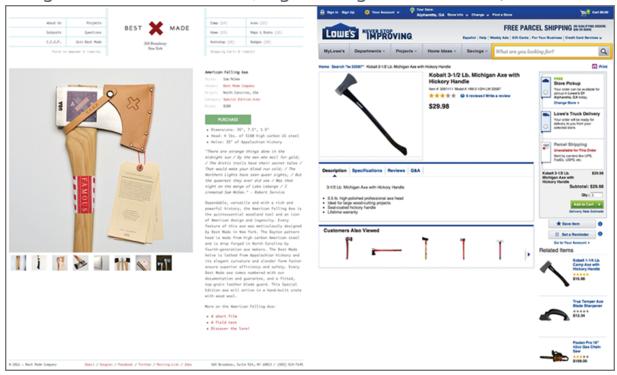
Sites help users resolve this cognitive dissonance by giving them reasons and evidence that bolster their satisfaction with the product (positive reviews; images of famous people using the product; and promises of hard-to-quantify benefits, such as social approval brought about by using the product) rather than letting them resolve the dissonance by returning the product.

The Best Made Company sells axes. One of its models was exhibited by the Saatchi Gallery in London, instantly turning it from a utilitarian object into a work of art. Painting stripes on the handle in limited numbers per design added to the exclusivity and thus desirability (see also the Tom Sawyer effect, in the chapter on Gluttony).

Lowes is a hardware company that also sell axes. At Lowes, a similar hickory handled felling axe costs \$30. The \$30 option comes with a lifetime guarantee, so why would you choose the \$300 version? Mainly because Best Made offers many superlatives that help to ease cognitive dissonance. Its product description reads more like a manifesto to the outdoors lifestyle than a listing of features.

If you were to point out to owners of this axe that they'd just paid about ten times too much money for something used to chop wood, they would have plenty of ammunition to fire back. Clever marketing on the bestmadeco.com site turns a utilitarian purchase into a search for exclusive art, thus resetting customers' pricing expectations. Continuing the marketing message through to the packaging of the item ensures that it is reinforced when customers receive the goods and every time they look at the product subsequently.

Buyer's remorse: You can spend \$300 or you can spend \$30. In both cases you get a hickory handled felling axe. (left image: bestmadeco.com, right image: lowes.com)



To prevent buyer's remorse, get customers to imagine the experiences they'll have with your product or the way that others will react when they see the customer using your product. Take the customer in their mind's eye to a contented future with the product and then make them look back on the current time as a pivotal decision point.

Continuing with the axe example, consider this quote on the About Us page: "Best Made Company is dedicated to equipping customers with quality tools and dependable information that they can use and pass down for generations. We seek to empower people to get outside, use their hands and in doing so embark on a life of fulfilling projects and lasting experiences." These words are aimed at making you jump into the future and look back on now. How could you *not* buy something that promises a fulfilling life full of lasting experiences?

To resolve buyer's remorse if it still happens, the trick is not to hide the return path, but to make it easier for customers to resolve the dissonance by changing their opinions instead. Because people are biased to see their choices as correct (see the description of confirmation bias in the Change Opinions pattern that follows), any supporting evidence can reinforce the initial opinions that led them to choose your product, help them rationalize their decision, and thus leave them happier with their initial choice. It is therefore important to use the same style of messaging throughout the site, from product pages through to the support and warranty/returns sections, and on all other collateral such as documentation sent with the product.

How to provide reasons

- Give purchasers plenty of reasons to want your product. Provide testimonials, reviews, and lifestyle images. Help them visualize a rosy future that includes your product. This is just as important after the purchase as before. Don't have a glossy sales page and a dull support page. Make it clear to existing owners that they did the right thing.
- Add something cheap but unique to your product offering. Best Made place their axe in a wooden crate lined with "wood wool" (shavings). This costs them comparatively little but boosts the appeal of the product by giving owners self-reassuring evidence that they received something special.
- Hire good product packaging and site designers.
 Presentation—how the product looks—can determine its price point. Utilitarian or bohemian?



Social proof: Using messages from friends to make it personal and emotional

Pride means caring what friends think about us and our activities. We're proud when our friends praise us for something we've done, and upset if our friends disapprove. Much of our behavior is determined by our impressions of what is the correct thing to do. Our impressions are based on what we observe others doing.

