

EXHIBIT C

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Table of Contents

As filed with the Securities and Exchange Commission on August 13, 2004

Registration No. 333-114984

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 7

TO

FORM S-1

REGISTRATION STATEMENT

Under

The Securities Act of 1933

GOOGLE INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

7375
(Primary Standard Industrial
Classification Code Number)

77-0493581
(I.R.S. Employer
Identification Number)

**1600 Amphitheatre Parkway
Mountain View, CA 94043
(650) 623-4000**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Eric Schmidt
Chief Executive Officer
Google Inc.
1600 Amphitheatre Parkway
Mountain View, CA 94043
(650) 623-4000**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

**Larry W. Sonsini, Esq.
David J. Segre, Esq.
Wilson Sonsini Goodrich & Rosati
Professional Corporation
650 Page Mill Road
Palo Alto, California 94304-1050
(650) 493-9300**

**Copies to:
David C. Drummond, Esq.
Jeffery L. Donovan, Esq.
Anna Itoi, Esq.
Google Inc.
1600 Amphitheatre Parkway
Mountain View, CA 94043
(650) 623-4000**

**William H. Hinman, Jr., Esq.
Simpson Thacher & Bartlett LLP
3330 Hillview Avenue
Palo Alto, California 94304
(650) 251-5000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are being offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the

Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee (3)
Class A common stock, par value \$0.001 per share	29,552,157 shares	\$ 135.00	\$ 3,989,541,195	\$ 505,474.87

- (1) Includes 3,854,628 shares which the underwriters have the option to purchase to cover over-allotments, if any.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(a) promulgated under the Securities Act of 1933.
- (3) Previously paid.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

similar to ours; and the views of research analysts. As a result, our initial public offering price may not be sustainable once trading begins, and the price of our Class A common stock may decline.

If research analysts publish or establish target prices for our Class A common stock that are below the initial public offering price or then current trading market price of our shares, the price of our shares of Class A common stock may fall.

Although the initial public offering price of our shares may have little or no relationship to the price determined using traditional valuation methods, we believe that research analysts will rely upon these methods to establish target prices for our Class A common stock. If research analysts, including research analysts affiliated with our underwriters, publish target prices for our Class A common stock that are below our initial public offering price or the then current trading market price of our shares, it could cause our stock price to decline significantly.

Submitting a bid does not guarantee an allocation of shares of our Class A common stock, even if a bidder submits a bid at or above the initial public offering price.

Our underwriters may require that bidders confirm their bids before the auction for our initial public offering closes. If a bidder is requested to confirm a bid and fails to do so, that bid will be rejected and will not receive an allocation of shares even if the bid is at or above the initial public offering price. In addition, we, in consultation with our underwriters, may determine, in our sole discretion, that some bids that are at or above the initial public offering price are manipulative and disruptive to the bidding process, in which case such bids will be rejected.

The systems and procedures used to implement our auction and the results of our auction could harm our business and our brand.

Only a small number of initial public offerings have been accomplished using auction processes in the U.S. and other countries, and none on the scale of our offering. We expect our auction structure to face scalability and operational challenges. Our underwriters' systems that manage the auction process could fail to operate as anticipated. This could require us to delay our initial public offering, potentially even after our underwriters have started taking bids, and harm our brand. Our underwriters must modify their internal systems and procedures to accommodate our auction process. This could increase the risk that our underwriters' systems or procedures fail to operate as anticipated.

Many of our users may submit bids in our auction with the hope of becoming stockholders. If these users either do not receive share allocations in our offering or if our share price immediately declines after the offering, our brand could be tarnished and users and investors could become frustrated with us, potentially decreasing their use of our products and services. If this occurs, our business could suffer.

Risks Related to Our Offering

If our involvement in a September 2004 magazine article about Google were held to be in violation of the Securities Act of 1933, we could be required to repurchase securities sold in this offering. You should rely only on statements made in this prospectus in determining whether to purchase our shares.

Information about Google has been published in an article appearing in the September 2004 issue of *Playboy Magazine* and entitled "Playboy Interview: Google Guys." The text of the article, which is included in this prospectus as Appendix B, contains information derived from an interview of Larry and Sergey conducted in April 2004, prior to the filing of our registration statement of which this prospectus is a part. The article presented certain statements about our company in isolation and did not disclose many of the related risks and uncertainties described in this prospectus. As a result, the article should not be considered in isolation and you should make your investment decision only after reading this entire prospectus carefully.

