

Visualization: Indexed.

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Visualization: It's an Elephant.

VISUALIZATION. To one person, it's charts and graphs and ROI. To another, it's illustration and colorful metaphor and gallery openings. To a third, it's that wonderfully redundant compound word: infographics. *Visualization*. It's a term that's been pulled and yanked like so much conceptual taffy. It's like that old tale of three blindfolded men who are asked to describe an elephant. One touches the elephant's tail and says, "An elephant is like a rope." Another touches the elephant's leg and says, "An elephant is like a tree trunk." The third man touches the elephant's trunk and says, "An elephant is like a snake." None of them is completely wrong, but none is completely right, because none of them can see the entire animal (Figure 20-1).

Visualization is only something (and everything) you can see. It's both the entire mosaic and a single, sparkling tessera. It's not just graphs. It's not just visual metaphors. It's not just graphic design in service instead of bullet points. It's not just sketching out ideas. It's not just data analysis. Those are just slivers of the larger concept.

Really good, beautiful, powerful visualization—visualization that touches both the mind and the heart—isn't just about an image, a snapshot, or a glance through a windowpane (Figure 20-2). Powerful visualization passes the elephant test: it's practically impossible to describe, but instantly recognizable. This chapter will describe various aspects of that elephant. Together, they'll help to paint a clear picture of what visualization really is, from tusk to toe.

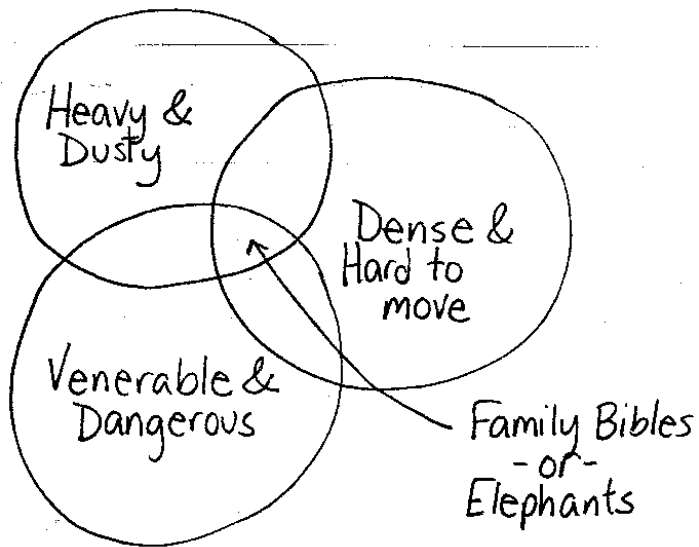
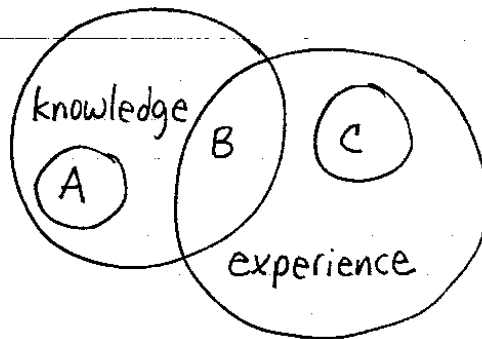


Figure 20-1. *There's always more to it*



A = Book Smarts
 B = Street smarts
 C = Internship involving the copy machine

Figure 20-2. *Knowing and doing go hand in hand*

Visualization: It's Art.

There's an image, a message in it. People stare at it and debate it. Framers are employed for another day because of it. Quality can be subjective, and aesthetics are always debatable—but the intrinsic artistry is evident. Like pornography, art is something you know when you see it, and no sooner (Figure 20-3). And visualization is widely perceived to be an art.

