FIGURE 43.7. Example of indirect control through graphic design.

look, you can control where they are going to go. Figure 43.7 shows a simple example.

It is difficult, looking at this picture, for your eyes not to be led to the center of the image. A guest looking at this scene in an interactive experience would be likely to focus on the central triangle before considering what might be at the edges of the frame. This is in sharp contrast to Fig. 43.8, where the guest's eyes are compelled to explore the edges of the frame and be-
would be a good bet that the guest would be trying to find out more about the objects on the edges, rather than the middle of the scene.

These examples are abstract ones, but there are plenty of real-world examples that illustrate the same thing. Set designers, illustrators, architects, and cinematographers use these principles to guide the eye of their guests and indirectly control

FIGURE 43.8. Another example of indirect control through graphic design.
Possible visual flows on alistapart.com
This Is What Happens When You Let Developers Create UI
November 27, 2006

Deep down inside every software developer, there's a budding graphic designer waiting to get out. And if you let that happen, you're in trouble. Or at least your users will be, anyway:

Joseph Cooney calls this The Dialog:

A developer needed a screen for something, one or two text boxes and not much more, so they created "the dialog", maybe just to "try something out" and always with the intention of removing it before the product ships. They discovered they needed a few more parameters, so a couple more controls were added in a fairly haphazard fashion. "The dialog" exposes "the feature", something cool or quite useful. Admittedly "the feature" is more tailored towards power users, but it's still pretty cool. The developer thinks of new parameters that would make "the feature" even more powerful and so adds them to the dialog. Maybe a few other developers or power users see "the dialog" and also like "the feature". But why doesn't it expose this parameter? New controls are added. Pretty soon the technical team are so used to seeing "the dialog" the way it is that they
91: The *Information* symbol from the U.S. DOT signage program (a) shows perfect integration between figure and ground. Unlike the distorted versions on the right (b), the circle and question mark possess a unity of scale that cause them to be read as one, rather than two objects.
93: Poor integration often results from improper default values in UI toolkits such as OSF/Motif. The tight padding (upper row) provided by default in Motif (perhaps appropriate for applications such as telephone keypads). Better integration (lower row) can be achieved by increasing these values.
moved without impeding communication. 
Supply missing details, as in this identity for
Pentagram – and the DOT’s access icon (b).
THE MENTAL PROCESS DESCRIBED IN CHAPTER TWO WHEREBY THESE LINES BECOME A FACE COULD BE CONSIDERED CLOSURE.
but a useful guideline is available in the standardized type sizes of traditional metal typography. The series made it easy to establish easily distinguishable size differences since display type (14 point or larger) was generally provided in even multiples of 12 points. The rule is never to use cent values from this series, since this leads to ambiguity. While greater bility is provided by digital systems, the same principles of legibility

| Black Black | Bold Bold |
| Black Bold  | Bold Medium |
| Black Medium| Bold Light |

Typographic contrasts based on weight should generally span more than one “step” on the scale to ensure adequate legibility. The contrast between bold and medium or between black and bold, for example, is generally unclear and should be avoided. Better results are obtained using the stronger light and black-medium, or even black-light contrasts.

Today, adjacent values often provide inadequate contrast in type height as well. For the Univers family (88), the minimum contrast needed for effective communication is achieved with medium-black (a) and light-black (b). Contrasts above the line are weak and ambiguous, while those below the line are adequate.

Interactive design ensures that all contrasts are clearly intentional and needed to fulfill a specific communication goal. Sharpened contrasts are especially important for providing critical state feedback in GUI’s. Selections, availability of controls or menu items, and window focus are all important examples of sharpening in the Macintosh desktop interface. Active, ed, or focused elements are more prominent (by virtue of a sharp value ast) then the surrounding area, provided the solid black (or colored) text...
Hello!
My name is ______________________
My theme song is _____________________
When I grow up I want to be _____________

When I grow up I want to be _____________

The heavy typeface combines well with the heavy border. Even the line for writing on is a bit heavy.

The typeface, the thin border, and the delicate ornaments all give the same style impression.

