Thank you very much for inviting me to speak with you today. It is a great honor.

Before I begin my talk there are several things I want to briefly mention. The first is that I have constructed this entire talk within Microsoft Office, primarily using Word and PowerPoint. The images you see were all produced from scratch in PowerPoint using only its own drawing tools. This is worth noting, for I believe (and this is not an unusual belief) that a medium powerfully affects the creative process, and so we could say that this talk is not just about PowerPoint, but it is also shaped by it.
Second, I would like to emphasize that this is not a scientific paper. Rather, it is a reflection, or perhaps a meditation, on certain activities I have engaged in and have been part of over the past decades. By far the most prominent is that during the last eight years, as a researcher at Xerox PARC, I have become a heavy PowerPoint user and have even become known for my presentations. I have ghost-written other people’s PowerPoint slides. I could even say I have at last found my medium. I think in PowerPoint.

And last, and most important, I have drawn deeply from my colleagues at PARC, particularly those in my RED group (Research in Experimental Documents). This a group of researchers who are currently studying reading and how it has changed over time and how it will continue to change in the digital age that we have so haphazardly stumbled into. I look at PowerPoint as a central, and powerful, form of reading in this new era.

**READING/Writing**

![Image of a pencil and glasses]

**RICH GOLD**

**ONE THOUSAND**

**SLIDE TWO**

Our culture privileges creativity, the making of new stuff, so greatly that we often think of writing as far more important than reading. To us, writing is the creative act, the formative act, the act of genesis. At best, we think of reading and writing as unequal equals, as mirror-like siblings that we take together as a single system. We might even imagine, as many do, that reading will disappear with the onslaught of multimedia. But we imagine that writing will remain, if for no other reason than to create the scripts for the video games.

The truth of the matter, of course, is that we read—oh, who knows, perhaps a thousand times more than we write. In every city there are only small handfuls of writers churning out the texts that the millions will read. In most of our jobs, writing takes only a fraction of our time, while reading, in all its forms, is ubiquitous. Even in my small office there are millions of printed words to read, and not just in the expected books, magazines, Web pages, and brochures. Words crowd and cover every object and
surface from keyboard to telephone, from white board to poster, from etched award to my shirt's label, from the colorful boxes of shrink-wrapped software to soda cans. Words are even printed on the skin of the orange I will snack on. I am in a state of constant reading.

Our untagged concept of reading—that is, how we think of "reading" free of modifiers—is that of scanning pure words on white, unadorned pages. For example, try to picture the sentence: "Jane reads." Most of us form an image of something like a woman sitting in a chair with a non-illustrated Grisham novel in her lap, alone and silently taking in the words. But most textual reading actually occurs within fields of illustrations that alter and bend the meaning of the words. In newspapers, magazines, textbooks, and on billboards, signage, and T-shirts, words appear next to, and interpenetrated by, images. Even nineteenth-century novels were illustrated (as are the covers of contemporary books). And we read everywhere, not just in armchairs. We read while driving, we read at conference tables and kitchen tables, we read in the movies, and we read on the Internet. Reading is not even necessarily silent. We read out loud to our children, to God in our churches, and to one another at conferences. Yet the image-free, silent, solitary definition of reading is so deep that it is hard for most people to even think of watching a PowerPoint presentation as reading. But within the contemporary workplace it is an extraordinarily central form.

Within today's corporation, if you want to communicate an idea to your peers or to your boss or to your employees or to your customer or even to your enemy, you use PowerPoint. PowerPoint is how companies read. I don't know if the novel is dead, but the memo certainly is. In its place rises the slide.

A MATRIX

<table>
<thead>
<tr>
<th>SYNCHRONOUS</th>
<th>ASYNCHRONOUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWERPOINT</td>
<td>BILLBOARDS</td>
</tr>
<tr>
<td>NEWSPAPERS</td>
<td>NOVELS</td>
</tr>
<tr>
<td>PUBLIC</td>
<td>INDIVIDUAL</td>
</tr>
</tbody>
</table>

Call me a structuralist, but I often find two-by-two matrixes to be helpful. They are particularly useful here in trying to shatter the stereotype that reading is a solitary act performed silently, while prone in bed, with no pictures accompanying the words. (Just as a data point, it is good to be
reminded that eight hundred years ago monks read standing up, in groups, out loud, and from illustrated texts.)

The first dimension of this matrix sweeps from top to bottom between public reading and private reading. This first dimension concerns itself with the architecture of the read word. The second dimension sweeps between synchronous reading (multiple people reading a given text at the same time) and asynchronous reading (multiple people reading a given text at different times). This second dimension is more social than architectural, but not wholly so. (There is another dimension that sweeps between group reading and individual reading that is similar to, but not completely isomorphic with, the public/private.)