Table of Contents**Appendix B**

Please see "Risk Factors—If our involvement in a September 2004 magazine article about Google were held to be in violation of the Securities Act of 1933, we could be required to repurchase securities sold in this offering. You should rely only on statements made in this prospectus in determining whether to purchase our shares" for certain information in the following article that has been modified or updated.

PLAYBOY INTERVIEW: GOOGLE GUYS

A candid conversation with America's newest billionaires about their oddball company, how they tamed the web and why their motto is "Don't be evil"

Just five years ago a googol was an obscure, unimaginable concept: the number one followed by 100 zeros. Now respelled and capitalized, Google is an essential part of online life. From American cities to remote Chinese villages, more than 65 million people use the Internet search engine each day. It helps them find everything from the arcane to the essential, and Google has become a verb, as in, "I Googled your name on the Internet and, uh, no thanks, I'm not interested in going out Friday night."

In addition to being the gold standard of Internet search engines, Google is setting a new example for business. It's difficult to imagine Enron or WorldCom with a creed similar to Google's: "Don't be evil," a motto the company claims to take seriously.

This maxim was perhaps most apparent in May when the company announced it was going public. Google founders Sergey Brin and Larry Page explained their lofty ambitions. "Searching and organizing all the world's information is an unusually important task that should be carried out by a company that is trustworthy and interested in the public good," they wrote in an unprecedented letter to Wall Street. With the release of the letter, Newsweek reported, "The century's most anticipated IPO was on, and the document, revealing the search giant's financial details, business strategy and risk factors, instantly eclipsed Bob Woodward's Iraq book as the most talked about tome in the nation."

Page, 31, is the son of Carl Page, a pioneer in computer science and artificial intelligence at the University of Michigan. Larry was surrounded by computers when he was growing up and once built a programmable ink-jet printer out of Legos. Reticent but wide-eyed and reflective, he is Google's clean-cut geek in chief, the brilliant engineer and mathematician who oversees the writing of the complex algorithms and computer programs behind the search engine. His partner, Brin, 30, is a native of Moscow, where his father was a math professor. As Jews, the Brins were discriminated against and taunted when they walked down the street. "I was worried that my children would face the same discrimination if we stayed there," his father told Reuters. "Sometimes the love for one's country is not mutual." The family emigrated to the U.S. when Brin was six. A part-time trapeze artist, Brin is the company's earnest and impassioned visionary—a quieter, nerdier Steve Jobs. Early on, when Google CEO Eric Schmidt was asked how the company determines what exactly is and is not evil, he answered, "Evil is whatever Sergey says is evil."

Page and Brin met as graduate students at Stanford University. After years of analyzing the mathematics, the computer science and the psychological intricacies involved in searching for useful information on the ever-growing World Wide Web, they came up with the Google search engine in 1998. It was far superior to existing engines, and many companies, including Yahoo and MSN, licensed it. (Yahoo recently severed its ties with Google, introducing its own search engine. Bill Gates, who once admitted that "Google kicked our butts" on search-engine technology, has announced that Microsoft will launch its own search engine next year.) With its simple design and unobtrusive ads, Google has quickly become one of the most frequented websites on the Internet, and the company is one of the fastest growing in history. The financial press has estimated that after the initial public offering, Google will be valued at \$30 billion, and Brin and Page, each of whom owns about 15 percent, will be worth more than \$4 billion apiece.

B-1

Table of Contents

*The two are unlikely billionaires. They seem uninterested in the accoutrements of wealth. Both drive Priuses, Toyota's hybrid gas-and-electric car. It is impossible to imagine them in Brioni suits. Brin often wears a T-shirt and shorts. Page usually dresses in nondescript short-sleeve collared shirts. Both rent modest apartments. Their only indulgences so far fall into the realm of technology, such as Brin's Segway Human Transporter, which he occasionally rides around the Googleplex, the company's Silicon Valley headquarters. (Page often scoots around on Rollerblades or rides a bike.) Page bought a digital communicator that employs voice-recognition technology to place phone calls. Both men are notorious workaholics, though *The Wall Street Journal*, which uncharacteristically did some sleuthing into their personal lives, reported that they have girlfriends. "Mr. Page has been dating an employee at Google, according to people close to the company," the *Journal* reported. "Mr. Brin has started going out with the sister of a Google employee."*

Contributing Editor David Sheff met with the Google founders at the Googleplex. It is unlike most other offices, with free Odwalla juice, random toys, a pool table, a courtyard lined with scooters and bikes, and an on-site masseuse. In the company's airy cafeteria, the former chef to the Grateful Dead prepares lunch. Sheff arrived at Google just before the company entered the quiet period prior to its IPO, but he found Brin and Page less interested in the billions of dollars on the horizon than in the day-to-day challenge of running a hugely successful company that provides a valuable service, does good in the world and is fun to work for.