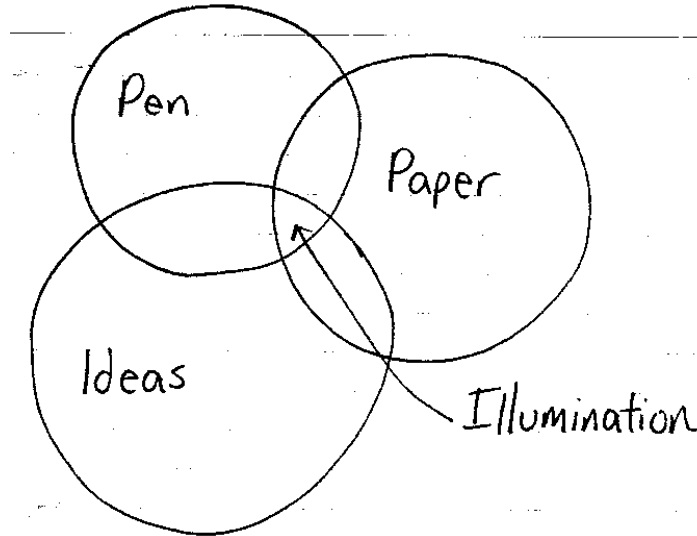


Figure 20-3. *Visualizing aha moments*

Visualization practitioners often have an air of creativity about them: they draw or paint or wear glasses with thick, black frames. Of course, as soon as something is branded as an artistic endeavor, the barriers to entry rise up around it. Those who believe they can't draw and those who would never assign themselves the label of "creative" shy away from visualization for this reason. And that's too bad—because you don't have to be a Rembrandt to have an idea that can be understood by scrawling a stick figure or two.

The beauty inherent in visualization (it can be argued) is the idea behind the image: the concept conveyed by the lines and shapes that your rods and cones observe. Just as anyone with a lump of clay can technically sculpt, anyone with an idea that can be conveyed visually can technically create a visualization (Figure 20-4). The quality of the sketch or the visualization will always be debatable. The quality of any piece of art, and of any image, will always be debatable.

Visualization, eye of the beholder—you get the idea.

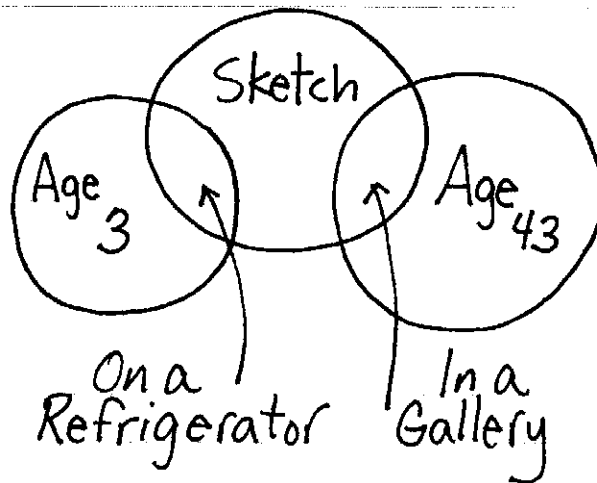


Figure 20-4. *Don't outgrow your skills*

Visualization: It's Business.

There's this little program out there—you may have heard about it. It's cheap, it's pretty much universal, and it has turned the idea of the visual aid into a tool of khaki-loving middle managers. It's called PowerPoint, and it, single-handedly, has transported visualization into the land of business (Figure 20-5).

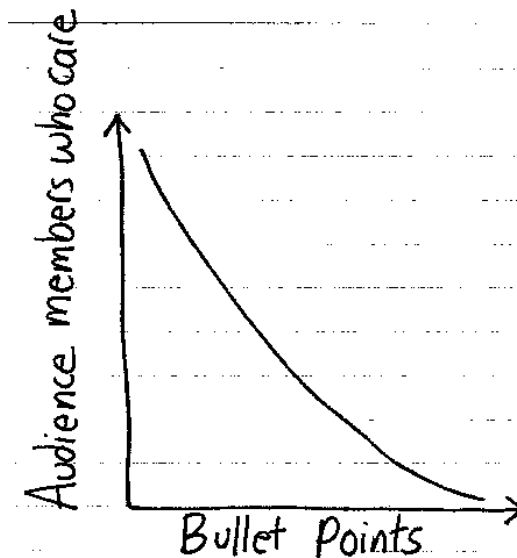


Figure 20-5. *Power point = an oxymoronic phrase*

There's no denying it: visuals are compelling. Want someone to ignore your prose? Make sure to include a lot of pictures, or graphs if you took math in college. When making a presentation to a board of directors, a prospective client, or for a midterm grade in an MBA class, going without PowerPoint is seen as quaint at best and ill-prepared at worst (Figure 20-6). Why? Because visualization is an excellent tool of persuasion. And persuasion is just another word for sales.

