The Waste Manifesto

Cover Story By Victor Margolin
Editor’s Note: The Timelines column was launched in 2006 around a three-row timeline focused on the 1940s through the present, designed with an assist from a great graphic designer. This provocative column has a timeline similar in outline, designed by a great graphic artist. Would that I could use big paper as effectively as she!

-Jonathan Grudin

Understanding Visual Thinking: The History and Future of Graphic Facilitation

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Graphic facilitation - facilitating a meeting by taking continual, visual notes on a large scale- demands both attention and suspension. It’s the most intense work I know. Listening isn’t enough, drawing isn’t enough. It’s a high wire act that taxes nerves, and after a session my wits are fried.

So when someone walks up in the pleasant hubbub of a break and says, “Great art! I wish I could draw like that,” it reminds me that one should always carry a loaded cream pie.

Although tempting, throwing a pie at a meeting participant is against the ethical guidelines of graphic facilitation. “Drawing” isn’t what’s been frying my brain. The work isn’t about drawing or art. The work is about graphically projecting ideas on a realistic worldview - on big paper on the wall. It’s about understanding how the interplay of conference ideas is shifting a view, reflecting participation back to the group, helping to explore and document the new path, and making the change of direction graphically plain.

The Challenge

On a good day a graphic facilitator’s hand, ears, eyes, background, brain and long-suffering feet are working independently and together, like the instruments in an orchestra. However, the work on the wall should feel effortless. Simplicity is the hard part; the drawing and color are minor tools.

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The graphic challenge isn’t verisimilitude or decoration. It’s representing ideas as icons and placing them in context with other ideas. It also uses words—phrases, titles, topics, quotes, buzzwords—as graphic symbols on the same field. In this graphic world, the lettered words “ZERO DEFECTS” can become a calligraphic representation of an entire concept. Calligraphy that allows the concept to interact spatially, graphically, conceptually with iconic symbols of production: churning factories, busy production lines, measuring yardsticks, assembling screwdrivers, or inspecting flashlights. In this abstract and plastic world, graphic facilitators use a “bucket”—a shape, color block or geometric form to “hold” a word, quote, symbol or even list. That “bucket” can represent its broader concept and be interposed significantly on a plane of understanding with other ideas.

The graphic facilitator records a conference’s topics and statements in a changing, evolving, connecting reality beyond typed words or drawn pictures. This synthetic idea-galaxy is in a dynamic state of creation, becoming a parallel world to the conference it reflects, but real enough to invite meeting members to glance up to see their own words and concepts progress in time and in relation to other ideas. This abstract galaxy records more than facts; it embraces conflict and shifts of understanding. It follows the cerebral track that brings a group’s relationship to a new place. It traces the inevitable, inexorable flow of change, which can be too elusive to record in a paragraph.

The medium is important. It seems low-tech and, materially, it is. We’re talking about paper taped to the wall in front of the working group. It’s big; generally four feet high by eight feet long. The big paper presents ideas in human scale. It’s a generous arena, large enough to show relationships between ideas, and long enough to hold the thoughts of an hour or more of conversation.

The linear narrative, tabular data and graphs of a written report are inadequate to embrace the map of ideas and the balance of topics. Simple flip chart recording, pictures and bubble charts can’t carry the conceptual content that goes onto big sheets of paper taped to a meeting-room wall. Big paper offers scope in recording and communicating the flow of a meeting for your broader organization. Corporations can realize a monetary value from this enhanced understanding and interrelationship of ideas expressed distinctly and memorably with big paper.
**The History of Graphic Value**

The worldview of the middle ages was linear and vertical: man at the muddy bottom gazing at the unreachable rungs occupied by priests, warlords, bishops, minor kings and the pope. Society was rigid, fixed by circumstance of birth and by “noble” favor.

The Industrial Revolution imposed a new worldview of business. Its web was a complex pyramid of authority with workforce at the bottom and money at the top, and many horizontal levels of supply, transport, decision and regulation. Each link was a route to opportunity for a person with drive and ability.

