Overview of Captology

Defining Persuasion

For purposes of captology, persuasion is defined as the attempt to change attitudes or behaviors or both.

Although philosophers and scholars have been examining persuasion for at least 2,000 years, not everyone agrees on what the term really means. For purposes of captology, I define persuasion as an attempt to change attitudes or behaviors or both (without using coercion or deception). This is a broad definition, and one on which many persuasion professionals, such as academic researchers, marketers, and clinical psychologists, would agree. It also fits with how the word is used in everyday life.

It’s important to note the difference between persuasion and coercion, terms that are sometimes confused. Coercion implies force; while it may change behaviors, it is not the same as persuasion, which implies voluntary change—in behavior, attitude, or both.

Similarly, persuasion and deception may be confused. For instance, when I ask my students to find examples of persuasion on the Web, invariably some of them come to class with screen shots of Internet banner ads that report false emergencies ("Your systems resources are low. Click here!") or that misinform users ("Pornography is downloading to your computer. Click here to stop.") While such ads might change what people think and do, they do so through deception, not persuasion. Computer-based coercion and deception are topics in their own right, but they are not covered under the umbrella of captology because they do not depend on persuasion.
Focus on the Human-Computer Relationship

In the premier issue of the academic journal *Interacting with Computers*, an editorial posed an important question: Do we interact *with* computers or do we interact *through* them? While a good rhetorician could argue either side of this question, it seems clear that people interact both *with* and *through* computers, depending on the situation.

Captology—the study of computers as persuasive technology—focuses on human-computer interaction (HCI), not on computer-mediated communication (CMC). Specifically, captology investigates how people are motivated or persuaded when interacting *with* computing products rather than *through* them. CMC is a separate area of research and design, with interesting intellectual questions to answer and big dollars at stake. But it falls outside the realm of captology.

Under the CMC model, the computer is a channel that allows humans to interact with each other. For example, people in different locations may use computer tools, such as instant messaging and electronic whiteboards, to collaborate with one another. In this scenario, the computer facilitates communication; it does not persuade.

By contrast, in a human-computer interaction, the computing product is a participant in the interaction and can be a source of persuasion. The computer can proactively seek to motivate and influence users, drawing on strategies and routines programmed into it. It can encourage, provide incentives, and negotiate, to name a few strategies. In later chapters you'll find examples of technology products that use such proactive persuasion techniques.

Persuasion Is Based on Intentions, Not Outcomes

At the start of this chapter, I defined persuasion as an attempt to change attitudes or behaviors or both. This definition implies that true persuasion—whether brought about by humans or computers—requires intentionality. Captology focuses on the *planned persuasive effects* of computer technologies.

This point about intentionality may seem subtle, but it is not trivial. Intentionality is what distinguishes between a planned effect and a side effect of a technology.
Chapter 1  Overview of Captology  ■  17

If you examine the history of computing technologies, you find that many high-tech products have changed the way people think, feel, and act. But most of these changes were not planned persuasive effects of the technology; they were side effects. Once people started using email, most probably changed how they used “snail mail”: they bought fewer stamps and went to the post office less often. Similarly, when video games came onto the market, kids started watching less television and played outside less often.8

Captology does not include such unintended outcomes; it focuses on the attitude and behavior changes intended by the designers of interactive technology products. These planned effects can range widely, from persuading people to buy things online, to motivating people to take stretch breaks after extended periods of desk work, to convincing people that bioterrorism is a serious threat.

One other point about intentions: Captology focuses on endogenous intent, that is, the persuasive intent that is designed into a computing product. A product also could acquire exogenous persuasive intent from users or another source—that is, if a product is adopted for a persuasive goal the designers hadn’t planned. For example, the Palm computer is not a persuasive product by design, but a student might buy it to motivate herself to do homework more regularly. The Sony CD Discman wasn’t designed to be persuasive, but a friend of mine bought one because she thought that the ability to listen to music during her workouts would motivate her to run more often. Captology does not focus on such exogenous intent but only on the endogenous persuasive intent built into a product.

Levels of Persuasion: Macro and Micro

Attitude and behavior changes that result from successful persuasion can take place on two levels: macro and micro. Understanding these two levels of persuasion will make it easier to identify, design, or analyze persuasion opportunities in most computing products.