"When I arrived, Brin was indeed having fun, playing a sweaty game of volleyball in an open-air plaza," reports Sheff. "Dragged in shoeless from the court, he contemplated questions with great seriousness while occasionally stabbing at a salad. Throughout our conversation, he and Page, who wore shoes, rarely sat down. Instead they stood up, leaned on their chair backs, climbed on their chairs and wandered about the windowed conference room. It's apparently impossible to sit still when you're engaged in changing the world."

PLAYBOY: Google has emerged as one of the most watched companies in the world. Since deciding to go public, have you worried that Google could become less fun because of quarterly reports and the scrutiny of thousands of investors?

PAGE: I worry, but I've worried all along. I worried as we got bigger and there were new pressures on the company. It wasn't so long ago that we were all on one floor. Then we moved to a new, larger office building and were on two floors. We added salespeople. Each change was huge and happened over a very short period of time. I learned you have to pay a lot of attention to any company that's changing rapidly. When we had about 50 people, we initiated weekly TGIF meetings on Friday afternoons so everyone would know what had happened during the week. But those meetings have broken down because we now have too many people, about 1,000, including many who work in different time zones. We try to have a summation of the week's work via e-mail, but it's not the same. When you grow, you continually have to invent new processes. We've done a pretty good job keeping up, but it's an ongoing challenge.

PLAYBOY: It's one thing to have volleyball games, refrigerators full of free juice and massages when you're a start-up, but can you maintain such a laid-back culture as a public company?

PAGE: We think a lot about how to maintain our culture and the fun elements. I don't know if other companies care as much about those things as we do. We spent a lot of time getting our offices right. We think it's important to have a high density of people. People are packed together everywhere. We all share offices. We like this set of buildings because it's more like a densely packed university campus than a typical suburban office park.

PLAYBOY: We read that you originally wanted a building without telephones.

BRIN: That was Larry. He was making the argument that you call most people on their cell phones because you're not sure if they're at their desk. Why bother having land lines? We decided to have them, though, because the quality is better. It's nice to have them.

Table of Contents

PLAYBOY: Do you subscribe to any particular management theories, or do you make them up as you go?

PAGE: We try to use elements from different companies, but a lot is seat-of-your-pants stuff.

PLAYBOY: How will you avoid the mistakes of many other dot-coms? After their IPOs, employees became more focused on the stock price than on their jobs. Many of those companies are gone.

PAGE: Those companies are not good analogues for Google.

PLAYBOY: But like you, they were Internet-focused technology companies. What's the difference?

PAGE: A lot of those companies were around for less than a year or two before they went public. We've been around for five. We're at a pretty significant scale, too. We have more than 150,000 advertisers and a lot of salespeople. Millions of people use Google. It's a completely different thing.

PLAYBOY: And you're profitable.

PAGE: That's a difference, yes. The dot-com period was difficult for us. We were dismayed in that climate.

PLAYBOY: What dismayed you?

PAGE: We knew a lot of things people were doing weren't sustainable, and that made it hard for us to operate. We couldn't get good people for reasonable prices. We couldn't get office space. It was a hypercompetitive time. We had the opportunity to invest in 100 or more companies and didn't invest in any of them. I guess we lost a lot of money in the short term—but not in the long term.

PLAYBOY: Companies tried to buy you, too. Did you ever consider selling Google?

PAGE: No. We think we're an important company, and we're dedicated to doing this over the long term. We like being independent.

PLAYBOY: Is your company motto really "Don't be evil"?

BRIN: Yes, it's real.

PLAYBOY: Is it a written code?

BRIN: Yes. We have other rules, too.

PAGE: We allow dogs, for example.

BRIN: As for "Don't be evil," we have tried to define precisely what it means to be a force for good—always do the right, ethical thing. Ultimately, "Don't be evil" seems the easiest way to summarize it.

PAGE: Apparently people like it better than "Be good."

BRIN: It's not enough not to be evil. We also actively try to be good.

