

Persuasive Technologies Should Be Boring

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Abstract. New persuasive technologies often make the mistake of touting how new and different they are from anything that came before. What they should really be trying to do is mask any behavior change by making their interface and interactions as familiar and mundane as possible. This lesson is illustrated in a case study of the Nike + iPod, a revolutionary device that pretends to be just a better way to go for a run while listening to music.

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1 Introduction: Persuasive Technologies Can Learn from Disruptive Innovations.

Persuasive technology is a new field, and many questions are as yet unanswered. What will make people willing to use products designed to change their behavior? Why are some persuasive products readily adopted while others languish? Those interested in driving the adoption of persuasive technologies should study the adoption of another set of inventions that encourage people to change their behavior – if not always for direct social benefit. They're known as disruptive technologies, challengers to an existing market or product category that reframe a given business problem. As an example, the automobile dramatically changed transportation and urban development. In this paper we'll draw a few lessons from such disruptors that are crucial to the design of (more overtly) persuasive technologies, before diving deeper into a case study of a persuasive product that has applied these principles successfully – the Nike + iPod Sport Kit.

1.1 Successful Disruptive Technologies Often Take on Familiar Designs.

Looking at the design of many successful disruptive products, a common theme runs through: they're actually quite familiar. This seems counterintuitive – if you come up with an amazing new way of doing something, it seems natural to make some bold design statements about how radically new and different it is. But often the most successful of these products actually take great steps to mask their novelty; their designs recall a preexisting, well-understood technology [1]. The original cellular phones looked like cordless telephones, which in turn looked like walkie-talkies. Compact discs and laser discs mimic vinyl records to convey that they are media that

store entertainment. Interactions with the first Palm Pilot were designed to resemble those of a pen-and-paper organizer in order to fit into people's existing context of use.

Generally speaking, the bigger the behavior change a technology promises, the more familiar its design should be. Though not a universal requirement for success, familiarity can go some way in avoiding the adoption obstacles common to any discovery that demands people go about their lives in a different way. People are more likely to adopt a new technology if it is presented in a way that connects with the lives they already lead. This insight has profound implications for the design of persuasive technologies.

1.2 Persuasive Technologies That Embody Familiarity Are Often More Successful than Those That Try to Signal How New and Different They Are.

Disruptive products necessitate a change in the way things are done. Persuasive technologies, by definition, are also trying to change behavior. Thus persuasive technologies, like disruptive ones, should attempt to take on familiarizing designs. To find their markets, these offerings should be designed to be as inconspicuous as possible at introduction. As Everett Rogers notes in *Diffusion of Innovations*, the key to driving mainstream adoption is fitting into what people already know and do – not emphasizing how different a new offering is [2]. Persuasive technologies that look and feel like existing products are less alien to customers. As a result, they don't depend on customers that are willing to step out of their comfort zones in order to succeed. They slot into people's existing routines. And they are understood as enhancements to existing activities, not as intentionally life-altering artifacts.

Let's dive deeper into an example of how downplaying disparities can actually lead to more profound changes in behavior.

2 Case Study: The Nike + iPod Sport Kit Gets It Right.

One successful and instructive persuasive technology comes from the Nike + iPod product line, introduced in May 2006. The device has won wide recognition, including several year-end awards, and at Nike's earnings call on Dec. 22, 2006 the company credited the line for in part driving 10 percent sales growth [3]. The \$30, two-piece kit is deceptively simple: it consists of a plain, rectangular receiver that clips on to the bottom of any iPod nano and a rounded transmitter that slips into running shoes. It promises to enhance the experience of running while listening to music. But underneath this unassuming promise lies a device capable of much more. It keeps track of distance covered in a work-out, time to complete individual goals and other fitness benchmarks. It can even give auditory directions for working out, filling the role of a virtual personal trainer.

In driving adoption, the Nike+ does three things very well, all of which could benefit any new persuasive technology: it uses a design that blends in with the iPod and running shoes, thereby framing itself in the familiar; it smoothes the change in people's behavior by promoting the best understood features first; finally, it invites comparison to less capable devices. By demonstrating how these principles work with the Nike+, we can show how they might be applied to other persuasive technologies.