We’ve entered a new age of information and global decision. Our worldview is not parochially two-dimensional, but vastly encompassing and non-linear. The Industrial Revolution’s pyramid organizational charts, with peons at the bottom and big cigars at the top, are relics. The instant communication of transformative technology and update of data relentlessly drive the flux of personnel and supply.
Contemporary business is no longer cast in stone; it's complex, diverse and dynamic.

There is always a reluctance to leave comfortably known models when new data or attitudes demand a shift. Clinging to pyramids, bubble-charts and antiquated business structures can cripple our ability to reach farther and change more gracefully. The medium affects the message; the visualization affects understanding.

If the mediaeval model of connection is the vertical ladder, and the industrial age model is the flat web, what is the global economy model of connection? An apt guess might be the neuron, that three dimensional nexus of nerve-endings that connects billions of signals in the brain, routing them in every direction. The neuron is an elegant metaphor for near-instant communication plugging into all levels of a problem and solving for multiple variables. Our brains' neuron networks
make up – singly and arguably as a group – a non-linear processor of data responsible for human ingenuity and creativity.

The speed of transactions is now measured in nanoseconds. Corporate structure is contemplated in humanist concern for all the corporate parts - workers and managers. Corporate decisions are increasingly informed by more people embracing environmental, sociological and ethical concerns. Business has become interactive, more fluid, less rigid, more answerable to voices outside a hierarchy that would be imposed by an antique pyramid.

In the 1950’s, the leading tool of business interaction was probably the flip chart. It was used to record ideas, make lists, display and alter titles. It was easily refreshed and constituted a running record. We had the physical tools of graphic facilitation then, but we hadn’t yet developed the graphic and intellectual worldview to retask old tools and create a facile medium.

During this time businesses began, almost reluctantly, to utilize the psychological advances of the earlier 20th century. The National Training Laboratory was at the center of “corporate learning” in its use of Gestalt awareness, acknowledging the curious world of new and less mechanistic physics that had, after World War II, trickled into mainstream consciousness. The T-Group and experiential learning awakened a generation of new leaders.

Peter Drucker, the author of The Future of Industrial Man, published in 1942, was an early prophet of profound post-war change. His book could in retrospect be titled The Birth of Systemic Thinking. Other key books driving new corporate awareness were Kurt Lewin’s Resolving Social Conflicts, Ronald Lippits’ Group Dynamics and Social Action, and Drucker’s The Age of Discontinuity. In 1957, Chris Argyris’ Personality + Organization explored the way organizations “learned” and changed, and advocated experiential learning. Ludwig von Bertalanffy’s General System Theory (GST), an overarching, interdisciplinary method of examining the influence of individual actions on group behavior influenced the need to perceive the patterns of business interaction. The fluctuating nature of reality viewed from the perspective of changing data fit the spirit of contemporary quantum physics.

Physician Edward de Bono developed a “cure” for linear decision-making and encouraged creativity in problem solving with his concept of “lateral thinking” - a fresh method of drawing creativity out of predictable sources. Applied to corporate planning, lateral thinking seems to inherit its loose-limbed flexibility from Gestalt therapy and new cognitive science.

We might consider the poster session in a basic but fecund business milieu, as a typical cooperative corporate tool: An ad hoc group of like minds hosts a table
between conference lectures to propound a view with assembled graphics, numbers and arguments.

As the 1950’s morphed into the socially reactive and expressive 1960’s, Geoff Ball’s “group memory” techniques for team-building, group learning, and collaboration influenced organizational development. Architects Michael Doyle and David Strauss used their visual training and architectonic pattern awareness to collaborate on How To Make Meetings Work in 1976. Their concept of a facilitator actively shepherding meetings toward conflict - and problem solving interactions shaped their consulting group Interaction Associates. Doyle and Strauss required a visual record in real time of all meeting ideas, effectively separating content from process and allowing the focus on process to make content more malleable and accessible. A handful of graphic facilitators and facilitators emerged, mostly in the San Francisco area. They were either influenced by David Sibbet’s large-paper approach and his proprietary formats, or Michael Doyle’s flip charts recording running dialogue, augmented with large infographic images.