PLAYBOY: Who ultimately decides what is evil? Eric Schmidt, your CEO, once said, "Evil is whatever Sergey decides is evil."

PAGE: That was not one of his best quotes, though it's memorable.

PLAYBOY: How does it work?

BRIN: We deal with all varieties of information. Somebody's always upset no matter what we do. We have to make a decision; otherwise there's a never-ending debate. Some issues are crystal clear. When they're less

Table of Contents

clear and opinions differ, sometimes we have to break a tie. For example, we don't accept ads for hard liquor, but we accept ads for wine. It's just a personal preference. We don't allow gun ads, and the gun lobby got upset about that. We don't try to put our sense of ethics into the search results, but we do when it comes to advertising.

PLAYBOY: Who decides that wine is all right but hard liquor isn't?

BRIN: We collect input. I think we do a good job of deciding. As I said, we believe that "Don't be evil" is only half of it. There's a "Be good" rule also.

PLAYBOY: How are you good?

BRIN: We have Google grants that give advertising to nonprofit organizations. A couple hundred nonprofits—ranging from the environment to health to education to preventing various kinds of abuse by governments—receive free advertising on Google.

PAGE: We're also working to set up a Google foundation that will have even broader initiatives. The "Be good" concept also comes up when we design our products. We want them to have positive social effects. For example, we just released Gmail, a free e-mail service. We said, "We will not hold your e-mail hostage." We will make it possible for you to get your e-mail out of Gmail if you ever want to.

BRIN: You won't have to stay with us just to keep your address.

PAGE: Which is something we view as a social good.

BRIN: Another social good is simply providing a free and powerful communication service to everyone in the world. A schoolchild in Cambodia can have a Gmail account.

PLAYBOY: But Yahoo and MSN's Hotmail already offer free e-mail accounts.

BRIN: This one has one gigabyte of storage—200 times more.

PLAYBOY: But there's a catch. You have stated that you will scan e-mail in order to target advertisements based on its content. As a *San Jose Mercury News* columnist wrote, "If Google ogles your e-mail, could Ashcroft be far behind?"

BRIN: When people first read about this feature, it sounded alarming, but it isn't. The ads correlate to the message you're reading at the time. We're not keeping your mail and mining it or anything like that. And no information whatsoever goes out.

PLAYBOY: Regardless, it's analogous to someone looking over our shoulder as we write private messages.

PAGE: You should trust whoever is handling your e-mail.

BRIN: We need to be protective of the mail and of people's privacy. If you have people's e-mail, you have to treat that very seriously. We do. Everyone who handles e-mail has that responsibility.

PLAYBOY: The Electronic Privacy Information Center equates such monitoring with a telephone operator listening to your conversations and pitching ads while you talk.

BRIN: That's what Hotmail and Yahoo do, don't forget. They have big ads that interfere with your ability to use your mail. Our ads are more discreet and off to the side. Yes, the ads are related to what you are looking at, but that can make them more useful.

PAGE: During Gmail tests, people bought lots of things using the ads.

Table of Contents

BRIN: Today I got a message from a friend saying I should prepare a toast for another friend's birthday party. Off to the side were two websites I could go to that help prepare speeches. I like to make up my own speeches, but it's a useful link if I want to take advantage of it.

PLAYBOY: Even that sounds ominous. We may not want anyone—or any machine—knowing we're giving a speech at a friend's birthday party.

BRIN: Any web mail service will scan your e-mail. It scans it in order to show it to you; it scans it for spam. All I can say is that we are very up-front about it. That's an important principle of ours.

PLAYBOY: But do you agree that it raises a privacy issue? If you scan for keywords that will trigger ads, you could easily scan for political content.

BRIN: All we're doing is showing ads. It's automated. No one is looking, so I don't think it's a privacy issue. To me, if it's a choice between big, intrusive ads and our smaller ones, it's a pretty obvious choice. I've used Gmail for a while, and I like having the ads.

PLAYBOY: Do the ads pay for the extra storage space?

BRIN: Yes. Targeted advertising is an important component. We could have had glaring videos appear before you look at every message. That could generate revenue too. Our ads aren't distracting; they're helpful.

PAGE: I find it works well. And it's an example of the way we try to do good. It's a high-quality product. I like using it. Even if it seems a little spooky at first, it's useful, and it's a good way to support a valuable service.

PLAYBOY: Did the outcry about the privacy issue surprise you?