2.1 Blend in by Adopting Familiar Forms and Frames.

Design has the ability to make new and alien technologies familiar and comfortable. The Nike + iPod accomplishes this through the use of familiar forms and frames. The actual kit looks very much like other sports-branded consumer electronics equipment, including Nike's own MP3 players. More subtly, the device fits comfortably into the frame of going for a run while listening to music. The designers chose to make its components slot into some very well-understood pieces of technology: a portable music player and a pair of running shoes.

Nike's design team was very conscious to make the receiver small enough to blend in with the form of the iPod nano and to physically conceal the transmitter inside the sole of the line's associated shoes. Even once an owner begins to embrace the little box's ability to dynamically measure her fitness levels, her workout looks to the entire world like any normal exerciser wearing a set of headphones and stylish running shoes. On the inside, she might be listening to an inspiring coach's commands for greater fitness – on the outside, she looks like everyone else.

Another service that illustrates this principle is Bank of America's "Keep the Change" program, which encourages people to save by automatically rounding up any debit card purchase to the next whole dollar. This difference is added to the enrolled member's savings account. The bank provides an incentive to save by matching up to the first \$250, but a second more subtle incentive is added by making the investment completely confidential and requiring no ongoing change in action. It's one thing to decide to put more money in your savings account. It's quite another to have a piece of software do it for you.

2.2 Emphasize Familiar Features First.

Though the Nike + iPod is a sophisticated exercise tracking and motivational tool, Nike and Apple choose to downplay its powers. They focus instead on the potential for music to inspire athleticism, leaving the device's more ambitious capabilities to be discovered over time. The original press release for Nike+ quoted the company's CEO, Mark Parker: "Nike + iPod will change the way people run" [4]. The release backs up this claim by noting the device's ability to track distance, pace and calories burned – the same basic features of any pedometer or treadmill.

Nike and Apple gloss over the "virtual personal trainer" aspect, saying only: "A new Nike Sport Music section on the iTunes Music Store and a new nikeplus.com personal service site help maximize the Nike + iPod experience." They don't acknowledge how the experience might be "maximized" through the use of sport mixes. Nor does Nike declare that they have created "Coaching Mixes" that offer verbal instruction for specific fitness techniques. These features are de-emphasized, allowing people to discover additional abilities over time.

Another successful technology shows the value of playing up familiar features first. The TiVo Digital Video Recorder was marketed as a way for people to "simplify the increasingly complicated television experience," according to CEO Michael Ramsay [5]. Many early comments merely emphasized avoiding the need to find blank tapes for recordings. At most, the creators touched on the device's ability to recommend relevant programming, but only in reference to "personal taste," not through tracking of users' behavior. Had TiVo emphasized the box's ability to "read viewers' minds,"

it's entirely possible the company would never have gained the traction it needed to introduce increasingly disruptive and persuasive features to its customer base.

2.3 Choose Your Reference Point Carefully.

The Nike + iPod is far from the first product that has attempted to motivate people to exercise more. Home exercise videos, countless websites and even a few video games all attempt to replicate the experience of working with a professional instructor [6]. Because these solutions mimic a real-life experience, they emphasize their artificial quality – and can remind people of how inadequate the digital device is to the task.

Subtly, the Nike + iPod is positioned to represent a better pedometer, not a cheap personal trainer. For \$30, people can not only keep better track of their progress than most fitness computers could – they can also coordinate their work-outs with their music collections. By setting up favorable reference points, persuasive technologies can promote themselves as better versions of existing devices instead of poor replacements for professional services.

Another product illustrates the power of this principle. Intuit's Quicken software could be sold as a virtual accountant or financial manager. Instead, the company focuses on making the experience of balancing one's own checkbook simpler. By constantly referencing itself relative to the nightmare of balancing the books by hand, rather than as a poor man's accountant, Quicken has established a reputation with users as the most effective way to ensure that their spending is kept in check.

3 Conclusion: The Best Persuasive Technologies Downplay the Behavior Change They're Trying to Reinforce.

The Nike + iPod is a great example of how to design a piece of persuasive technology. It gives us a concrete case from which to draw some broader lessons about how to design for persuasion. Other technologies would do well to emulate how the Nike + iPod presents an innocuous front, slots into existing activities, and messages augmentation instead of replacement. Conforming to people's routine and enhancing it goes a long way towards promoting adoption and use. Designing for familiarity is crucial when trying to persuade people to behave in unfamiliar ways.

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