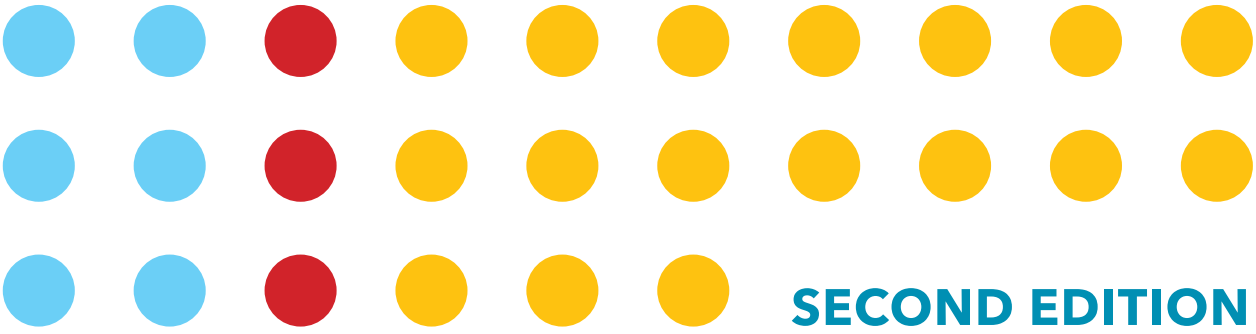
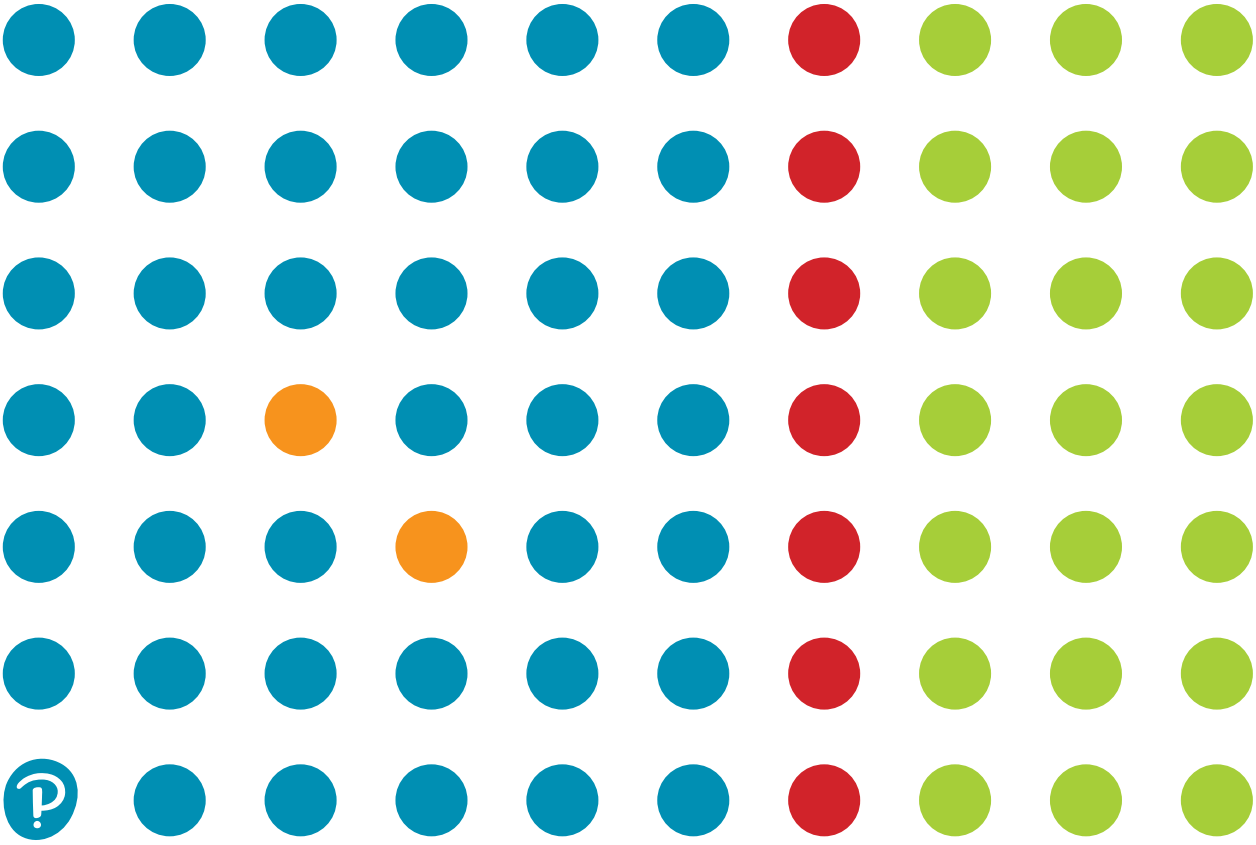