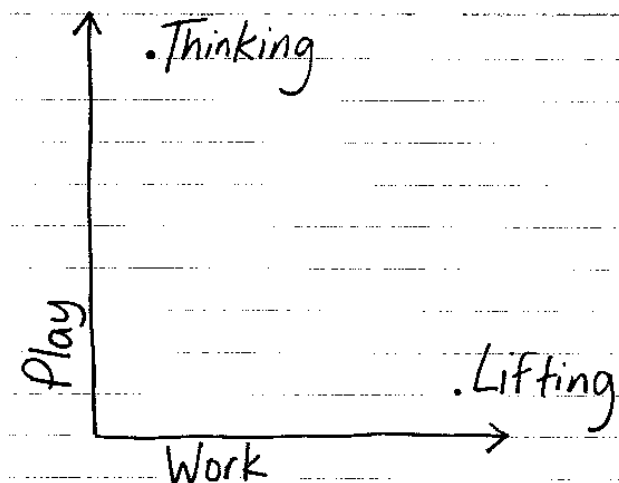


Figure 20-6. *Ideas can work for you*

Mergers. Acquisitions. Negotiations. Advertising. Propaganda. Business communication is being conveyed visually every day. Here's the back of my napkin. Here's my whiteboard. Here's the doodle of my exit strategy that I drew in that last four-hour meeting.

Seeing is believing. And believing—well, when people believe in something, they buy into it. How do you think corporate headquarters, political dynasties, and mega-churches get built?

Visualization: It's Timeless.

Those famous cave paintings in France weren't to-do lists, sentences, words, or even letter forms. They were images. Thousands of years ago, hieroglyphics held images in each character. Written Chinese does the same today. We understand smiles before we understand words. As powerful as language is, it's not as instinctive or primal as visualization (Figure 20-7).

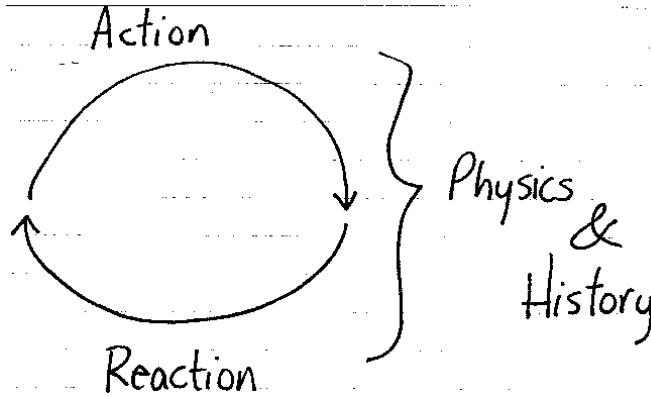


Figure 20-7. *Same old story, different authors*

When we see a photograph or a painting, or the map on the weatherman's green screen, we learn a lot more a lot faster than we would if such an image were described in words. We can listen to an hour-long description of abject poverty, or we can look at an image of a vulture hovering near an emaciated child for a fraction of a second. No matter how compelling the verbal argument is, the image shares its story faster. While we may have advanced as societies to employ complex vocabularies and languages packed with idioms and metaphors and grammars that vicious nuns teach us as children, we are still able to communicate without our languages—with only images (Figure 20-8).