Technology was shifting almost too quickly beneath corporate foundations in these years. During the 1980’s, when the personal computer, networking and the Internet expanded worldview, corporate innovation began to pivot on Silicon Valley. Interactive graphics to support group process were being explored by Geoff Ball (who coined the phrase “group graphics”) at Stanford, Joseph Brunon (a pioneer in family dynamics therapy) at UCLA, and David Sibbet at the Coro Foundation in San Francisco.

During this furor of rapid change and helter-skelter retrenching, management shifted in ways that conventional A = B logic did not govern. People realized that corporations were similar to human entities - subject to more complex motives, stressors and failures. Business didn’t follow linear patterns.

As self-help books became a staple for publishing, management pundits had fully embarked upon explaining how American commerce ran, how it could change, and what improvement was available. In an age that was coming to accept alternate technology, half a dozen books offered fresh ways to facilitate better corporate culture and promote management communication, including Tony Buzon’s Mind Maps, Peter Senge’s The Fifth Discipline, and Robert Horn’s Mapping Hypertext.

Richard Saul Wurman’s groundbreaking Information Anxiety came out in 1989; Wurman coined the term “information architecture” in reaction to massive amounts of information collected daily with little care or order. He founded the TED Conference in 1984; which now brings together the world’s most fascinating thinkers and doers, who are challenged to give the talk of their lives - in 18
minutes. TED has a large online presence and archive. Rudolph Arnheim’s *Visual Thinking* disputes the separation between seeing and thinking, perception and decision. Robert McKim’s *Experience in Visual Thinking* is a workbook for expanding the experience of thinking in new ways and applying neurological realities to creative problems.

In the 1990’s many business management consultants developed large-scale change methods to involve wider groups of stakeholders in the process of creating fresh decisions – DavidnCooperrider, and Kathleen Dannemiller. Bill Smith’s Six Sigma concept of flying squads, heroes, black belts and quantification was a new approach to change from within. *The Fifth Element* was a contemplative approach to allowing a corporation to reinvent itself over and over, becoming a “learning corporation” by practicing “systems thinking.” Horn’s follow-up to his hypertext discussion was *Visual Language: Global Communication For the 21st Century*, a scholarly contemplation of how words and images should work together.

The godfather of visual data, Edward Tufte, offered *Envisioning Information*, explaining the syntax of visual language, making an indelible contribution to graphic thinking. His academic discussions, however, don’t address group interaction or organizational learning. But the appearance of infographics on the front page of *USA Today* tells us something about the mainstream recognition of graphic data.

One of the principal concepts of the 1980s was “total quality management”. It became part of the “Japanese miracle,” practiced across the Pacific with success, but with a rigidity unfamiliar to American firms. The core of the idea appeared in Edward Feigenbaum’s 1951 book *Quality Control: Principles, Practice, and Administration*. Today, we still esteem this expat-come-home but some perceive tones of the Industrial Revolution in the way total quality management is measured and practiced by rote.

**The Visual Now**

This caution prompts a question: Just how enlightened has business become? Has corporate management changed with the tools available to it? Or does stubborn authoritarian hierarchy still regard business systems as static machines? We can attend conferences, read books, mouth buzzwords and still return to Scrooge & Marley’s Counting House, over and over.

It almost seems as if the corporate model is post-revolutionary, but before the revolution has ended. The Age of Innovation continues. We deal with global networks, entirely new disciplines, instant news, unparalleled (and uncontrolled) connectivity, clickable-map awareness of geography, major transactions at blurring speeds, and new modes of work – flex-time, part-time, the paperless, water-coolerless, officeless office.
Our connectivity has progressed to virtual meetings and on-line face-chats. Our visual senses have never been as keen or as necessary.

This raises another question: What is the most facile tool of reflecting and influencing corporate change? For grace and subtlety in expressing complex and multifaceted corporate plans I advocate using big paper on the walls.

Here we arrive at the heart of my matter. With a competent graphic facilitator interpreting, bridging, recording and connecting, there is no tool as facile or succinct. A good graphic facilitator brings the tools of cognitive understanding to the process, so that the moving form of the graphic actively nurtures clearer statements and fresh directions from the meeting members.