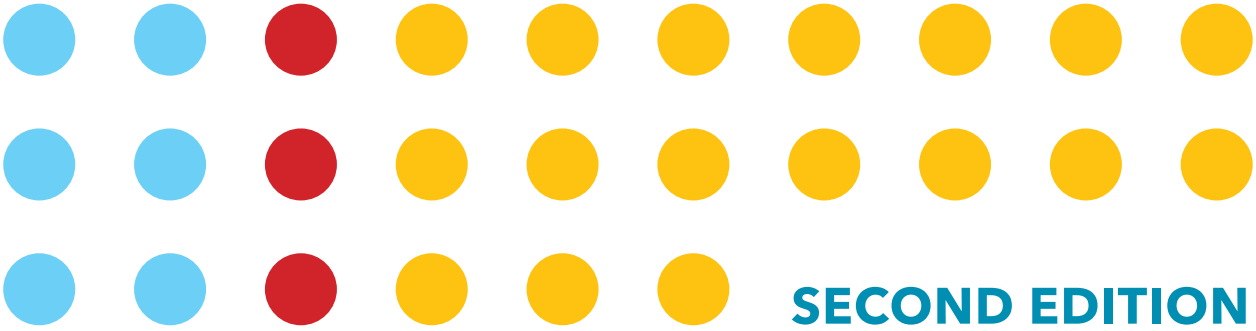
SECOND EDITION

100 THINGS

EVERY DESIGNER NEEDS TO KNOW ABOUT PEOPLE

SUSAN M. WEINSCHENK, Ph.D.





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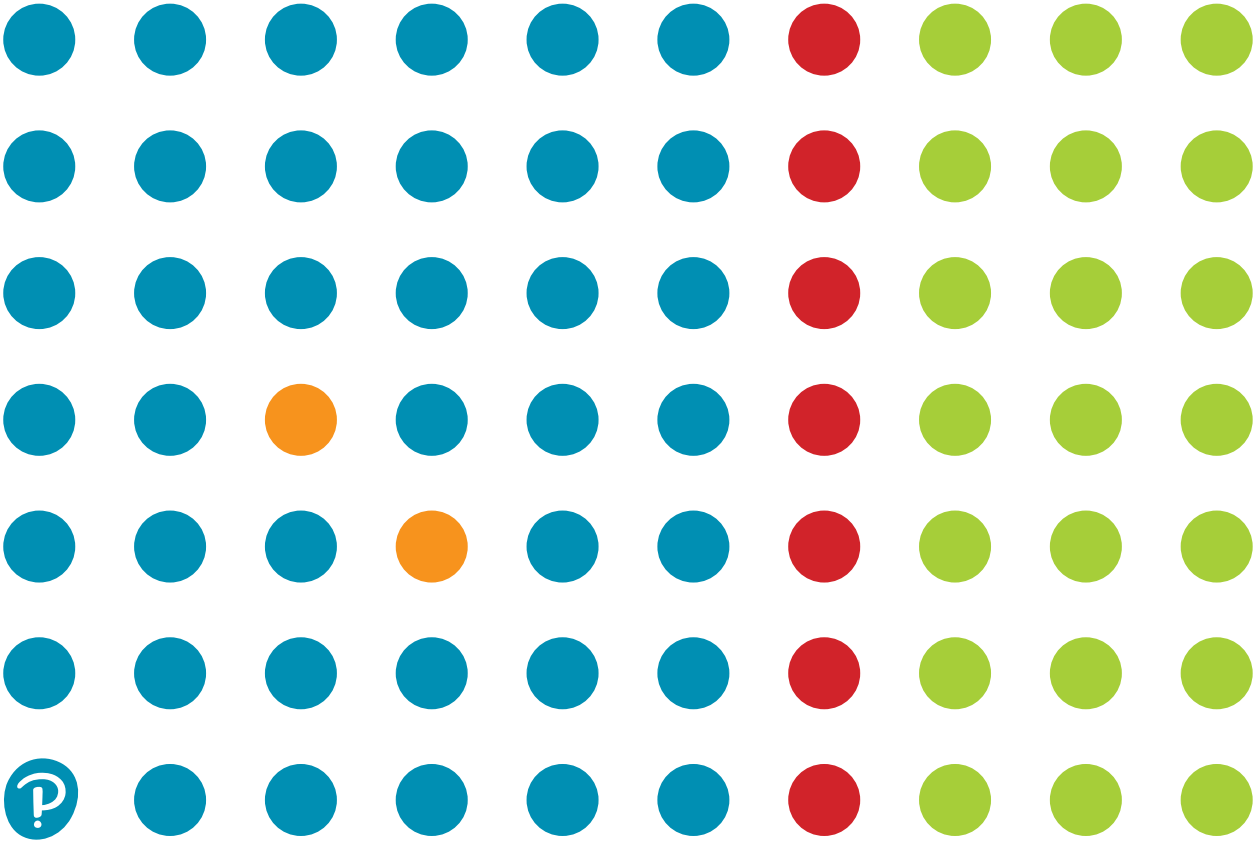