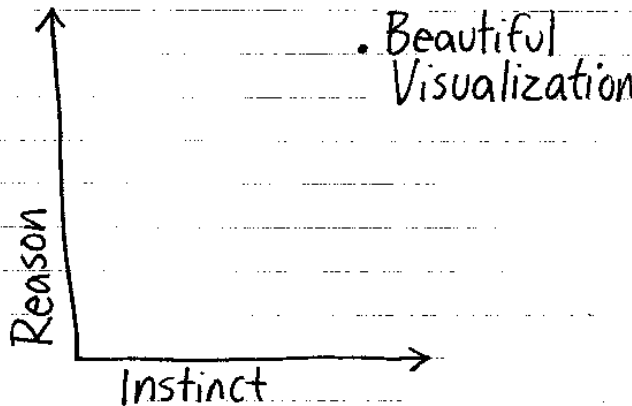


Figure 20-8. *To see is to know*

Just imagine: cave paintings and shapes scratched in ancient dirt. Before punditry. Before poetry. Before PowerPoint.

Visualization: It's Right Now.

What says more: a name or a logo? How do people recognize you: your avatar or your resume? What's the more precious piece of real estate: a famous URL or a lot in a famous zip code? Today, logos tell epic stories. Screen names equal human identities. Web addresses fund mansion renovations and the purchase of ranches, islands, and city blocks.

More than ever, we are swimming in information. We are pickling in data. More information than any human world has ever seen before or could ever hope to comprehend is generated every day (Figure 20-9). And so we turn to visualization as a means to collect, condense, and convey this information.

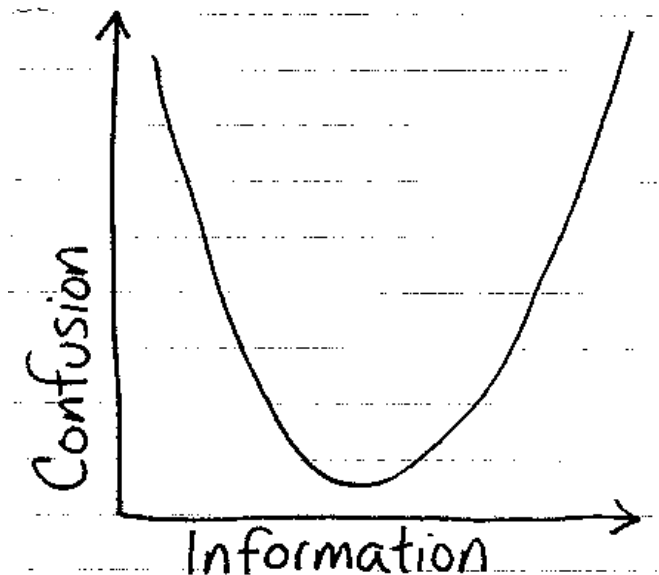
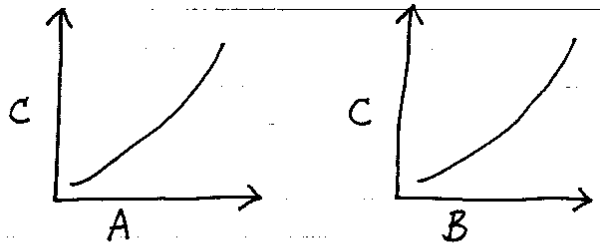


Figure 20-9. *Water, water, everywhere*

Visuals crunch data. They take reams of chunky, unwieldy, black and white spreadsheets and compact them into sleek, colorful charts. Visuals reveal patterns in vast amounts of data; they take complex and difficult-to-understand theories and elegantly explain them (Figure 20-10). Imagine data points as molecules of ice. Visualizations are the resulting snowflakes: gorgeous and organic arrangements of many smaller pieces of information.

When we want to make sense of the sea of information around us, we make visualizations. It's the age of information. And thus, one could argue that it's the age of visualization, too.



A = Dollars B = Data Points
 C = Problems we wish we had

Figure 20-10. Use either to get what you need

Visualization: It's Coded.

Letters represent sounds. Words represent ideas. We combine and weave our sentences to tell stories. The hood ornament on your car represents your tax bracket. Your wrinkles speak to your age. We communicate in codes—aural, visual, tactile, and social. Even our DNA is a code—we are built from the ground up to communicate with representational bits of data (Figure 20-11). Visualization is just another form of coded communication, with the axes of graphs as shorthand for correlation, and with characters in editorial cartoons standing in for ideologies. Photographs and paintings represent history.