BRIN: Yes. The Gmail thing has been a bit of a lesson.

PAGE: We learned a few things. There was a lot of debate about whether we were going to delete people's mail if they wanted it to be deleted. Obviously, you want us to have backups of your mail to protect it, but that raises privacy issues. We created a policy statement about privacy, and the attorneys probably got a little ahead of themselves. The lawyers wrote something that was not very specific. It said something like, "If you request that we delete your e-mail, it may remain on a backup system for a while." It led people to say, "Google wants to keep my deleted mail." That's not our intent at all. Since then we have added some language explaining it. We intend to try to delete it.

PLAYBOY: That's not reassuring.

PAGE: But you wouldn't want us to lose your mail, either. There's a trade-off. So yes, we learned some things. We could have done a better job on the messaging. In its earliest testing stages Gmail was available only to a small number of people. People started talking about it before they could try it. I didn't expect them to be so interested. We released the privacy policy, and they were very interested in that. It was all they had access to, so it sparked a lot of controversy. The more people tried Gmail, however, the more they understood it.

BRIN: Journalists who tried it wrote positive reviews.

PLAYBOY: With the addition of e-mail, Froogle—your new shopping site—and Google news, plus your search engine, will Google become a portal similar to Yahoo, AOL or MSN? Many Internet companies were founded as portals. It was assumed that the more services you provided, the longer people would stay on your website and the more revenue you could generate from advertising and pay services.

PAGE: We built a business on the opposite message. We want you to come to Google and quickly find what you want. Then we're happy to send you to the other sites. In fact, that's the point. The portal strategy tries to own all of the information.

Table of Contents

PLAYBOY: Portals attempt to create what they call sticky content to keep a user as long as possible.

PAGE: That's the problem. Most portals show their own content above content elsewhere on the web. We feel that's a conflict of interest, analogous to taking money for search results. Their search engine doesn't necessarily provide the best results; it provides the portal's results. Google conscientiously tries to stay away from that. We want to get you out of Google and to the right place as fast as possible. It's a very different model.

PLAYBOY: Until you launched news, Gmail, Froogle and similar services.

PAGE: These are just other technologies to help you use the web. They're an alternative, hopefully a good one. But we continue to point users to the best websites and try to do whatever is in their best interest. With news, we're not buying information and then pointing users to information we own. We collect many news sources, list them and point the user to other websites. Gmail is just a good mail program with lots of storage.

BRIN: Ironically, toward the end of the 1990s most of the portals started as search engines. Yahoo was the exception, but Excite, Infoseek, HotBot and Lycos began as search engines. They diversified and didn't take searching as seriously as they should have. Searching was viewed as just another service, one of 100 different services. With 100 services, they assumed they would be 100 times as successful. But they learned that not all services are created equal. Finding information is much more important to most people than horoscopes, stock quotes or a whole range of other things—which all have merit, but searching is substantially more important. They lost sight of that. It's why we started Google in the first place. We decided that searching is an important problem that requires serious concentration. That continues to be our focus.

PLAYBOY: What does Google do that early search engines didn't?

BRIN: Before Google, I don't think people put much effort into the ordering of results. You might get a couple thousand results for a query. We saw that a thousand results weren't necessarily as useful as 10 good ones. We developed a system that determines the best and most useful websites. We also understood that the problem of finding useful information was expanding as the web expanded. In 1993 and 1994, when Mosaic, the predecessor of Netscape, was launched, a "What's New" page listed new websites for the month and then, when more began appearing, for the week. At the time, search engineers had to deal with a relative handful of sites, first thousands and then tens of thousands. By the time we deployed our initial commercial version of Google in late 1998, we had 25 million or 30 million pages in our index. Today we have billions—more than 4 billion, in fact. That volume requires a different approach to search technology.

PLAYBOY: How do you refine the results when there are so many websites?

BRIN: We had to solve several problems. One was relevance: How do we determine if a web page relates to what you ask? Next, although many results may be relevant, which are the most relevant and the most useful? That's something we continue to work hard on. Another important consideration is that the kinds of questions people ask have changed. They have become far more challenging and complex. People's expectations have grown. They ask for unusual things that have a variety of associated linguistic challenges. We have to deal with all of those situations.

PLAYBOY: Specifically, how do you deal with them?

