

The Representation of Meaning

Visual Information Design as a Practical and Fine Art

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Addressing the split between practical and fine art

The great art historian, E. H. Gombrich, on the next to the last page of his monumental book, *The Story of Art*, says, "Despite some promising experiments there still remains an unhappy cleavage between what is called 'applied' or 'commercial' art which surrounds us in daily life and the 'pure' art of exhibitions and galleries." (Gombrich, 1954, 445) He goes on to say that "many of us find" this cleavage "hard to understand." With the exhibit InfoArcadia during these three months, this "unhappy cleavage" is beginning to be bridged. I would like my talk today to contribute to the building of these bridges and to our celebration of this process.

Appreciations for InfoArcadia

I would like to thank the curators of the InfoArcadia Exhibit, Ronald van Tienhoven and Maarten de Reus, and their information design consultant Yuri Englehardt, for their deep insight and especially for their initiative in mounting this exhibit. I would like to acknowledge the support given them by Lily van Ginneken, the director of the Stroom Center for the Visual Arts. With this exhibit they have directed the attention of the art world to an important new movement. They have sent a strong and significant message that both acknowledges the value of the practical in design-art, and at the same time notices that there is often much of beauty in such functional design-art.

The goals of this speech

My main goal in this talk is to explore with you an important need of our time. A significant gap. A central missing element. And I want to explore how some artist-practitioners of information design are addressing this need. In particular, I believe many people at the turn of the millennium are struggling with meaning, how to conceive of it in their lives, how to express it, how to represent it, and how to share it with others. While this is a perennial issue for human beings, it is also one that has been sharply presented to us in contemporary times.

I will examine some of the ways that visual information design art is responding to these needs through its tools of representation; and I will begin to characterize some of the

possible directions for this new combination of practical and fine arts that emerge from such an exploration. In one sense, we can say that there is nothing so practical as to be able to express one's deepest and most comprehensive understandings and meanings.

I will look at three splits: the split of the practical and fine arts already referred to, and two other cleavages: the split of writing from the visual, and of the split of narrative meaning from the purely formal and structural strands in modern visual art. Finally I will show how these elements are again coming together in a new art form.

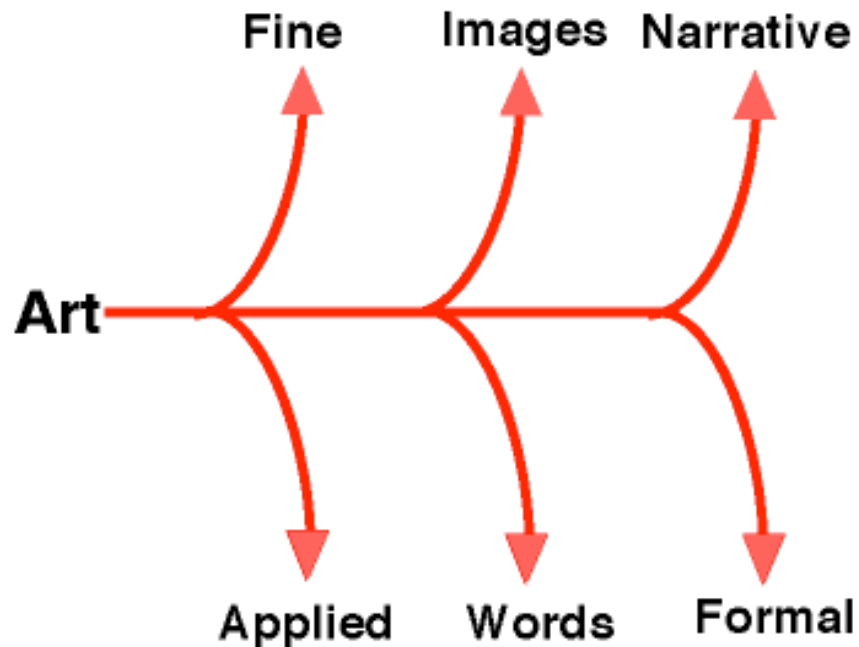
A new genre of art emerging : the information mural

To illustrate some of these points I will give some attention to a new genre which is called the "information mural." This new genre of art is emerging out of the values and practices of information design. In its most recent expression it draws on the narrative and integrative functions that visual art served in ancient and medieval times right up to the middle of the 19th century. In its fullest expression it provides us with illuminating glimpses of the new possibilities of meaning, representation, and esthetics I have been referring to.