The perfect example of public reading is a billboard. Other examples might be movie credits, posters, crawling stock market quotes, cereal boxes at the supermarket, or a Monopoly™ board at a party. The usual example of private reading is a book. Newspapers are mostly private, but can be read over someone’s shoulder, making them a little more public. PowerPoint is quite public, but usually not as public as a billboard. So here’s a good place to make the other distinction: PowerPoint is group reading, and the sense of the group is important. The billboard, though public, is read individually, each reader being alone in a vehicle.

The second axis sweeps between synchronous and asynchronous reading. To use this last example again, billboards are read asynchronously, while PowerPoint presentations are primarily read synchronously. Chat lines are synchronous, while books are read asynchronously. Newspapers are read more or less synchronously (at least on the same morning), while magazines are slightly less so (same week or same month). Reading psalms in church is highly synchronous, while reading the telephone book is asynchronous.

A PowerPoint presentation is, then, typically synchronous, group, and semiprivate—a powerful form of reading and one well suited to the hierarchical, group-oriented, and highly social nature of most corporations.
There is an interesting distinction to be made between cultures that read primarily from private documents (bibliographic) and cultures that read primarily from walls (epigraphic). Reading PowerPoint is wall reading, is group reading, is synchronous reading, is semipublic reading. The corporate shift from memos to walls is profound, for it reflects or prefigures, or constructs, a society of sociality over individuality. This tugs both ways on our national- and class-value systems, for if the isolated memo reader was alone, gray, and disconnected, he or she was also unique, self-motivated and self-determined. In the sweaty, hormone-steeped conference room, when all eyes are on the PowerPoint presenter with his or her slides dissolving from one to the next, the emphasis is on group, consensus, team, collaboration, comprise, unity.

There are two basic forms of wall reading. The first is primarily asynchronous and public: It includes billboards, road signs, posters, airport arrival/departure signs, building exit maps, you-are-here maps, storefront signage, and the like. The second group is vocally glossed wall reading, and it includes teachers pointing at blackboards, coaches explaining play diagrams, generals barking orders over military maps, museum tour guides pointing to painting signage, and art directors caressing new advertising campaign boards on flip charts. PowerPoint is not only in this second group, but has colonized much of it.

While it is often assumed that PowerPoint slides simply help the reader/listener to follow the speaker's argument, I propose that their actual function, as in most vocally glossed reading, is somewhat different. The slides externalize the truth and allow the audience to analyze it separately, but simultaneously, from what the speaker is saying about the same truth. The slide is not simply an opinion, it is a written artifact on a wall owned in common by all in the room—even if, as is usually the case, the speaker wrote the words in the first place. It is for this reason that it is considered a faux pas for the speaker to simply read the slides. For a speaker to read the slides is to attempt to make private what is now perceived as public. It is also for this reason that for the speaker to simply read directly from notes without extemporizing while the slides click by is also considered to be a faux pas. For a speaker to read from notes is to say that the speaker is not commenting about the commonly held written artifact, but is rather reporting on some previous, private musings.
Like all rituals, PowerPoint presentations arose from precursor rituals—shifting them, enlarging them, engulfing them. What was once minor, off-to-the-side, primitive, uncritical becomes central, expansive, elaborate, sophisticated, core. Such shifts can occur for social/political/economic reasons, and for technical reasons. The technical shift in this case was the personal computer (PC). Once the PC loomingly situated itself on the average worker's desktop, the latent social forces were in a position to re-formulate an old, minor form of reading (group presentations) into the behemoth of PowerPoint.

The driving social need leading to the rise of PowerPoint was—no surprise—corporate communications. It is simply mind-bending how many thousands of people and how many tens of companies, working together, it takes to make even the simplest object. To achieve these remarkable feats (and it is achieved over and over as the tens of thousands of objects in our world attest) requires more than just communication (the exchange of information); it requires common purpose and direction.

As a result (or a necessary condition) corporate workers swim in a thick soup of communications ranging from voice mail to email, from brochures to video conferences, from annual reports to Web pages, from memos to meetings, from corporate speeches to hallway gossip. Each communication form takes a different amount of time to construct (hallway conversations are constructed in real time; annual reports might take six months to produce) and a different amount of time to consume (the hallway conversation takes as long to consume as to construct).