BRIN: It's so complex—there's not one way but many ways. We worked hard to understand the link structure of the web. It's analogous to the way people provide references to one another. If I'm looking for a doctor in the area, I might go around and ask my friends to recommend good doctors. They in turn may point me to other people who know more than they do—"This guy knows the whole field of Bay Area doctors." I would then go to that person and ask him. The same thinking applies to websites. They refer to one another with links, a system that simulates referrals. The web is far more expansive and broad, however, so there must be refinements to the system. We have to look at who is doing the referring. It presents a new challenge: How do you decide the importance of the links on a site? We do it with mathematical formulas that go deeper and weigh many factors.

Table of Contents

PAGE: That's a small part of how we actually link pages. It's very complex.

BRIN: We have to consider many other challenges. How do you deal with different words that refer to the same concept? How do you help people find websites in languages they understand? Can we translate pages for them? Google is all about getting the right information to people quickly, easily, cheaply—and for free. We serve the world—all countries, at least 100 different languages. It's a powerful service that most people probably couldn't have dreamed of 20 years ago. It's available to the rich, the poor, street children in Cambodia, stock traders on Wall Street—basically everybody. It's very democratic.

PLAYBOY: Tim Berners-Lee, who designed the World Wide Web, worried that commercial content would prevail on the Internet, pushing aside open and free conversation and information from individuals. Does Google have a bias toward commercial websites?

BRIN: One thing that's important to us is the distinction between advertising and pure search results. We make it clear when something is paid for. Our advertising is off to the side and in a couple of slots across the top. Ads are clearly marked. There's a clear, large wall between the objective search results and the ads, which have commercial influence. Other search engines don't necessarily distinguish. Beyond ads, with other search engines, payment affects the results. We think that's a slippery slope. At Google, the search results cannot be bought or paid for.

PLAYBOY: Will that distinction be protected after the IPO? What if your shareholders push you to accept payment for better placement in search results?

BRIN: It doesn't make sense. Why don't you, as a magazine, accept payment for your articles? Why are advertisements clearly separate?

PLAYBOY: Our editorial content retains its credibility only if it isn't influenced by advertisers. If that line were unclear, our readers would rebel.

PAGE: There you go. It's no different for Google. People use Google because they trust us.

PLAYBOY: With search engines, however, the line between editorial content and advertisements may become less obvious than in magazines. As you note, some search engines do not clearly identify results that are paid for. How can users know the difference?

PAGE: It's a problem for us because some people assume we blur the distinction as well. But people are smart. They can distinguish pure results. We will continue to make it clear.

BRIN: It's an important issue, something people should be concerned about. We're dedicated to separating advertising and search results, and we want people to understand the distinction. The more awareness among the entire world's people about these questions—their ability to understand results that are tainted versus those that are not—the better. It's not enough for us to improve the search engine so it provides better results from more web pages; we must also protect it from people who attempt to manipulate the results. People try to find ways around our system, and we continue to work on the problem.

PLAYBOY: And yet an entire industry of optimizers seeks to influence Google search results. They claim they can help companies place higher in your rankings, but sometimes they resort to treachery. How do you counteract them?

BRIN: You have to distinguish among optimizers. Some do perfectly legitimate things—they're just trying to create informative sites.

PAGE: They help people find what they're looking for.

BRIN: But some people do surreptitious things. They try to influence the system.

Table of Contents

PLAYBOY: What are some examples of new techniques people use to influence your search results?

BRIN: People send us web pages to review that are different from the ones they'll send to users. It's known as cloaking. They'll put stuff on their web pages that the user can't see—black-on-black text, for example. We consider that manipulative and work to combat it.

PLAYBOY: Playing cat and mouse like this, how can you be sure to stop them?

PAGE: We have a lot of people devoted to stopping them. We do a good job.

BRIN: People try new things all the time. By now, the people who succeed have to be very sophisticated. All the obvious or trivial things one might think of have been done many times, and we've dealt with them.

PAGE: It's going to get harder and harder to do these things. However, the benefits are obviously large, so some people will try to manipulate the results. Ultimately, it's not worth it. If you're spending time, trouble and money promoting your results, why not just buy advertising? We sell it, and it's effective. Use that instead. Advertising is more predictable and probably more effective.

PLAYBOY: Yet it may not carry the weight of a search that appears to be unaffected by money.

PAGE: Yes. So people will try, and we will continue to stop them. Eventually people may realize that it's more efficient just to pay to promote their things, if that's what they want to do.

BRIN: That's absolutely true, because ads on Google work. We know that when people are looking for commercial things, they use the ads. They know they're ads and they know they're just commercial, yet they use them.