You are cordially invited to share in our wedding celebration

Popeye & Olive Oyl

April 4
3 o'clock in the afternoon
Berkeley Square
on the same name. I have on the page, it two faces most of the avoided.

er ge,
Hello!

My name is ____________________________

My theme song is ____________________________

When I grow up I want to be ____________________________

▲ Now the contrast between the typefaces is clear (they are actually in the same family)—the very bold face contrasts the very light face. The line weights of the border and writing lines also have a clear distinction.

This invitation uses two very different faces—they are different in many ways. The graphic picks up the strength of the dark typeface, adding another contrast to the script, and creating a repetitive touch.

Popeye & Olive Oyl

You are cordially invited to come to our garden party!

April 1
3 o’clock in the afternoon
Berkeley Square
TO ABSTRACT AND SIMPLIFY OUR IMAGE, WE ARE MOVING FURTHER AND FURTHER FROM THE "REAL" FACE OF THE PHOTO.

WHY DOES IT SEEM JUST AS REAL AS THE OTHERS?

WHAT IS THE SECRET OF THE ICON WE CALL--

--THE CARTOON?
29: Interference between competing elements. Menu accelerators (i.e., individual keyboard shortcuts that invoke menu commands directly) in Windows (a) use purely textual cues for both the qualifier (e.g., Ctrl, Alt, Shift – the keys you press to indicate that the next key should invoke a command) and accelerator keys. These alphabetic qualifiers – along with the “+” symbol used to separate qualifier and accelerator – interfere with the accelerator characters, and sometimes with the menu items themselves. Contrasting these accelerators with their Macintosh counterparts (b) demonstrates the effectiveness of the simpler approach, in which a single graphical symbol is used as the qualifier for all accelerators. Because the “propeller” symbol is not confusable with the alphabetic characters, and because there is less visual information in the surrounding area, the Macintosh accelerator characters are far more readable than their Windows equivalents. They can be noticed in peripheral vision while choosing items with the mouse, which makes the logic of the accelerator scheme more apparent and incidental learning more likely. The same kind of visual interference is apparent in the Alignment icons from the OPEN LOOK Developer’s Guide (c). The readability of these images suffers from an irrelevant variation in shape within each icon that serves to obscure the relevant variation in alignment.
The U.S. Interstate Highway signage program makes effective use of perceptual grouping and information hierarchy. The eye is drawn immediately to the city name and route numbers.

**Icons**

- Engaging shape sense
- Task to process simplified.
Plate 2: The famous route diagram for the London Underground system was the first representation of a complex transportation network in which complexity was reduced through a conscious decision to alter the geometry for simplified reading. So long as accurate connectivity information is retained, the user need not be concerned with minor geographical inaccuracies or the elimination of irrelevant surface detail. The use of reduction is especially effective. This technique allows suburban routes to be greatly compressed, since users are more interested in the sequence of stops than in the precise direction of travel or distance between stations. This highly successful approach has been followed by virtually all subsequent transit systems.
However, the direct transference into actual interaction design came to me while I was in an elevator. Just as the doors began to close, I could see a woman with a large suitcase running toward me. Sympathetically, I reached down to push the “door open” button. To my horror, I pushed the “door close” button by mistake and the doors slid silently shut. As she could clearly see me reaching over to push a button, it looked to her like and I had intentionally closed the doors. I was mortified.

Standing there in the now empty elevator, I couldn’t help but thinking I had been set up. This wasn’t simply “pilot error”; there was something very wrong. I took out my camera and took a picture of these buttons (shown in figure 26.2). As I reflected on the experience, it became clear that as I had reached down to push the “open” button, I had been confronted with not one but two buttons: the open and the close button. I had to choose, in a split second, which to push. There was a momentary panic as my brain tried to decode arrow direction and expected outcome and, as most errors have it, I choose the wrong one.

I realized at that point that I was staring at the interaction design equivalent of Tufte’s $1 + 1 = 3$. If there had just been a single open button, my choice would have been clear. But as there were two buttons, a third “object” had been created: the cognitive load required to visually parse, understand, and then choose the correct button. This extra load is the unseen, untoldled cost of feature creep.