What PowerPoint brings to the table is not efficiencies in time. PowerPoint slides are actually quite time-consuming and difficult to produce. And the information (to use that compromised word) contained in a forty-five-minute PowerPoint presentation can usually be contained in a short memo. What PowerPoint dramatically inspires is unifying directional community formation, much as a war dance inspires the fighting
power of a tribe about to go to war. If everyone is focused in the same
direction, it is far more likely that whatever the company is manufacturing
will get manufactured. When the PC made verbally glossed wall reading
not just possible but easy, ubiquitous PowerPoint was the result.

There are three primary formal elements to a PowerPoint presenta-
tion: the slides, the presenter, and the audience.

The slides are usually projected onto a wall or screen behind the pre-
senter. That they are projected behind the presenter creates one of the few
nettlesome problems in the PowerPoint ritual, for the presenter must
decide how to deal with imagery behind him or her. How to point to spe-
cific elements on the slides, without either blocking the audience's view or
losing eye contact with it, is not an entirely resolved problem. There is
another place where the slides and the presenter rub across a rough edge:
the presenter must change the slides, either by placing new overheads on
the projector, by pressing a hand-controller, by using the "PgDwn" key on
the laptop, or by calling out "next" to an unseen compatriot. This extra-
textual activity can on occasion disrupt the flow of the gloss.

The wall writing itself is structurally divided into discrete slides, which
are clicked through in a monotonic order. While contemporary versions of
PowerPoint offer transition effects (fading, blending) and limited forms of
animation (bullet points that come flying in), the concept of the discrete
slide remains firm and is the scaffolding on which the reading hangs.

Each slide contains a combination of words and images, though either
can attenuate to zero on any given slide. Although there is great variation
in word and image, there are certain defining formalisms, deeply embed-
ded within the construction parts of the PowerPoint program, that make
a PowerPoint slide instantly recognizable. On the word side, there is the
title, usually in boldface and placed across the top; there are numbered or
dingbatted lists, usually in a terse form of PowerPoint English; there are
asides or quotes or miscellaneous short blocks of text set apart for their
emphasis; and there are ownership and numbering texts placed across the bottom.

Both in slide construction and in slide consumption (except for anomalies such as cartoons with speech bubbles) the graphics are distinct from the text. The graphics are either *clip art*, which are drawn with scalable vectors and fill, or *pictures*, which are bitmaps. The relationship between graphics and text can be highly varied and serve many purposes: graphics can emphasize a certain piece of text; they can illustrate a point; they can be the object of the textual references; or they can be an aside (humorous or serious). The graphics can also occupy, on occasion, the entire slide—for example, a picture of a new product—in which case any explanation must come entirely from the presenter.

In a well-formed talk, the slides have a common background image—a kind of floating landscape providing tone and cohesion, with a small number of fonts used in a consistent manner and an overall graphical style. However, as we shall see, the semiunderground economy in individual slides often results in a potpourri or potluck style instead.

**POWERPOINT AS JAZZ**

As in most verbally glossed wall writing, the *presenter* is expected to explain the artifacts on the wall, often pointing and gesturing at them, as the talk progresses. Because they are wall writings, the audience has already reviewed much of the writing, but has not fully comprehended it. The role of the presenter is to explain these artifacts, to fill them out, to make them comprehensible. The presenter is also supposed to give the images and words appearing on the screen a truth value by reprocessing and explaining them in real time.

Hence, the role of *notes* in a PowerPoint presentation is highly ambiguous. PowerPoint itself gives a method of adding notes to each slide that can be printed out, along with thumbnails of the slides, to create a kind of cheat sheet for the speaker. Other methods of maintaining notes are by using the paper separators between the acetate slides or by using heavily
annotated printouts of the slides. Typically, notes are hidden on the lectern or placed precariously on the overhead projector table. In any case, these notes are not intended to be read from (or seen by the audience), but exist only to remind the presenter of what he or she should think about, and then comment upon, in real performance time.

Presenting PowerPoint slides is, then, much like playing a sax in a jazz band. The slides (and notes) provide the bass, rhythm, and chord changes over which the melody is improvised. Clearly, the chops required to do this have been practiced and studied, but they are laid down afresh for each presentation.

When a presenter is really cooking, he or she enters *flow* (as Mihaly Csikszentmihalyi calls it in his 1991 book *Flow: The Psychology of Optimal Experience*), that state of unthinking in which each moment follows naturally from the previous in a highly intelligent manner. In flow, the presenter locks into the audience, locks into the slides, locks into the ideas, and produces a gloss that takes the obscured and fragmented wall writings and makes a whole.

**UNFOLDING OF THE ARTIFACT**

It is an unresolvable question as to whether close listening to formally presented speech is a form of reading or not. (It is really a matter of how we want to define it.) We read books to our children; we listen to books on audio tape in our cars; poetry jumps on and off the page; before Gutenberg, almost all writings from Homer to the Bible were listened to and not looked at; the blind hear their books (when not touching them). Let’s say that such listening is reading.