DESIGN WITH FORGETTING IN MIND

Don't assume that people will remember information. Provide the information that people need or an easy way to look it up.

Before option buttons and dropdown menus were available, most software made large demands on users to remember what data could be entered into a field. Now there are user interface elements—like option buttons and dropdown menus—that relieve the memory load and help people forget less often.

Figure 25.2 shows a typical situation in which a dropdown list box will help people remember what the options are.

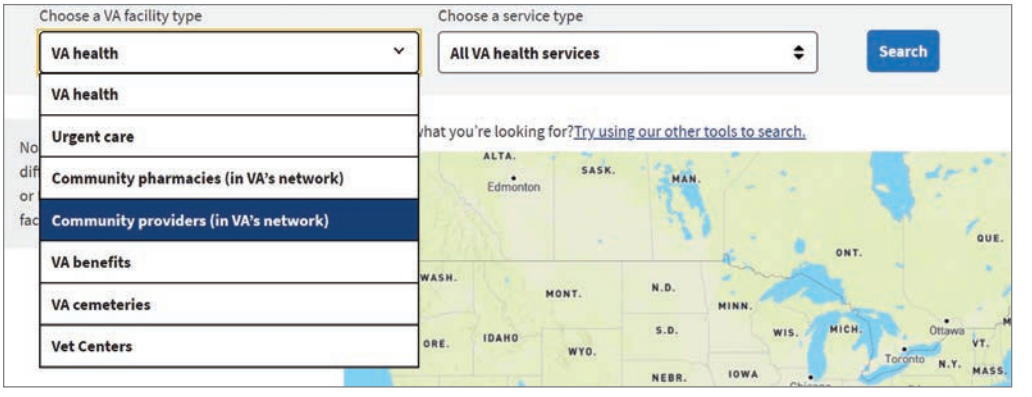


FIGURE 25.2 Dropdown menus help relieve memory load and minimize forgetting

Takeaways

- People are always going to forget.
- What people forget is not a conscious decision.
- Design with forgetting in mind. When information is really important, don't rely on people to remember it. Provide it for them in your design or have a way for them to easily look it up. For example, use dropdown list boxes to show choices rather than assuming users will remember what to fill in.

26 THE MOST VIVID MEMORIES ARE WRONG

If you are at least 30 years old and I asked you to recall where you were and what you were doing when you first heard about the September 11, 2001, attacks in New York City, chances are very good that you could tell me about that day in great detail. If you live in the U.S., and you were age 10 or older on that date, your memory would likely include details such as how you heard about the attacks, who you were with, and what you did the rest of that day. But research shows that a lot of, perhaps even most of, your memories would be wrong.

FLASHBULB MEMORIES ARE VIVID

Remembering traumatic or dramatic events in great detail is called flashbulb memory. Emotions are processed in the amygdala, which is very close to the hippocampus, which is involved in the long-term coding of information into memories. So it's no surprise to psychologists that emotionally laden memories might be very strong and remembered vividly.

VIVID BUT FULL OF ERRORS

Although flashbulb memories are vivid, they are also full of errors. In 1986 the space shuttle *Challenger* exploded. If you are old enough to recall that event, you probably remember it vividly. The day after this tragic event, Ulric Neisser, a professor who researches memories like these, had his students write down their memories of what had happened. Three years later he asked them to write their memory of the event again (Neisser, 1992). Over 90 percent of the later reports differed from the originals. Half of them were inaccurate in two-thirds of the details. One person, when shown the description she had written three years earlier, said, "I know that's my handwriting, but I couldn't possibly have written that." Similar research has been conducted on individuals with memories of the 9/11 attacks, with similar results.

The Ebbinghaus forgetting curve showed that memories degrade quickly over time. Because flashbulb memories are so vivid, it was thought that perhaps they were not as subject to forgetting as other memories. But it turns out they are. That's kind of disturbing when you think about it. Because these memories are so vivid, we tend to think they are more true. But we are wrong.