Multiple splits in the modern psyche

To understand what we are up against, we also need to note the philosophical, psychological, and social splits that we are facing today. In Western culture, many observers have pointed to the increasing fragmentation of life. The crisis in meaning has come from the Enlightenment's split from a religious or spiritual world view. Our meanings have been disturbed by the radical change in gender roles and in the structure of the family. It has been shaken by the radical urbanization of life, the cutting off of our connection to nature, and the pace of change in technological society. Since Nietzsche, we have had to face nihilism around every corner. Since Einstein, relativism has spread into every dimension and domain of thought. From the dawn of postmodernism, multiple interpretations of life, culture, and meaning have pervaded our lives. Our culture is still struggling with the consequences of these multiple fragmentations.

Three Cleavages



Split between words and images in the process of being bridged by a new language

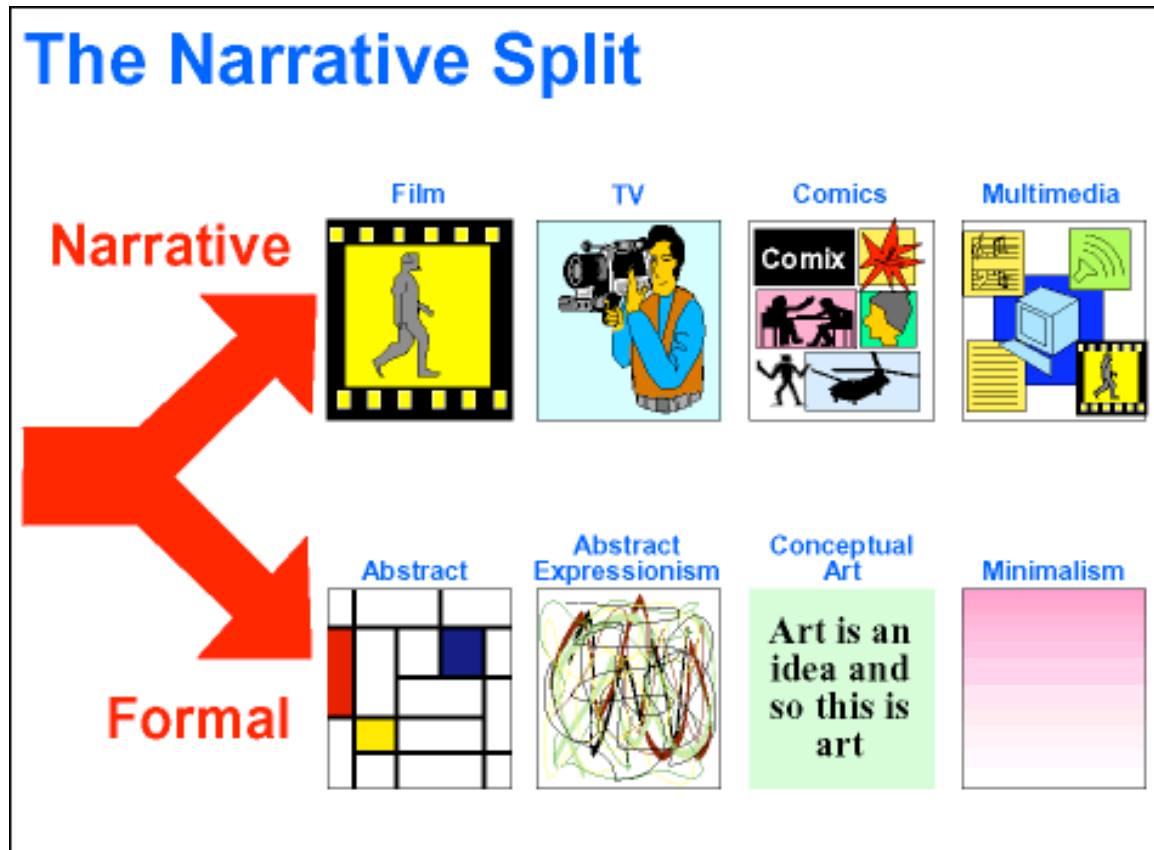
For an even longer period of time there has been an unfortunate and artificial split between words and images. We grow up and have a choice to become either writers or visual artists. We are word people or visual people. At my university, the English department is on the opposite side of campus from the Art department. This split has recently begun to morph into a new kind of integration. I have documented in my book, *Visual Language*, what I see as a new international auxiliary language appearing in the form of tightly integrated words and visual elements. (Horn, 1998a). The appearance of the graphic computer in 1984 and the rapid spread of the World Wide Web are the current breeding grounds for this language. The rapid spread of complex technological civilization is the major driving force behind its expansion.