A game called HIV Roulette, which I’ll describe in more detail in Chapter 4, is designed to persuade users to avoid risky sexual behavior. Baby Think It Over, also detailed in Chapter 4, is designed to persuade teenage girls to avoid becoming pregnant. Persuasion and motivation are the sole reasons such products exist. I use the term macrosuasion to describe this overall persuasive intent of a product.
Some computing products, such as email programs or image manipulation software, do not have an overall intent to persuade, but they could incorporate smaller persuasive elements to achieve a different overall goal. I refer to this approach as microsuasion.

Microsuasion elements can be designed into dialogue boxes, icons, or interaction patterns between the computer and the user. For example, in educational software applications, microsuasion techniques—such as offering praise or giving gold stars for completing a task—can lead to staying on task longer, getting a better understanding of the material, or strengthened brand loyalty.

Quicken, the personal finance application created by Intuit, provides a good example of how microsuasion can make a product more effective. The overall goal of the product is to simplify the process of managing personal finances. But note how the program uses microsuasion to achieve this goal. At the simplest level, the software reminds people to pay bills on time, helping them be financially responsible. The program also tracks personal spending habits and shows results in graphs, highlighting the financial consequences of past behavior and allowing projections into future financial scenarios. In addition, the software praises users for doing menial but necessary tasks, such as balancing their online check registry. These microsuasion elements—reminders, visualizations, and praise—are influence strategies embedded in the Quicken experience to change what users think and how they act.

Consider a few ways that microsuasion is used in CodeWarriorU.com, a site designed to teach people how to use the CodeWarrior tools to develop software applications. To convince users that its teaching methods are effective, the site uses testimonials, easily accessible from the homepage. To persuade users to enroll, the homepage extols the benefits of at least a dozen courses, casting a wide net in making the sales pitch to prospects. In addition, no matter where users go on the site, on every page they see invitations to enroll, in the form of prominent buttons that say "Register" and "Enroll now." Furthermore, the site reduces barriers to enroll: it's free and easy to do.

The site also uses microsuasion techniques to motivate users to continue making progress in their chosen course. Each course has a schedule with a firm ending date, which serves both to set work expectations and a deadline. Each lesson has tracking features that help users see how much they've completed and how much work remains. The CodeWarriorU.com system also tracks students by maintaining a transcript that includes completion dates of assignments and performances on quizzes. To further motivate users to continue progressing, the site makes enrollment public to other students through a class roster and discussion area, as well as by sending preprogrammed emails that
prompt users to complete their work. All of these microsuasion elements contribute to the overall learning goal of CodeWarriorU.com.10

Microsuasion on the Web

Examples of Web sites that use microsuasion are plentiful and sometimes subtle. For example, eBay has created a rating system—what it calls “feedback”—whereby buyers and sellers evaluate each other after a transaction is completed. This system motivates people to be honest, responsive, and courteous in their interactions. Similarly, the survival of epinions.com, a site that “helps people make informed buying decisions,”11 hinges on persuading people to share their opinions online. To encourage this, epinions hands out highly visible titles of status (“Top Reviewer” and “Editor”) when people contribute many reviews that are valued by readers. Classmates.com uses the lure of curiosity—finding out more about high school classmates—to persuade browsers to register their personal information at the site. Once registered, users have access to the information about others in their class who have registered. In their overall macrosuasive goal of motivating people to quit smoking, Quitnet.com uses public commitment (announcing your quit date) as a microsuasion strategy. All of these techniques involve persuasion on a micro level.

Microsuasion in Video Games

Video games are exceptionally rich in microsuasion elements. The overall goal of most games is to provide entertainment, not to persuade. But during the entertainment experience, players are bombarded with microsuasion elements, sometimes continuously, designed to persuade them to keep playing.