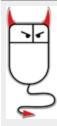
Those others don't have to be our friends. In a new situation we may follow the cues of total strangers. Most of those strangers could also be new to the environment, but we still make the assumption that they have a deeper understanding of the situation. Experts, celebrities, existing customers, and even the "wisdom of the crowd" can all serve as drivers for how we behave. This influence is known as **social proof**: "If other people are doing it, it must be right."

If we see a tip jar full of bills, we are more likely to tip. If we see a nightclub with a line outside, we're more likely to think it's a popular venue. If we see a restaurant full of happy people, we're more likely to think that eating a meal there would be worthwhile. That's why baristas "prime" their tip jars in cafes, why nightclubs keep a slow-moving line outside even if the club is quiet inside, and why restaurants seat people at the window seats first thing in the evening.

It doesn't hurt Apple to have long lines outside its stores on product release days. (Well, except for the Chinese release of the iPhone 4S, in which there was such a large crowd that the police made the stores cancel the release.) This just provides additional social proof that Apple's products must be worth having because so many people line up to buy them.

The line outside the Chicago Apple store on a cold morning two weeks after white iPads were first released. The fact that people were prepared to stand outside at least half an hour before opening time for the vague possibility that this store had some iPads in stock projects strong social proof that Apple's products must be worth having.





Dispel doubt by repeating positive messages

Hearing the same positive message several times from different trusted sources can provide the social proof that helps users form a decision.

In 1969, Stanley Milgram was running studies looking at conformity. He's best known for a study in which he determined that subjects would give supposedly lethal shocks to another person if told to by an authority figure. However, he also ran slightly more benign studies that looked at how influence varies with different numbers of sources. He had a paid helper stand on a busy sidewalk and look up at the (empty) sky. He noted that approximately 40 percent of people passing would also look up. With two confederates, that number rose to 60 percent. When he paid four people to stand together and look up, around 80 percent of people passing would also look up.

If more people are doing something, it lends additional credibility to the activity. If you hear about the same product from several different sources, you tend to attribute more positive views to it than a product you were unfamiliar with. In other words, familiarity doesn't breed contempt, it breeds reassurance.

Showing what others bought and what is frequently bought together serves as two additional social proof reinforcements for the item on the page. (amazon.com)

Frequently Bought Together



- ☑ SanDisk Cruzer 8 GB USB 2.0 Flash Drive SDCZ36-008G-A11 \$8.50
- ☑ SanDisk Cruzer 32GB USB Flash SDCZ36-032G-B35,Black \$19.72

What Other Items Do Customers Buy After Viewing This Item?



Explore similar items

People rely on social proof more when they are unsure what to do. New users, people shopping for infrequent or unfamiliar purchases, or people seeking expertise are all likely candidates for social proof persuasion.

To give customers several converging statements that add to social proof, sites also provide white papers of case studies, indications of how popular a particular item is (number sold, number left in stock, or even a "sold out" label), recommendations for complementary products or accessories, and product reviews.

Testimonials are another type of social proof. If you offer testimonials, make sure they come from people who appear qualified to make the statements, and that you give enough details about these people so that a reader can validate that they exist.

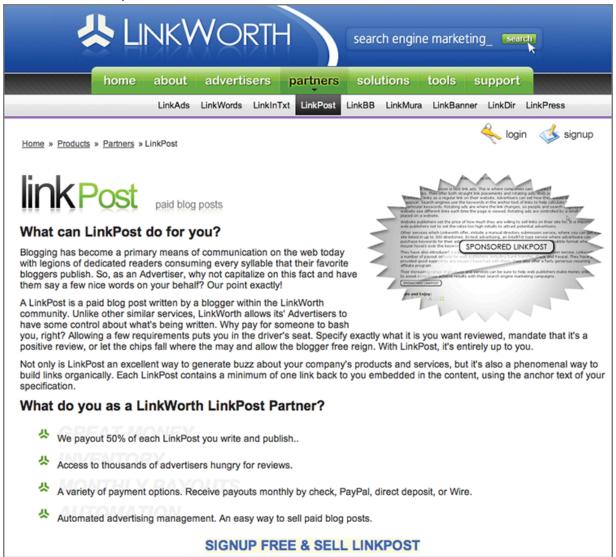
Because the information from each of these sources complements the other sources, and because they appear in different places around the site, users tend not to notice that the same basic message is repeated to them in different ways each time.