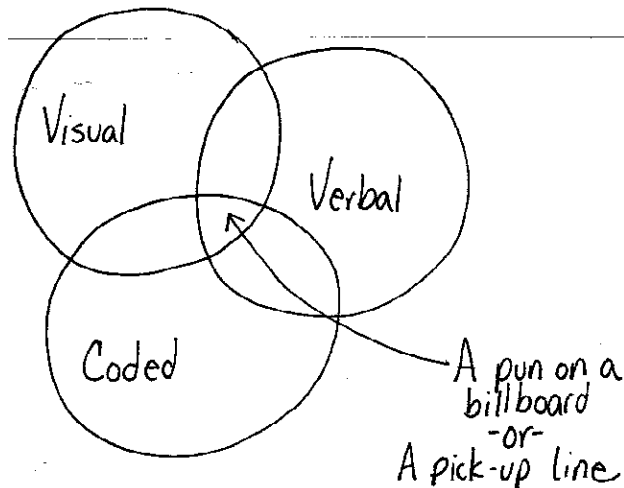


Figure 20-11. Wink wink, nudge nudge

As visualization becomes a larger area of inquiry—in ivory towers, in art studios, and on message boards—the idea of semiotics will be raised more frequently. As we look closer at signs and symbols, we’ll see that we communicate with visualizations almost as much as we speak in words. From a single finger raised to the driver who just ran that red light to hearts drawn on love notes to the use of increasingly trite emoticons, we use symbols to express ourselves.

Metaphors. Idioms. Inside jokes (or literary allusions, if you’re an English major). Our communications involve many layers of symbolism, many codes that we interpret in every conversation. Visualizations are another way to represent ideas; another not-so-secret code. The clearer the visualization is, the more people there are who can crack that code.

Gang tattoos, Rorschach tests, pieces of art with multiple interpretations—these are just a few of the many visualizations that hold hidden (and sometimes, profound) meanings (Figure 20-12).

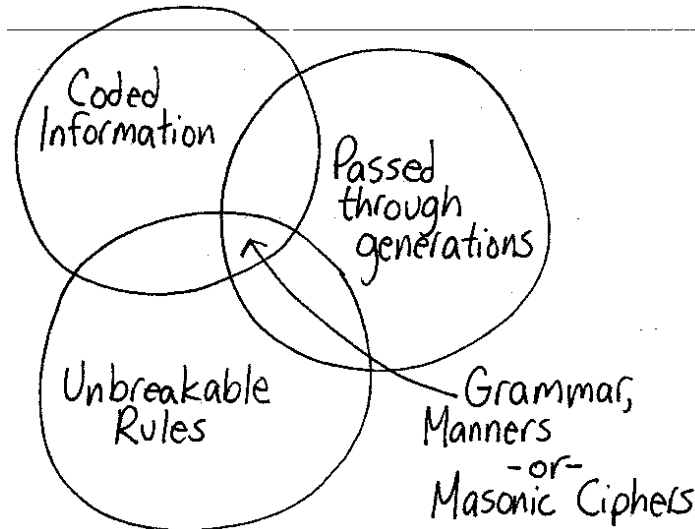


Figure 20-12. *Secrets and/or societies*

Visualization: It’s Clear.

One of the beauties often attributed to visualization is simplicity. Pure clarity! Marvelous obviousness! Splendid simplicity! An image can set the tone for a presentation, a feature article, an annual report. We look. We see. We understand. Between first glance and “Oh, I get it,” just a fraction of a second passes.

We don't always have time to dissect meanings or read a 10-page summary. We want to look at a chart, see year-over-year results, and move on. Images are incredibly good at conveying information quickly. Clarity allows us to understand and carry on. Ambiguity takes time to ponder—time that we just don't have.

We learn more about a person in the first 10 seconds of meeting him than hours of Google-stalking could have ever told us. We judge books by covers and real estate by curb appeal. We see a picture of the Statue of Liberty with a noose around her neck and we understand that injustice is occurring. We see devil horns drawn on a poster of the jock running for class president and we understand that someone dislikes him. It's clear what visuals convey (Figure 20-13). But just because the message is clear, it might not always be true.