Takeaways

- Dramatic or traumatic experiences will be remembered more vividly and more certainly than other types of memories.
- Most of these dramatic or traumatic experiences will be remembered incorrectly.
- No matter how certain people are of their memories of events, you need to assume that most long-term memories are not completely accurate.
- If you are interviewing people and requiring them to remember events, keep in mind that what they say happened may be inaccurate.

HOW PEOPLE THINK

The brain has 23 billion neurons. That's a lot of capacity for mental processing. So what's going on in there?

Understanding how people think is crucial if you're going to design for them. Just as there are visual illusions, there are also thinking illusions. This chapter describes some of the interesting things the brain does as it makes sense of the world.

27 PEOPLE PROCESS INFORMATION BETTER IN BITE-SIZED CHUNKS

The brain can process only small amounts of information at a time—consciously, that is. (The estimate is that you handle 40 billion pieces of information every second, but only 40 of those make it to your conscious brain.) One mistake that designers sometimes make is giving too much information all at once.

APPLYING THE CONCEPT OF PROGRESSIVE DISCLOSURE

Progressive disclosure means providing only the information people need at the moment and letting them click to learn more about specific topics as they want or need to.

If you don't use progressive disclosure, you will end up with very long pages of information that may overwhelm your reader.

Take, for example, this page from the United States Social Security website. This is a section on benefits planning for survivors. The page is very long and has no progressive disclosure (**Figures 27.1, 27.2, 27.3**).

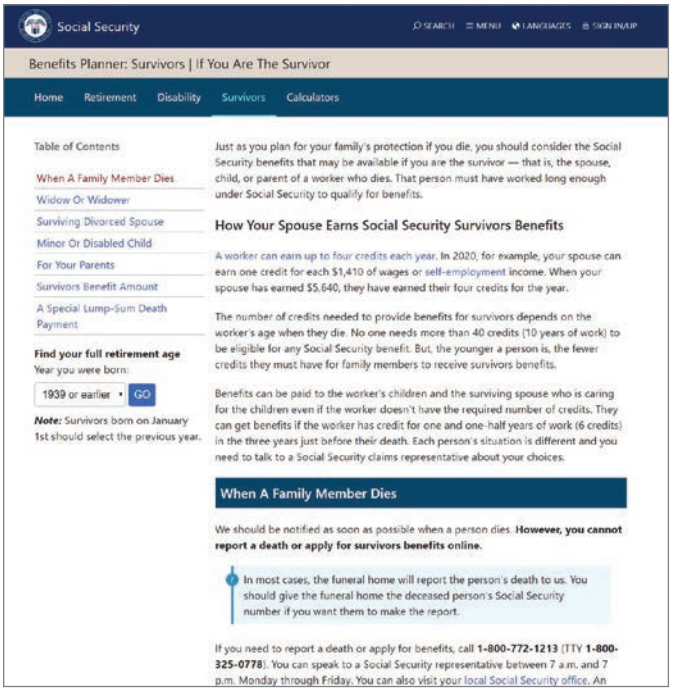
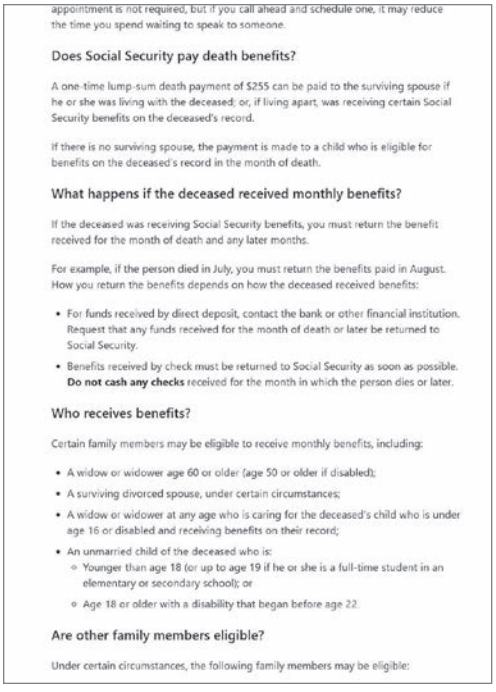


FIGURE 27.1 The first screen of the page



appointment is not required, but if you call ahead and schedule one, it may reduce the time you spend waiting to speak to someone.

Does Social Security pay death benefits?

A one-time lump-sum death payment of $255 can be paid to the surviving spouse if he or she was living with the deceased; or, if living apart, was receiving certain Social Security benefits on the deceased's record.

If there is no surviving spouse, the payment is made to a child who is eligible for benefits on the deceased's record in the month of death.

