Commencement address to the graduating seniors in the departments of cognitive science, mass communications and interdisciplinary field studies at University of California Berkeley, on May 21, 1998.

Distinguished staff, honored professors, beloved bureaucrats, fortunate matriculators, fellow content-providers, ladies and gentlemen. Thank you for inviting me here today. I want to say a few words about words. In the beginning was the word, and yet "in the beginning" is three words. This is not an actual paradox, this is a happy trick of English. When I was a young person, I did not understand that words were fungible. Indeed, when I was a young person, I did not understand that "fungible" was a word. Words are both analog and digital, their meanings changeable and multiple, their penumbras and resonances intertwined. Nike is a shoe company, a goddess and a missile. Coke is a kind of coal, an addictive drug and the most popular soft drink in the world. Bugs are insects, computer errors and covert listening devices, while bugging is both annoying and gratifying.

It is fashionable to say we live in a post-literate society, that somehow the advent of the graphical user interface has meant the death of reading. This

is of course not entirely true.

The future is chunky with words. The next 50 years will be the most word-intensive time since Gutenberg developed a method to get Bibles in the hands of every citizen. He thought he was spreading the word of God; he was actually spreading the god of words. (I made that phrase up just last night and am quite proud of it. If your friends ask you later about this speech, be sure to remember that phrase—"He thought he was spreading the word of God, but he was actually spreading the god of words." They'll ask you what that means, and you'll say, I dunno, the first part of the speech went by pretty fast.)

Words have more than multiple meanings; they have multiple functions. Put the letters "http" in front of a string of words, and it becomes a wormhole into another part of the universe. It is a hot link, which is also, of course, a kind of sausage.

If you click on it using your mouse (which is also both a rodent and a bruise under the eye), you're someplace else entirely. You know little about your new location; you

have to read to find out anything. Reading is a survival skill.

The world of hyperlinks is rather like the ancient text-based computer game called "Adventure." You would type a single letter (n for north, s for south, and so on) and you would immediately get a navigational message, the most famous of which was "You are

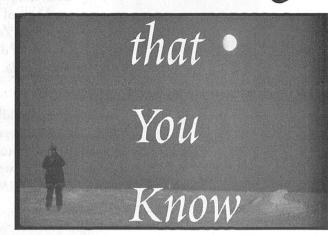
in a maze of twisty passages, all alike."

The Web is a great big adventure game; its unique power comes from the sense of choice it gives you. Go north, go south, type anythingatall.com, and you are transported somewhere else with a magic that quickly becomes commonplace. (It seems to be the nature of technology that its wonders rapidly become ordinary, whereas the wonders of nature—a sunset, a tulip, an orgasm—stay wonderful pretty much forever.) But it is new magic nevertheless, no matter how routine it seems, and it's always a good idea to respect the new magic, particularly the kind that seems ordinary. A penny arcade game called the Zoetrope became the most powerful propaganda tool the world yet knows.

All of which means that it's a great time to be a content provider. I envy you, and so I am going to do what envious people frequently do. I am going to give you advice.

But first I am going to tell you a story. In 1914, Sir Ernest Shackleton, one of England's most successful explorers, decided to cross the Antarctic continent on foot. You might think that this was a zany and pointless enterprise, and so it was. Then as now, men were much given to symbolic journeys, partly for personal glory, partly to rekindle some spirit of heroism and sacrifice that every age perceives is about to be extinguished. We went to the moon for much the same reason that Shackleton wanted to walk across Antarctica. He had men, supplies, dogs, sleds, food caches, maps and a sturdy boat. He set sail on the very day that England declared war on Germany, so his trek was to become a matter of great national pride. He was walking for Anglo-Saxon values against the cruel and godless Huns. Alas, he never made it so far as the coastline of Antarctica. His boat, the Endurance, was trapped in the ice in the Weddell Sea ("frozen like an almond in the

Knowing



Nothing

middle of a chocolate bar," wrote one crew member)—about 100 miles from the continent itself.