PLAYBOY: How do you fight Google bombing, a tactic some people use to manipulate search results by linking words? For instance, if they have their way, the query "world's dumbest man" might lead you to the White House web page.

BRIN: That's in a different category. We call it spam but not in the sense of e-mail. People try to make political statements using search results. They want to affect the results when you search for something obscure and specific, say "French military victories." They get tons of people to link the phrase to a website that pushes their political point of view. These queries are rare. The number of people interested in French military victories is tiny. There may be no other websites dedicated to that topic, so people create a page with the idea of controlling a message.

PAGE: People do it because it's like discovering fire: "We can affect the web!" Well, you are the web, so of course you can affect it.

BRIN: Typically Google bombs don't affect people looking for information.

PAGE: They're more like entertainment.

PLAYBOY: How can you balance the more modest sites of nonprofits or consumer groups with those of enormous companies and industries? If we research a controversial topic, how can Google be certain to point us to sites that reflect both sides of an issue?

BRIN: I agree that diversity of sources is a desirable goal, and in fact the results naturally tend to be diverse. We do some simple things to increase the diversity. If you check almost any topic, you will get diverging viewpoints. Everyone on any side of an issue will typically complain, though. Environmentalists will say, "Why aren't you showing our results first?" An industrial group will say, "Why aren't you showing *our* results first?" They all want to be number one. We think it's good for us to encourage diverse viewpoints, and the search engine presents them. It happens naturally as a response to queries.

Table of Contents

PLAYBOY: But don't companies with enormous budgets have the ability to pay for deep sites with lots of links and overwhelm the opposition?

PAGE: Actually, given the factors the search engines take into consideration, opposition groups do well in search results. For example, environmental groups tend to be very active on the Internet. That's how they organize. They have good websites with a lot of activity. All of that is factored into the search results. Thus their sites will be prominent in the listings.

BRIN: Yes. On such a search, you would likely get the best environmental sites as well as the best sites representing the industry, for two sides of the issue. I'm sure there are counterexamples, and I'm sure we could do a better job.

PAGE: In general we're trying to use the web's self-organizing properties to decide which things to present. We don't want to be in the position of having to decide these things. We take the responsibility seriously. People depend on us.

PLAYBOY: Yet you've been criticized for caving to pressure from organizations that objected to some of your search results. In one famous case, the Church of Scientology pressured you to stop pointing out a website critical of it.

PAGE: That was more of a legal issue.

BRIN: The Scientologists made a copyright claim against an anti-Scientology site. It had excerpts from some of their texts. The counter-Scientology site, Xenu.net, didn't file an appeal. It sort of folded. Consequently, we were forced to omit their results, but we explain what happened on the search. If things are missing from a search, we often link to websites that explain the controversies. So now, if you do a generic search on Scientology, you get a link to a site that discusses the legal aspects of why the anti-Scientology site isn't listed. In addition, this independent site links to the anti-Scientology site. As a result, if you search for Scientology, you will be armed with anti-Scientology materials as well as pro-Scientology material.

PAGE: A Stanford University organization has volunteer lawyers posting complaints about cases like this related to web searches. We're able to link to this site. It's a nice compromise. In general, though, few things get removed in this way. It's not a practical problem.

PLAYBOY: How did you respond when the Chinese government blocked Google because your search engine pointed to sites it forbade, including Falun Gong and pro-democracy websites?

BRIN: China actually shut us down a couple of times.

PLAYBOY: Did you negotiate with the Chinese government to unblock your site?

BRIN: No. There was enough popular demand in China for our services—information, commerce and so forth—that the government re-enabled us.

PLAYBOY: Have you ever agreed to conditions set by the Chinese government?

BRIN: No, and China never demanded such things. However, other search engines have established local presences there and, as a price of doing so, offer severely restricted information. We have no sales team in China. Regardless, many Chinese Internet users rely on Google. To be fair to China, it never made any explicit demands regarding censoring material. That's not to say I'm happy about the policies of other portals that have established a presence there.

PLAYBOY: Which sites cooperate with Chinese government censors?

Table of Contents

BRIN: I've heard various things, but I don't want to spread secondhand rumors. There is a Harvard site that lists what you can and can't get from different places around the world.

PAGE: Search for "censorship" and "Berkman" and you can get the website. [Editor's note: The website is at cyber.law.harvard.edu/home.] It has some cool programs that automatically track what is and isn't available on the web.