It's important that the social proof examples you use guide people in the direction that you want. Making it clear that a large group of people engage in the behavior you *don't* want (even if you emphasize it only to say "don't do this") legitimizes that behavior in people's minds and may provide social proof in the wrong direction. For instance, a campaign against teen drinking that tries to shock by saying what proportion of teens drink may work for adults, but will have the opposite effect on teens. ("Hey—all the others are doing it, so why don't I?")

The best forms of social proof come from outside the direct sphere of influence that a site has. Reading positive statements about a product or company on a supposedly neutral third-party site can have greater social proof outcomes than reading the same statements on the company's site. By 2011, only 13 percent of consumers purchased products without first using the Internet to review them. More customers think it's important to get reviews from other consumers than from professional reviewers or consumer associations.

This has led to the rapid growth of pay-to-blog advertising and sponsored posts. Companies exist to match advertisers with bloggers (inblogads.com, weblogsinc.com, sponsoredreviews.com, reviewme.com, payperpost.com, and blogsvertise.com), and a whole army of bloggers exists to take advantage of these paid endorsements. Many are in the home, family, and parenting blog categories and on tech "review" sites.

LinkWorth is just one of many companies who match advertisers to bloggers. The pseudo-originality of the blog post—each one written by a different blogger, but on the same theme—increases search engine optimization and adds social proof. (linkworth.com)



The proliferation of for-pay blogging caused concern about both the impartiality of reviews written online and also the blurry line between commercial sites and blogs that were basically shills for an organization.

In 2009 this led the Federal Trade Commission (FTC) to update its testimonial and endorsement guidelines for the first time since 1980.

When there exists a connection between the endorser and the seller of the advertised product [that] might materially affect the weight or credibility of the endorsement (i.e., the connection is not reasonably expected by the audience) such connection must be fully disclosed.

The maximum fine is \$11,000—although this seems to be aimed more at celebrities on talk shows than at mommy bloggers. Now the industry has several different yet similar codes of conduct, all aimed at allowing bloggers to receive money from advertisers for giving honest opinions. The money hasn't disappeared, but the honesty (and the fact that blog posts are sponsored) should be more apparent.

The fact that bloggers can leave less favorable reviews probably won't even harm sponsors considerably. Only 4 percent of people would change their mind about a product or service after reading one negative review, and it takes three negative reviews before the majority of users would change their minds. The proportion of reviews can also play a role: Three negative reviews may mean very little in comparison to 300 positive reviews.

How to use social proof

- Try to create several statements that back up the same general positive concept about your product or service. Users are more likely to believe you if they hear several variations on the same theme.
- Get statements placed on different sources or sites.
 Seemingly impartial reviewers have more credibility, and hearing the same statement from multiple sources also improves social proof.
- Place statements at locations on the site where they'll be seen by new users, people shopping for infrequent or unfamiliar purchases, or people seeking expertise.
- Describe your process, product, and so on as the accepted norm—for instance, the industry standard or reference item. Being seen as a standard gives the product implied social proof.
- Work with common stereotypes of behavior—if it's commonly held that people will do X in situation Y, then reinforce that stereotype to your advantage, as it plays to social proof.
- Use site statistics to impute social proof—for instance "70 percent of our business comes from client referrals" demonstrates that clients like the business enough to recommend it to others.
- Make sure the social proof example you use emphasizes your desired behavior rather than trying to dissuade people from the opposite behavior. Don't even raise the opposite behavior as an option.





Personal messages hit home

Messages aimed directly at the user grab attention. Messages that come from friends and trusted others have even more effect.

To reach Hanakapiai Beach on Kauai in the Hawaiian islands, you have to hike a couple of miles along the beautiful but up-and-down Kalalau trail along the Na Pali coast. The visual reward makes the hike worthwhile, and it would be unfair to spoil it for you by showing you photos here. Instead, I'm going to show you photos of the warning signs that you see just before you reach the beach.



On the left is the series of three official signs. Each is carefully crafted to give a depiction of the dangers that await you, backed up by stern sounding warnings. That clean, official, indirect voice keeps things passive and impersonal and thus relatively easy to ignore.

On the right is the unofficial sign, found just a few yards further down the trail. Obviously hand-carved by a concerned amateur, this sign talks less about the natural features of the beach and more about the outcome: "Killed? Yikes!" This more personal approach (backed up with near real-time updates on the death toll) is much more likely to hit home with passing hikers.