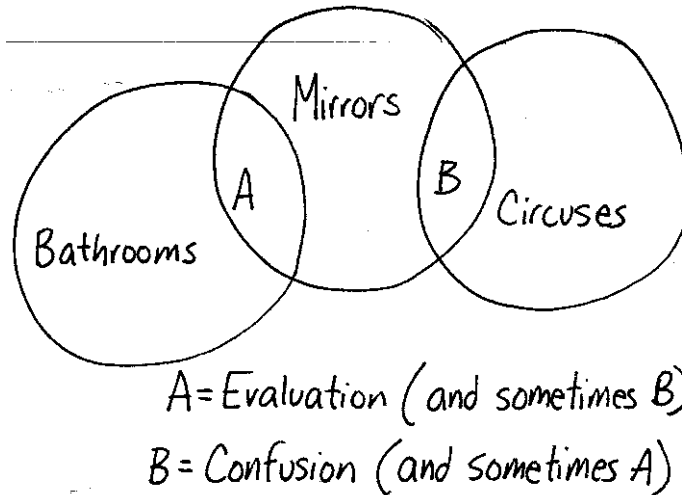
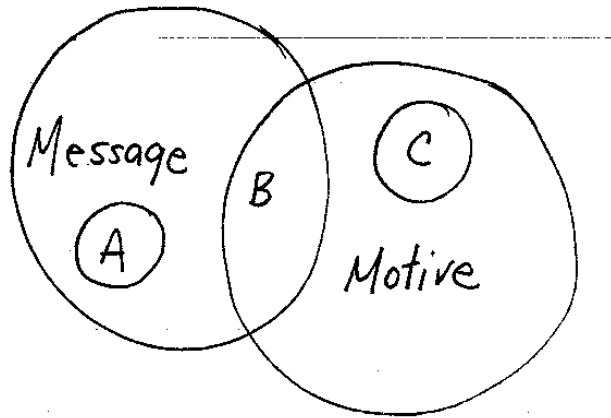


Figure 20-13. *It's all context*

We don't trust news from biased sources. When an offer sounds amazing, we know that the fine print will be dense and long and written against us. Truth in advertising is a myth. Remember this when gazing upon a beautiful visual. Its message may be clear and obvious, but the motivations behind it may take more time to see (Figure 20-14).



A=Love B=Advertising C=Money

Figure 20-14. Ask why you are seeing what's in front of you

Visualization: It's Learnable.

The display of information, in any and all forms, is open to everyone to both create and consume. From the way you wear your hair to the color of your coat, you are sending visual signals and conveying visual information. Anyone can pick up a pen and draw a line on the wall or a sheet of paper. Pixels can likewise be rearranged to express the thoughts of anyone with access to a computer.

You don't have to speak Italian to appreciate the art of Michelangelo. Anyone can visit the Louvre and leave inspired. Likewise, an infant can recognize human faces and expressions without knowing so much as a word.

And just like learning to read and to communicate with words, it's possible through practice to become a skilled visual communicator. *Drawing* is the ability to translate scenes onto paper—making a direct translation. *Visualization* is the ability to put ideas onto paper—taking data and distilling it into a concept. Don't confuse the two. The thinking process is different, even if a pen and paper unite the two skills. Ideas (concepts, theories, equations, opinions, processes) behave differently than a still life painting of a bowl of fruit (Figure 20-15).