PLAYBOY: What would you do if you had to choose between compromising search results and being unavailable to millions of Chinese?

BRIN: There are difficult questions, difficult challenges. Sometimes the "Don't be evil" policy leads to many discussions about what exactly is evil. One thing we know is that people can make better decisions with better information. Google is a useful tool in people's lives. There are extreme cases, we're told, when Google has saved people's lives.

PLAYBOY: How has Google saved lives?

BRIN: When people look up information in a life-threatening situation. Someone wrote that he was having chest pains and wasn't sure of the cause. He did a Google search, decided he was having a heart attack and called the hospital. He survived and wrote to us. To help in situations like that, Google has to be quick and correct. Other people have written us with similar stories. We get postcards and pictures of them with their family. Those are extremes, but there are countless other examples. People are helped with their careers. Students are helped when they study. It's a powerful tool.

PLAYBOY: When someone is having chest pains and searches the web for information about them, for example, it's essential that the information be correct. How does Google know about the veracity of a website's information?

BRIN: Similar to other media—books, magazines, whatever—you have to use judgment.

PLAYBOY: But isn't the Net, where anyone can put up a web page, more likely to have erroneous information?

BRIN: Yes. Joe Blow can write something in a few hours, post it and it's on the Net. It could be about neuroscience, and he may know nothing about neuroscience. More typical inaccuracies in other media are from out-of-date material. In both cases, you have to apply judgment. The Internet helps because you can quickly check a number of different sources. If I were seriously interested in something important to me, I wouldn't just click on the first search result, read it and take it as God's word.

PAGE: Which is a great thing about the Internet, because you can read information from many sources and decide. Libraries might have some of the information but probably not all—and not necessarily the most up-to-date.

PLAYBOY: Librarians must hate Google. Will you put them out of business?

BRIN: Actually, more and more librarians love Google. They use it. They do an excellent job helping people find answers on the Internet in addition to using their book collections. Finding information still requires skill. It's just that you can go much further now. Google is a tool for librarians just as it's a tool for anyone who wants to use it.

PLAYBOY: Much has been made of the fact that *Google* has now become a verb. When did you begin to fathom the scale of Google's success?

PAGE: I don't remember exactly. Pretty early on I saw a newspaper story about Googling dates. People were checking out who they were dating by Googling them. I think it's a tremendous responsibility. If you think

Table of Contents

everybody is relying on us for information, you understand the responsibility. That's mostly what I feel. You have to take that very seriously.

PLAYBOY: Are you still surprised by the ways people use Google?

PAGE: We hear surprising stories all the time. The amazing thing is that we're part of people's daily lives, like brushing their teeth. It's just something they do throughout the day while working, buying things, deciding what to do after work and much more. Google has been accepted as part of people's lives. It's quite remarkable. Most people spend most of their time getting information, so maybe it's not a complete surprise that Google is successful.

PLAYBOY: Though you have cataloged 4 billion websites, there are more than 10 billion, and the number grows each day. Is it possible for Google to catch up and keep up?

PAGE: We have to. The increasing volume of information is just more opportunity to build better answers to questions. The more information you have, the better.

PLAYBOY: Yet more isn't necessarily better.

BRIN: Exactly. This is why it's a complex problem we're solving. You want access to as much as possible so you can discern what is most relevant and correct. The solution isn't to limit the information you receive. Ultimately you want to have the entire world's knowledge connected directly to your mind.

PLAYBOY: Is that what we have to look forward to?

BRIN: Well, maybe. I hope so. At least a version of that. We probably won't be looking up everything on a computer.

PLAYBOY: How will we use Google in the future?

BRIN: Probably in many new ways. We're already experimenting with some. You can call a phone number and say what you want to search for, and it will be pulled up. At this stage it's obviously just a toy, but it helps us understand how to develop future products.

PLAYBOY: Is your goal to have the entire world's knowledge connected directly to our minds?

BRIN: To get closer to that—as close as possible.

PLAYBOY: At some point doesn't the volume become overwhelming?

BRIN: Your mind is tremendously efficient at weighing an enormous amount of information. We want to make smarter search engines that do a lot of the work for us. The smarter we can make the search engine, the better. Where will it lead? Who knows? But it's credible to imagine a leap as great as that from hunting through library stacks to a Google session, when we leap from today's search engines to having the entirety of the world's information as just one of our thoughts.