Back in the tech world, Jimmy Wales' "personal appeal" to raise funds for Wikipedia has a positive effect on donations. Wikipedia runs annual fund raising drives, and in 2011 the banner ads it used to accompany the fund raising were crafted through a series of A/B comparison tests to ensure maximum click through, followed by appeal pages designed to tell a story that would maximize conversion and donation amounts.



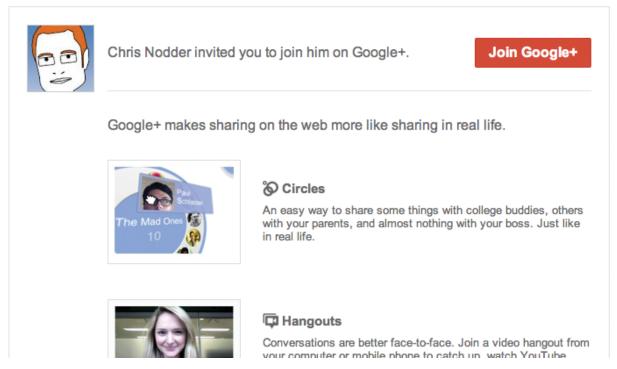
Please read:
A personal appeal from
Wikipedia founder Jimmy Wales

 \boxtimes

Wikipedia's A/B tests allowed them to work out that the most effective messages came from Jimmy Wales (the founder and public face of Wikipedia) and included a trustable explanation as to why the donations were needed. Thus, it came as close to being "personal" as is possible from a person that donors had probably never met.

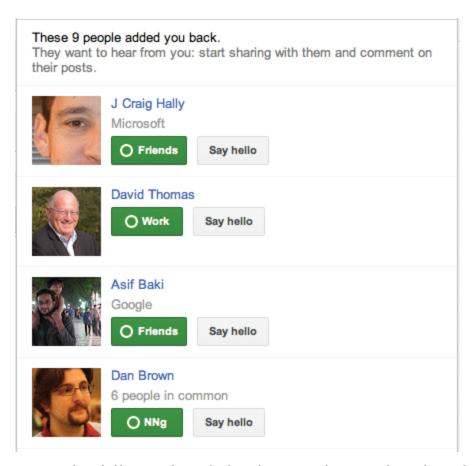
Social networking sites use pseudo-personal messages in an attempt to drive viral adoption. For instance, Google+ tells you your friends have invited you, so you feel like it's a recommendation from them to use the service. All that actually happened was that your friend added your e-mail address to their Google+ Circles.

Did Chris really invite me to join him? No, he just added me to his circles. But it sounds more like a recommendation this way.



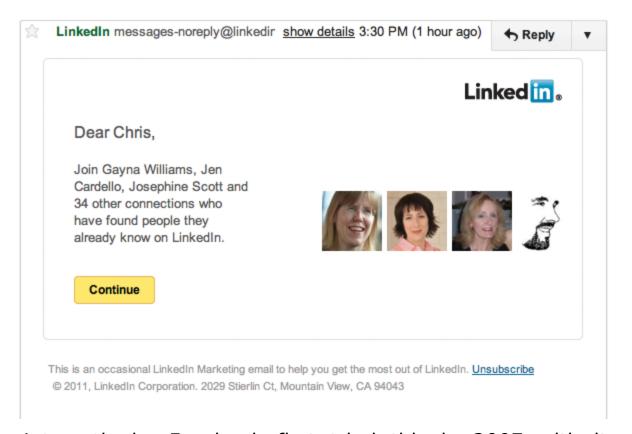
After you sign up and add some people to your own circles, you perpetuate the social proof effect. In addition, when you reciprocate with an "add," Google informs the person who first added you that "they want to hear from you."

The recipients of my "invitation" now apparently want to hear from me. Wow, I'd better start using the service more diligently!



Even more insidious is LinkedIn and Facebook's habit of using your name and likeness in ads seen by your friends and contacts saying that YOU recommended/used/did this thing, so your contacts should, too.

An e-mail from LinkedIn uses my connections' names and likenesses to convince me to do something. If all of these respectable professionals are doing it, maybe I should be too.



Interestingly, Facebook first tried this in 2007 with its Beacon product. It bombed because it was hideously intrusive, to the point of sharing details of purchases that individuals made at third-party sites on their Facebook walls. After much public outcry it was shut down in 2009.

Facebook's demonstration of how advertisers on their site can take advantage of social proof to place adverts in the news feed by piggybacking on your friend's posts