The *audience* reads, synchronously, the PowerPoint presentation while reading with both eyes and ears. With all facing the presenter and his or her slides, the audience enters into a deep reading reverie. Audience members’ eyes read the slides and decode the images. While the slide makes sense on one level, it is only by listening to the gloss, provided by the presenter, that the deeper levels are revealed. This unfolding, this
unlayering, can be quite powerful for it replicates, in a speeded-up fashion, one’s own thought processes.

Like the presenter in a truly great talk, the audience also reaches flow where the visual reading and the auditory reading merge. Two things are supposed to happen. First, an understanding is reached with the presenter. Second, wholly new thoughts arise in the listener’s mind, improvising one octave up from the speaker, like a clarinet over the sax. When all of this works, as in any synchronous reading, a community spirit is founded upon a common heartfelt experience.

Depending on the kind of presentation, the audience can ask questions either during or after the talk. Questions during the talk are truly a test of the speaker, for he or she must maintain flow, and for that reason such intratalk questions are often forbidden (or limited). On the other hand, questions at the end are extremely common, almost required, and serve a number of purposes, but primarily they are concerned with whether group consensus has been reached. These clarifications, questionings, appreciations, additions, attacks, rephrasings, shared new thoughts, and all the other interrogatives spoken by audience members are really tests of, or attempts to create or attempts to prevent, group formation. These group-formation efforts usually continue into corridors and cubicles after the talk is formally over and the audience disperses.

Unlike what happens with a memo, and to acknowledge its theatrical roots, the audience often claps at the end of a PowerPoint presentation. For the presenter, who is often in a peer or near-peer relationship to the audience, this clapping is proof of acceptance and having passed a severe test of membership.

**SECONDARY READINGS**

The PowerPoint presentation is the preferred or privileged form of reading PowerPoint, but it is not the only one. Depending on the nature and context of a PowerPoint presentation, it may not even be how most readers read the slides. A slide set can be read off the Internet (or the
"sneaker net"); it can be emailed to one or a thousand people; it can be printed as thumbnails and handed out (it is, in fact, a common request after a talk to ask for the paper version); or it can be placed on the Web where hundreds or millions can read it.

The obvious problem with reading PowerPoint slides sans presenter is, as we have seen, that it is the verbal gloss that contains the critical information to make the slides meaningful. The slides are often intentionally obscure (or at least so distilled as to be not more than the essence of the talk) precisely so that the verbal gloss will illuminate them. Furthermore, to the reader, without being part of an audience in the process of group formation, the slides become dry and dusty historical artifacts, the interpretation of which becomes almost arbitrary. In other words, read alone, PowerPoint slides are missing both the crucial commentary and the mammalian pack-formation pheromones.

This is known as the PowerPoint reading problem and is dealt with in various ways. First is by textually glossing the printed slides—that is, by placing narrative text next to or under the slides. This text is intended to replicate to some degree what would be verbally glossed during a presentation. Often these are simply the notes of the presenter, though more elaborate. Second, and less commonly in my experience, is that the presenter can create two versions of the slides, the second version being much more verbose and self-explanatory (that is, traditionally readable) and is the version that is distributed. Lastly, the author can leave it up to the reader to mentally add in the missing verbal gloss and read the slides as if both were present, much the same way that one can read poetry silently, as if it were being read out loud. This is difficult if you don’t know what the slides are supposed to mean.

In any case, that the slides will be read after the presentation, minus the gloss, puts considerable pressure on the slide creator to make them usable without the verbal gloss even though this can diminish the performance itself. Like many art forms, PowerPoint is filled with compromise.
A GIFT CULTURE

Because the slide in PowerPoint is so stable and formalized, and the means of PowerPoint production are so ubiquitously distributed on most PCs, and it is so easy to electronically exchange slides, and we live in an age of appropriation, annotation, and quotation within most corporations, there is a brisk trade and economy in slides. It is not uncommon to see presentations composed primarily of slides produced for other talks by other people. While this can produce a jarringly ugly and disjointed visual experience, it does not matter as much as you would expect so long as the verbal gloss, which is the heartbeat of the presentation, flows.

Within a corporation itself, just who owns a slide—the employee or the corporation—is a slippery question. Each slide certainly is another corporate asset that can and should be used to maximize ROI (Return on Investment) in multiple ways. On the other hand, each employee within a corporation is an independent agent, with his or her own career track and elaborate set of social relations. To simply use someone else's slide in your own presentation, while not illegal, is, within this context, unethical.