The split of narrative from the visual arts

In modern times (since about 1850) there has been a split of the narrative and explanatory from visual fine art. Prior to that there was always an integration of the art works with the stories they illustrated. In the middle ages and Renaissance, it was the Christian stories.

As the modern age progressed the stories illustrated were those of kings, and battles, and political events. Throughout time the ancient myths were told and retold in the visual arts.

With the emergence of



photography, cubism, abstract expressionism, and many other styles, technologies, and directions, much modern art has focused on the purely formal and structural. From Kandinsky on, modern art has celebrated the abstract. From Piet Mondrian it has received minimalism. From the Bauhaus on, the visual arts have focused on function. From Hans Hofmann on, purity of form. From Picasso and Braque and Duchamp on, it has, in the words of Moholy-Nagy (1965), centered on presenting "vision in motion." From Van Gogh on it has danced to the song of pure expression. From the American abstract expressionists on, mere paint on the flatness of canvas. From the conceptual artists, the art that isn't there or won't be there long.

In recent times, major artists focused simply on the relationships of patches of color and form largely unconnected with any wider context than the art world itself. Not that they have no theory. They have theories. But they are impoverished theories, unequal to the needs and uncertain of the possibilities--of our time. Only some of the great muralists of this century remained tightly connected with the narrative tradition.

Seeing narrative as an important component of meaning

Narratives are the stories we tell about each other, about ourselves, about our culture, about our communities. Narratives are a major way we dwell in meaning. Yet, narrative substantially disappeared from much painting in the 20th century. Other arts took over the job of weaving stories that make life meaningful--preeminently film and television. The abstract, the conceptual, the purely formal visual art does not convey very much narrative. I am not talking about all visual art, of course. I am saying that much of the dominant art collected in museums of modern art and discussed in the histories in the past 100 years has that characteristic.

Deficit of meaning in modern art

Many have commented on the destabilization of philosophy in the postmodern world. Much has been said about a floundering in our worldviews. We are cut loose from our moorings. We are floating in space. We don't know what to think in these shifting contexts and as a result have expressed the frustration of fragmentation, alienation, nihilism in our art. Up to quite recently in painting we have been served up continuous expressions of emptiness and meaninglessness. Mostly there has been an underlying despair at the emptiness portrayed.

There is always something satisfying when we can see --actually visualize--what and how we are feeling and thinking. But in a deep sense the project of modern art has been disquieting. It has not give us that ability to visualize ourselves and our meaningful connections. It has given us the pleasure of contemplating patches of color and texture and shape in relation to each other. But for the most part, the artists have said to us, "I am feeling fragmented. I am alienated. And so are you!" It has failed to nourish that aspect of the human spirit that requires meaning and coherence, that celebrates unities and integration, that sparkles at hope, that marvels at complexity, and that is in awe of the vastness and majesty of the universe.

Meaning as a human need

I want to explore for a few moments, the idea of meaning itself. There is a great need in human beings for meaning. In some psychological experiments, people are given meaningless stimuli and asked for their meaning. And people always supply a meaning to the experimenters, no matter how random the stimuli. Particularly in our times there is a need for connections with the larger systems--environment, community, culture--of which we are a part. The new science of ecology has nurtured meaning in the hearts of many environmentalists. Our continuing passion for cosmology attests to our yearning to understand our connection to the wider universe. Our abiding interest in consciousness demonstrates our attempts to understand the mysteries of our own psyches. We need all of the tools we can get to think about meaning. Among other places, we look to art to supply at least some of our meaning-making.

Meaning not easily defined

But meaning is not something that is easily defined, described, or portrayed. For me, it is one of those words like beauty, goodness, justice, and democracy that defy precise definition. We don't really understand how humans make meaning.

The difficulty of describing and understanding meaning comes out clearly in the story of the man who traveled all the way from Europe to India to find the meaning of life. He was told to climb one of the highest of the Himalayan mountains and there he would find a guru who would tell him the meaning of life. So he went to the mountains. He climbed and climbed, day after day for 15 days. And near the end of the 15th day he crawled up over a ridge and there sitting at the mouth of a cave was the guru. After greetings, the guru asked him why he had climbed all the way up to see him. "Please tell me the meaning of life," said the man. The guru thought for a moment and said, "Potatoes." The man was stunned. He was angry. He felt deceived. "I climbed for 15 days up this mountain to ask you what the meaning of life is. And all you can tell me is potatoes?" The guru paused for moment and then said, "You mean it isn't potatoes?"