What happens if the deceased received monthly benefits?

If the deceased was receiving Social Security benefits, you must return the benefit received for the month of death and any later months.

For example, if the person died in July, you must return the benefits paid in August. How you return the benefits depends on how the deceased received benefits:

- For funds received by direct deposit, contact the bank or other financial institution. Request that any funds received for the month of death or later be returned to Social Security.
- Benefits received by check must be returned to Social Security as soon as possible. **Do not cash any checks** received for the month in which the person dies or later.

Who receives benefits?

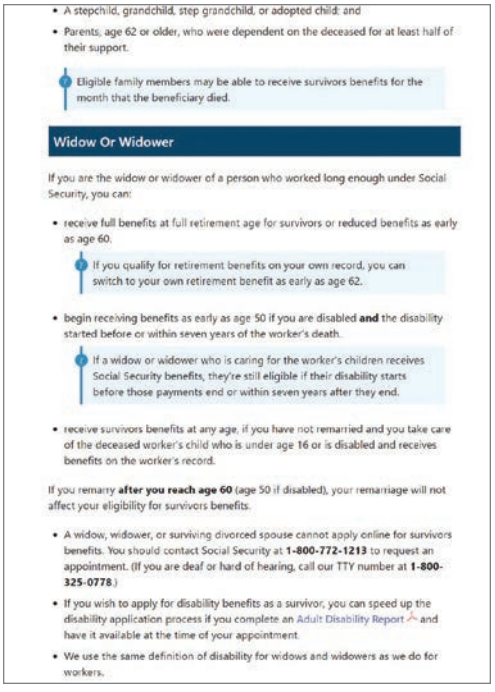
Certain family members may be eligible to receive monthly benefits, including:

- A widow or widower age 60 or older (age 50 or older if disabled);
- A surviving divorced spouse, under certain circumstances;
- A widow or widower at any age who is caring for the deceased's child who is under age 16 or disabled and receiving benefits on their record;
- An unmarried child of the deceased who is:
  - Younger than age 18 (or up to age 19 if he or she is a full-time student in an elementary or secondary school); or
  - Age 18 or older with a disability that began before age 22.

Are other family members eligible?

Under certain circumstances, the following family members may be eligible:

FIGURE 27.2 Scrolling down, still on the same page



- A stepchild, grandchild, step grandchild, or adopted child; and
- Parents, age 62 or older, who were dependent on the deceased for at least half of their support.

Eligible family members may be able to receive survivors benefits for the month that the beneficiary died.

Widow Or Widower

If you are the widow or widower of a person who worked long enough under Social Security, you can:

- receive **full** benefits at full retirement age for survivors or **reduced** benefits as early as age 60.

  If you qualify for retirement benefits on your own record, you can switch to your own retirement benefit as early as age 62.

- begin receiving benefits as early as age 50 if you are disabled **and** the disability started before or within seven years of the worker's death.

  If a widow or widower who is caring for the worker's children receives Social Security benefits, they're still eligible if their disability starts before those payments end or within seven years after they end.

- receive survivors benefits at any age, if you have not remarried and you take care of the deceased worker's child who is under age 16 or is disabled and receives benefits on the worker's record.

If you remarry **after you reach age 60** (age 50 if disabled), your remarriage will not affect your eligibility for survivors benefits.

- A widow, widower, or surviving divorced spouse cannot apply online for survivors benefits. You should contact Social Security at **1-800-772-1213** to request an appointment. (If you are deaf or hard of hearing, call our TTY number at **1-800-325-0778**.)
- If you wish to apply for disability benefits as a survivor, you can speed up the disability application process if you complete an Adult Disability Report and have it available at the time of your appointment.
- We use the same definition of disability for widows and widowers as we do for workers.

FIGURE 27.3 Scrolling even more, still on the same page

In fact, the reader needs to navigate through seven screens to finish the page. If the page had included progressive disclosure, then each topic could have been summarized in one or two sentences. The reader can then click or tap for more information. This is especially appropriate for the type of information on this page, because it is likely that only some of these sections apply to any one individual.

COUNTING CLICKS ISN'T WHAT COUNTS

Progressive disclosure requires multiple clicks. You may have heard it said that you should minimize the number of times that people have to click to get to detailed information. The number of clicks is not the important metric. People are very willing to click multiple times. In fact, they won't even notice they're clicking if they're getting the right amount of information at each click to keep them going down the path. Think progressive disclosure; don't count clicks.

KNOW WHO NEEDS WHAT WHEN

Progressive disclosure is a great technique, but it assumes that you know what most people want most of the time. If you haven't done your research on that, then you could