WarCraft III is a real-time strategy (RTS) game that uses microsuasion elements to make the game compelling (if not addictive for some). Throughout the game, as players kill enemies, the player hears a dying sound, an audio reinforcement for succeeding. If players kill monsters, who are neither friend nor foe in this game, the dying monsters drop gold or other items of value that the player can use later as resources. The prospect of gaining new powers also serves as microsuasion. Specifically, if a “hero” belonging to one of the players progresses to the next level, the player can select a new power for that individual, such as the ability to heal others. And of course, players are motivated by the challenge of getting themselves ranked on the high score list.
As the previous discussion suggests, designers of products such as Baby Think It Over must understand macrosuasion techniques to succeed in their overall goal of persuasion. But even designers of products such as productivity software—products that do not have persuasion as their primary goal—must understand how persuasion techniques can be used at the micro level in order to make their products more effective and successful.

Captology: Summary of Key Terms and Concepts

1. For purposes of captology, persuasion is defined as an attempt to change attitudes or behaviors or both (without using coercion or deception).

2. Captology focuses on attitude or behavior change resulting from human-computer interaction (HCI), not from computer-mediated communication (CMC).

3. Captology focuses on planned persuasive effects of technology, not on side effects of technology use.

4. Captology focuses on the endogenous, or "built-in," persuasive intent of interactive technology, not on exogenous persuasive intent (i.e., intent from the user or another outside source).

5. Captology recognizes that technology can persuade on two levels, macro and micro.

Notes and References

For updates on the topics presented in this chapter, visit www.persuasivetech.info.

1. Persuasion scholars don’t agree on a single definition of persuasion. For example, Reardon defines persuasion as “the activity of attempting to change the behavior of at least one person through symbolic interaction” (Reardon 1991, p. 3). Other scholars (including myself) view persuasion more broadly. For example, see D. Forsythe, Our Social World, (New York: Brooks/Cole, 1995). Also, in their definition of persuasion, Zimbardo and Leippe (1991) extend persuasion to encompass changing a person’s “behaviors, feelings, or thoughts about an issue, object, or action” (p. 2). Other scholars expand persuasion beyond the idea of “changing”; persuasion includes shaping and reinforcing (Stiff 1994).
Chapter 1  *Overview of Captology*  • 21

If you are interested in investigating the definition of persuasion further, these sources are a good starting point:


2. The line between persuasion and coercion can be a fine one. Consider dialog boxes that won't go away until you've answered the questions they pose; sites that require you to provide personal information before you can view their "free" content; and ads that pop up right over the part of the page you are trying to read. These and other "persuasive" techniques may be viewed as subtly coercive and may have a cumulatively negative effect on users.


4. For example, both Reardon (1991) and Zimbardo and Leippe (1991) discuss distinctions in persuasion, coercion, and deception. See


6. Computer-mediated communication (CMC) is a large area, so it's difficult to single out one article or person to represent the work in this domain. For a broad picture of CMC, visit John December's online resource about computer-mediated communication at [http://www.december.com/cmcinfo](http://www.december.com/cmcinfo) (note: this is a for-profit effort). His site gives pointers to more specific areas in CMC, such as conferences, journals, and organizations.

7. Stanford professor Donald Roberts was the first to help me clearly see the distinction between effects and effectiveness, including the key role intention plays in interpreting outcomes. I use different terms in my writing (planned effects versus side effects), but the concept is the same. Don Roberts and Nathan Maccoby address the issue of intended and unintended outcomes in the following:


8. A 1999 study by Nielsen Media Research documents that kids are watching less TV and proposes that one factor is competition from video games. For a brief summary of this research, see [http://www.ncpa.org/pdf/social/pd120299h.html](http://www.ncpa.org/pdf/social/pd120299h.html).
A longer article, drawing on various studies, that talks about the decline in kids' TV watching and suggests that computer games are a factor, is Lauren Rublin's "Tuning Out," published in Barron's on November 8, 1999.

9. Many common interaction patterns found in human-human interactions can be applied to HCI. For example, the "door in the face" technique involves asking a big favor to which a person is likely to say no, then exploiting the guilt the person feels in order to persuade him or her to do a smaller favor.

10. One could argue that the real purpose of CodeWarriorU.com is not to help students to learn but to sell them books and software for each course. Even so, my main point still applies: the microsuasion elements I outline contribute to a larger overall goal.

11. This quote about the purpose of epinions comes from http://www.epinions.com/about.