Meaning, in one technical sense of the word, is always shared personal understandings. We understand our meanings from an appreciation of our relationships with ideas, people, events in our lives. We know we can not express the fullness of the word "meaning" in our lives. There is a deeper, more personal sense. We do know when we have more of it. We suffer where there is lack of meaning in our lives. We know it when we feel coherence, purpose, connection to larger systems and nature, when our world makes sense to us. We know when we are in the presence of our own meanings.

The search for meaning as a great magnet

I think of the disturbances and gaps in meaning as a great magnet in our time. It is an asking -- a calling, a yearning, a search -- for coherence, connection, clarity, direction, larger purpose, community. How does the magnet manifest? Not obviously. People don't wake up in the morning and say to their bedmates, "I feel a lack of meaning." It appears as a feeling, only half spoken, by our fellow citizens of this planet. It is in their worries and concerns. It is expressed when we begin to put those concerns together-- when we expand the focus of the little microscope of our eyes through which we generally look at the world.

Information design answering the calls for meaning

How does infodesign answer some of these calls to meaning? Visual information design has very modest beginnings. For much of its history, it has simply tried to help ordinary people cope with the flood of complexity and information overload that are characteristic of our Western Civilization. Visual information design has been built from the ground up with immensely practical approaches. I will not attempt to survey its accomplishments tonight as I have already written at length about the emergence of this new profession. (Horn, 1999) Many of its practitioners ply their trade in the making of government forms

and practical manuals for computer and organizational communication. Their aesthetic is that of the minimalist. They often take their visual lead from the theories and experiments of the Bauhaus and their typography and grids from the Swiss designers of recent decades. The value system of information design insists that each visual and verbal element has to be justified to serve the practical needs of the consumers of information. As such, information design has generally addressed the repeated challenges of increasing complexity, fragmentation, and meaning on a kind of brick by brick basis. There is no question that I believe information design is increasingly important in our everyday lives.

Information Mapping® as a practical example of information design

My own early work in information design has offered foundational and fairly rigorous ways to address huge volumes of largely textual information through what I have called "Information Mapping®" or more loosely "structured writing." The goal there has been to discover and create systems for analyzing, organizing, structuring, and presenting information in ways that make management of them efficient and effective. (Horn, 1989, 1992 a & b, 1993, 1997) I have shown how there is deep structure in information. For example, in the domain of relatively stable subject matter, and where our goal is explanatory, my research has shown that we can sort the sentences of a subject matter into 40 categories which cover at least 80% of the content. If each of the resulting information blocks are systematically labeled, aggregated hierarchically into larger topics, and displayed for scanning and skipping (rather than for word-by-word reading), they permit a whole new ability to navigate through and manage information on the World Wide Web, a topic I've discussed in my book Mapping Hypertext. (Horn, 1989)

This purely practical side of information design is well represented in the InfoArcadia exhibit. But these values of clarity, economy, efficiency, effectiveness, and ease of communication run deep and can have a much wider effect, as I will now illustrate.