What arises as the resultant vector is an elaborate gift culture in slides. "Can I use one of your slides in my presentation?" is an oft-repeated phrase in any company. The answer is almost always "yes," but it sets up, or adds to, a balance sheet of favors that over time must get reconciled. If the favor is considered large, or if the two participants are of unequal status (either way, it turns out), the phrase "I will give you credit" is appended to the request. Eventually, a network of slides and favors bonds together entire departments and can form the basis of corporate cultural identity.

It is not uncommon, for instance, for a certain slide to be used so often, by so many different people, that it completely breaks free of its original owner and is considered an "ur-text" of the company. Such texts, because they remain in PowerPoint (unlike slides produced in Illustrator, for instance), are highly malleable and can be seen to mutate over months and even years as they are cast and re-cast into different presentations. A knowing audience can read these changes, as Soviets used to read the
appearance of Politburo members on the balcony, for changes in the corporate wind.

**SECONDARY CHARACTERISTICS**

No art form can exist for long without creating a surrounding *aesthetic* that both modulates the new construction of it, and deeply affects the reading of the art. This aesthetic is broader than the *content* of a talk. We have all seen presentations that were *good* but lacked content, and likewise *bad* talks that had lots of content. And we can imagine two talks, both with the same content but where one was *better* than the other. These aesthetics are not neutral when judging the *effectiveness* of a presentation—that is, how much it alters subsequent behavior in a desired direction—but are critical to it. No one considers it a surprising thing to say that an aesthetically pleasing presentation is also an effective one. And in that direction lies personal success within the corporate milieu.

Just being able to successfully create an aesthetically pleasing presentation is a *secondary success characteristic* in that it suggests that the creator can also be successful in other endeavors. In that sense, it is important that it not be too easy to create a good PowerPoint presentation, for it would then cease to be a worthy test. We need not worry, of course, for to create a good presentation requires a firm grasp of content, a good graphical sense, a good written-language sense, and, most importantly, good real-time performance skills. And the bar continually inches upward with each new version of PowerPoint and with the addition of new and improved audiovisual "aides."

PowerPoint presentations, particularly at the upper levels of the company, often are ghost-produced (but they can never be ghost-presented in anything like the same sense). As the graphical aesthetics become more sophisticated, it becomes necessary to turn the task of the slide production over to professional graphic artists. But managing graphics artists is itself a difficult task (and perhaps a worthier test of corporate skill than that of centering text).
Great presentations can arise out of a corporation and gain national or even international fame. In the lucrative conference circuit, audience members pay thousands of dollars to attend sessions that have become in essence PowerPoint marathons, in which presentations can be compared for aesthetic and content quality.

**EVEN ARCHITECTURE**

![Old and New Diagram](image)

**RICH GOLD**

**SLIDE TWELVE**

PowerPoint has transformed the modern corporation from a document-reading environment of individuals to one of group, synchronous wall reading. In so doing it has transformed the social forces that bind the corporation and give it direction and unity. It has also brought with it a sense of aesthetic art and performance, of theater and theatricality that had been largely missing. But the times are not stagnant and we can expect still further changes.

There is a growing tendency to include video within presentations, which is highly problematic because video drags the attention away from the presenter’s gloss. The gloss must either be loudly spoken over the video’s soundtrack or be delayed until the video is over.

As video conferencing becomes more common (primarily as a solution to the high cost of travel), PowerPoint presentations are often broadcast as part of these virtual meetings, the techniques and aesthetics of which are still to be largely worked out. To the remote viewer, the graphics and gloss collapse into a single, distanced video, which may need its own local gloss. In any case, they are often painful to watch.

Like all other media, PowerPoint is merging with the Web. It is not uncommon these days for PowerPoint-looking talks to be given directly off the Web in HTML. It is assumed that in the near-future Microsoft will migrate PowerPoint directly onto the Web, thereby collapsing this distance to zero. While I see this as a difference in media, the genre remains pretty much the same.

While there are perceptual changes in equipment (from noisy overhead projectors to finicky laptops), PowerPoint is now, most amazing, directly
affecting the very architecture of corporate buildings. Until recently, conference rooms were dominated by the oval table, perfectly suited for a document-based culture. Companies are now in the midst of remodel fever, replacing the ovals with "U"s, the open end of which faces a wall of white screens, perfect for a wall reading society.

Just as Gutenberg's printing press changed what and how we read and what a library looked like, PowerPoint is changing how the neurons of business carry information, and even what their office buildings look like.

Thank you, for allowing me speak to you today. I will now take questions.

**READING POWERPOINT**

Thank You

**RICH GOLD**

**SLIDE THIRTEEN**

Reference