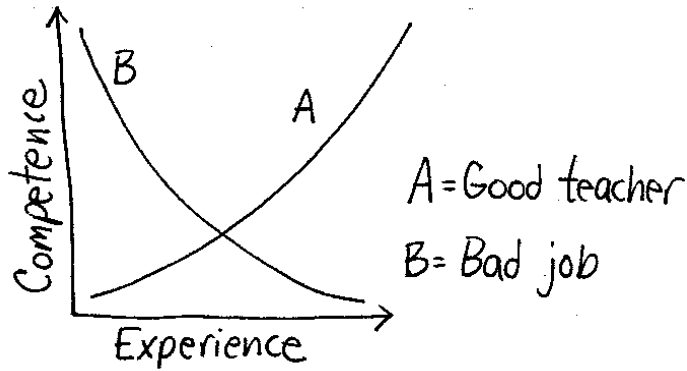
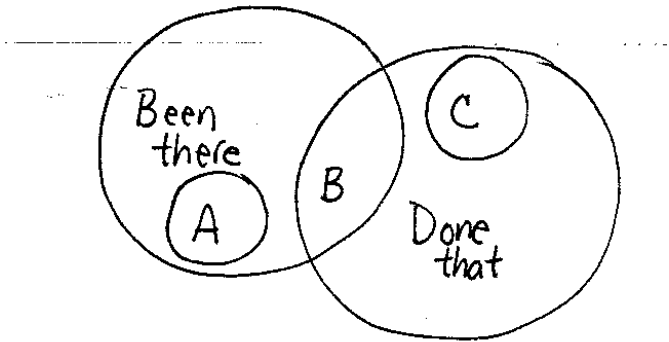


Figure 20-15. *Know more, do more*

Sketching symbols and metaphors can be done in a sloppy, messy fashion, and still be powerful and clear. Remember that the next time you trace a heart in the steam on a windowpane (Figure 20-16).



A = Dream B = Reality C = Resumé

Figure 20-16. *You are what you do*

Visualization: It's a Buzzword.

So, is this a meme (Figure 20-17)? Is visualization merely the latest turn of phrase that's sweeping the feature pages of business magazines, RFPs, and course syllabi? Is it another word that marketers are batting around to sound smart? Or is it less of a fad, and more of a response to our current data-saturated environment?

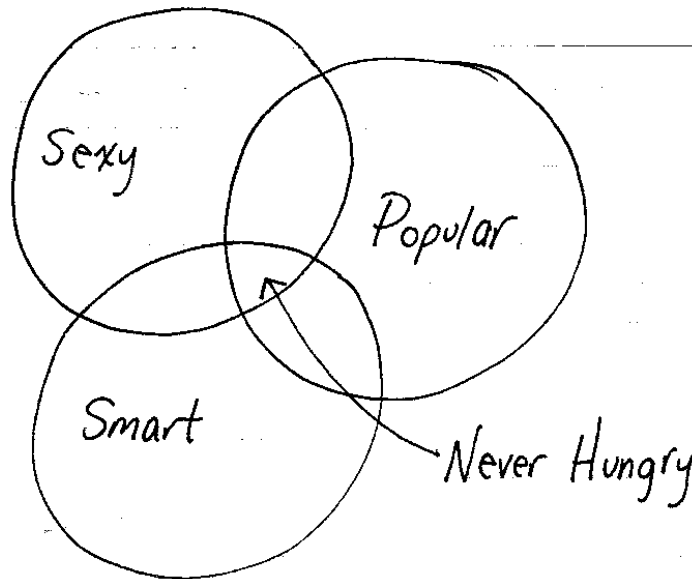


Figure 20-17. *Welcome to the Internet*

Visualization is getting a lot of attention: it helps us cope with information overload, saves us time, and reaches us on an innate level. Well-crafted visualizations are compelling and beautiful to look at and to intellectually enjoy. And with software at the disposal of so many, there has never been an easier time to turn ideas into images. And so it seems that the popularity of visualization is a function of necessity: the more data we have to sift through, the easier it is to convert that data to images, the easier it is to juxtapose images with text, the more we want to persuade others and promote ourselves, the more visualizations we'll see all around us.

The word is popular. The idea is popular. The applications are popular. Visualization helps us communicate. It enables and fosters connections. And as long as those last two statements are true, we can but hope that visualization is popular like the Beatles, and not the Monkees (Figure 20-18).