For a long while, it drifted helplessly, then the ice began to squeeze the ship. Shackleton and his men offloaded everything and listened for three agonizing weeks as the ship was crumpled and finally crushed. It sounded, they said, like animals dying.

There followed one of the great struggles for survival in modern history. First they had to make for open water, dragging their lifeboats behind them, over the shifting ice floes. They had to sleep on the ice as well, kill seals and eventually their own dogs for food, combat frostbite, boils, depression, hunger and eventually, the dark, terrible Arctic winter.

When they reached water, things did not improve much. They were a thousand miles from the nearest human habitation. They had no hope of rescue. They had no radio, no navigational

aids beyond maps and sextants, no engines for the tiny lifeboats.

Eventually, they reached an uninhabited island—the first solid ground their feet had touched for more than a year—and made a sort of camp. After a time, Shackleton and five other men got into an open boat, 22 feet long and six feet wide at its broadest point, and set off for a thousand-mile sail in the stormiest waters on the globe. Remarkably, through unimaginable pain and privation, they made landfall at South Georgia Island, site of a small sealing station they had left some two years before. But the coast was rocky and the tides were against them; they were shipwrecked on the wrong side of the island, with a 4,000-foot icy ridge between them and the station.

Shackleton and two other men began climbing at dawn. By night, they were nowhere near the summit. There was a sliver of moon; they searched for handholds by its thin light. At about midnight, they reached the summit. They had no idea where along the ridge line they were. They could not see down the steep slopes below them. They were less than five line-of-sight miles from the station, at the end of a two-year journey of incredible endurance.

Shackleton felt himself getting sleepy. He realized that he was experiencing the first

symptoms of hypothermia.

This is an entirely true story, by the way. Many journals survive; many books were written. Shackleton had his men sit down on the ridge and link themselves together as though they were riding a toboggan. He himself sat in front. Each man put his arms around the chest of the man in front of him. Without a word, Shackleton launched his small crew over the ridge line and into the blackness below.

A thousand feet later, the snow field began leveling off. Another thousand feet, and the party came to rest naturally against a small rock. Twelve hours later, they walked up to the main building at the encampment. A man opened the door. "Who the hell are you?" he asked. "My name is Shackleton," said Shackleton. It was all over. The men back on the island were rescued a month later. Not a man was lost.

And now we come to the advice. There will come a time in your life when you are standing in the dark on a snowy ridge line. I speak metaphorically—at least, I hope I do. You will, at that moment, realize the worthlessness of opinions. All your life, and probably for most of your college career, you have been drowning in a sea of opinions. You have been instructed to mediate your experiences with opinions. You have sometimes found yourself in the uncomfortable position of holding the wrong opinion, of liking a work of art which it is not useful to like, say, or of seeing a pattern which, it is commonly believed, does not actually exist.

Opinions are great barnacles of the intellect; they are substitutes, not just for thought, but for life itself. They come between you and beauty; they blind you to unexpected ineffability;

they convince you that the thing you love is not worthy of you.

And what good are your opinions on the icy ridge? What good are they when you are in a maze of twisty passages, all alike? Information would be useful; you can always use information. But opinions are of no use. Jettison as many as you can right now, in anticipation of that moment when you have to travel light.

The other thing that you will have been told is that failure is the worst thing of all. Because failure is bad, experimentation is discouraged. I submit to you that failure is the best friend you have. Failure is the only way to get ready for that moment on the mountain. Failure is the only thing that makes you strong and smart. Cherish your failures; remember them; tell them to other people. Failure is just wisdom in ragged garments.

So we return to the situation. You are on the ridge line and the moon is down and you have no options left and you can feel yourself slowly dying. What is the very best thing you can do? Link arms with your friends and launch yourself into the darkness, knowing that you know nothing and having the courage of your ignorance.

Because that's when the fun really begins. Thank you.