Vocalized ideas are merely bits of vibrating air. When I fix these ideas on paper in the visual language that has excited and illuminated communication, they stand symbolized beside other, lateral ideas.

I know that nothing is as understandable, logically connected, or as fast as my hand. I also know that the language in which I work is the way human beings encode thought. We don’t imagine in words but in images; we can only think graphically.

The imperfect nature of my strokes makes the big paper human and touchable. In a lively meeting, the big paper demands collaboration, correction, controversy. It’s value is in the moment it crystallizes and in the connections it makes. It becomes a member of the meeting in its own right.

With digital camera technology, I can record and download the big paper on the wall almost instantly, so that every meeting member takes away a record, a map of the ideas traversed.

It’s worth noting that the big paper transmitted digitally – though a duplication of what everyone has seen – remains interpretable. A tool of lateral thinking and new, better, wilder, more focused, less rigid, or simply different thought. Post-meeting ideas spring out of the Big Paper when it’s exposed to a broader audience, and its good effects continue, weeks after it was recorded.

More graphic facilitators with sophisticated abilities distilled from new infographics and graphic design are emerging from many disciplinary backgrounds – architecture, illustration, journalism, and business – so the field is in an undefined stage that is still fresh and flowing.

What are my medium’s shortcomings? Because the paper records hand strokes, calligraphy, icons and purely graphic shapes and tones, it doesn’t respond to a digital search. Ideas in shape and color aren’t searchable until handwriting recognition reaches a much more advanced level. It’s currently possible to notate the big paper’s image after the fact with referencible hypertext, though this
requires an extra time consuming step. Though these hypertext interpretations are searchable, there is the danger of fixing them too narrowly and losing the evocative nature of graphics that suggest non-linear associations. One of the “killer apps” of the next decade may be a graphic recognition and archiving program enabled to search both handwriting and drawings.

Big paper on the wall is artful, not art. It doesn’t concretize ideas; rather, it exposes them.

One of the most important things big paper records is the participation of the meeting attendant who saw it being created. What is on the big paper is what was discussed. Is there something that should have been said? Some connection that should have been made? Was there an objection that some dissenting voice should have registered? The big paper is a reminder to every member of the meeting, evidence of the meeting’s success and of any failure to change the big paper. In this way the big paper’s image encourages continued interaction and follow up.

Big paper on the wall gives the graphic facilitator scope – on that broad field a gifted graphic facilitator can use the tools of iconography, calligraphy, information architecture to map the flow of group thought and decision.

Paper, invented in China in another millennium, became commonly available to working people only in the 18th century. I tape big sheets of it to walls. My other tools– markers, chalks – are old and simple. The only cutting-edge materials are fresh visual language, a knowledge of group dynamics, and contemporary business and meeting process awareness. What I create is a sea surge of words and colors and shapes. I believe my medium is the most important tool of collective thought in the continuing Age of Innovation.

ABOUT THE AUTHORS

Christine Valenza has been a strong contributor to the growth of her profession. She was one of the earliest facilitators to connect learning styles, meeting dynamics, and visual thinking in graphic recording, and to translate ideas into graphics as active catalysts for creative and strategic thinking in meetings. Her evocative art has helped many corporations make fresh, innovative decisions.

Valenza is the co-author, with Nancy Margulies, of the award winning book Visual Thinking: Tools for Mapping Your Ideas.

Her practice is now focused on coaching individuals and small groups in the use of visual thinking and graphic facilitation for business and community building.

See more of her work and understand more about the art of her communication at www.christinevalenza.com.
Jan Adkins is sometimes called “The Explainer General.” He uses illustration and words to trace the shortest, simplest, and often the most entertaining route to understanding. He’s written and illustrated 40 books – most of them non-fiction - and hundreds of articles for mainstream magazines. For nine years he was an art director at National Geographic explaining everything from Soviet space shots to deep-diving submarines. In both text, image and graphic design he expresses simplicity with graceful style. Learn more at The Jan Adkins Studio; www.janadkins.com