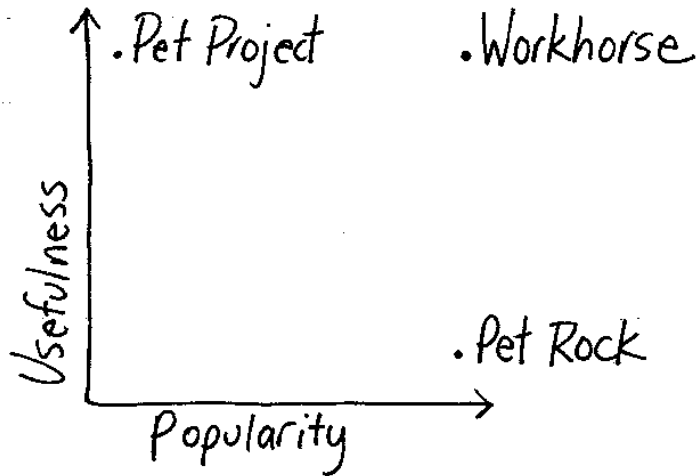


Figure 20-18. *Are you joining a revolution or a fad?*

Visualization: It's an Opportunity.

If you want to connect, compel, and communicate, you need to use visuals. You can combine art and business. You can reach people quickly, powerfully, and emotionally with visuals. Even if you don't think of yourself as creative, or as an artist, you can be a visualizer (Figure 20-19).

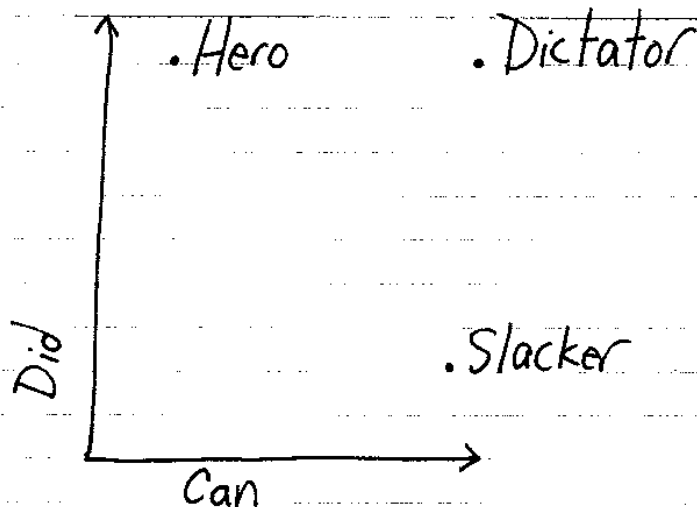


Figure 20-19. *Your excuses aren't valid*

Just as writers read to sculpt their skill, visualizers look. They stare with intensity and peer into places others would rather ignore. They look not only at images, but also at events. They gawk at causes and effects and motives and means. And sometimes, they close their eyes and wonder how to illustrate the universe in a Word document, or the depth of their feelings in an email, or the scope of their business in a single slide (Figure 20-20).

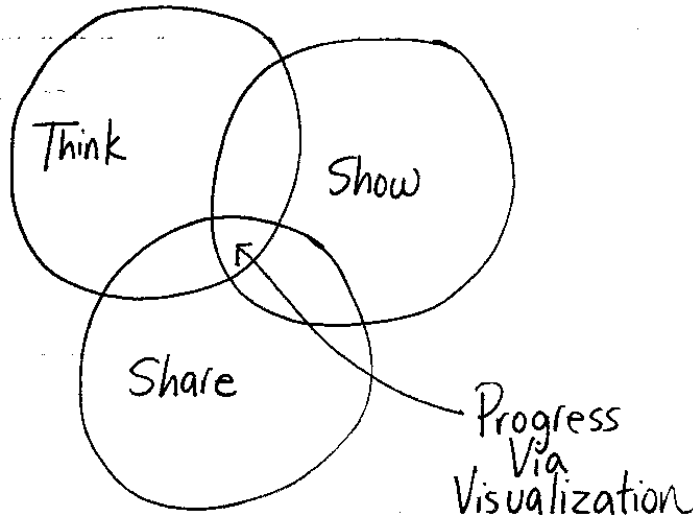


Figure 20-20. *Look closer and go further*

Observation is the first step toward visualization, and you are doing it at this very minute. If you can think it, you can visualize it. If you can visualize it, you can share it. And if you can share it, you can change the world.

But first: look around you. You're looking at opportunity.