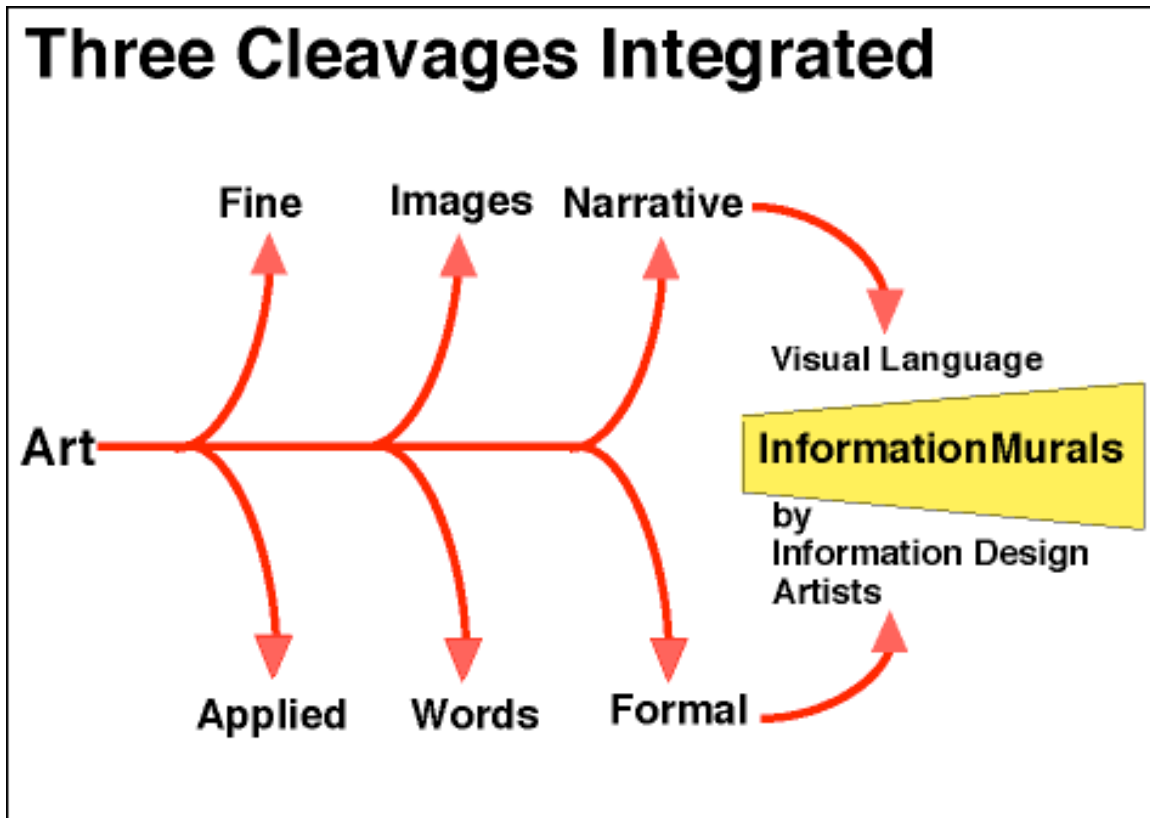
How to represent meaning in visual art

To show this potential wider effect, I return now to the question I left hanging a few moments ago. The question is: how do we represent wider meaning? How do we express it? I think often we find our meaning in our connections with wider systems, wider contexts of which we feel ourselves an important part. But these wider contexts are basically not visible. They are complex and in many cases we have too much information and not enough patterns. And surely patterns are a significant component of meaning.

How does visual information design art respond to these yearnings--and to this invisibility?

We are only now beginning to see how that might take place. I will illustrate this information design response from some of the posters and information murals that have visual language and information design as their foundation. I will show you that a

major way this representation of meaning operates is through the integration of words and visual elements in murals that will serve both an explanatory, narrative, and integrative function -- as well as an artistic one. I have called this "visual language," whose critical defining attribute, as I noted above, is the tight integration of words, images, and shapes. (Horn, 1998a)



Murals: classical and informational

Michelangelo's murals in the Sistine Chapel and the extraordinary murals of Rivera, Siqueiros, and Orozco—the Mexican muralists of the last generation—did not need to incorporate names of the figures of myth and history into their murals. At the time they were made, everybody who would look at them would know those names. They did not need to incorporate verbally, the dynamics of the story's narrative into their murals. Every viewer already knew the stories.

<http://www.wga.hu/frames-e.html?/html/m/michelan/3sistina/lastjudg/index.html>

But times are different today. We do not have such a common corpus of stories and explanations to interpret text-less murals. We do have different worldviews and no master narrative. What some contemporary muralists, coming out of the information design world, have begun to do is integrate a considerable amount of text into their murals. I want to show you some of their work and illustrate how it relates to some of the

issues I've been discussing today. You will see that the way they integrate pictorial representation, text, diagrammatic shapes, visual metaphors, multiple story lines, represents a new genre of mural emerging.

Info-narrative murals

The murals of Steven Harrold and of David Sibbet are good examples. They have grown out of immensely practical situations, the meetings of groups in various organizations, both commercial and non-profit.

Example of Sibbet's work: (http://www.grove.com/success_stories/ns.html)

It has been found that the creation of an information mural as the group meets and tries to solve its problems, visualize its future, plan the implementation of its decisions has become a distinct practical performance art. These "action murals" focus dialog in certain communities, workgroups, businesses, and organizations. As their subject, they have taken the history of the company, a seminal sequence of events, the values and visions of the founders and leaders, plans for the future, etc.

How meaning takes place in information murals

This "action art" produces extraordinarily useful public art that is often turned into more finished murals (especially histories and visions of the future of companies and organizations). These posters and murals are often framed and exhibited in the boardrooms and public spaces of these organizations, for inspiration, information, and, I would say, more importantly for meaning and connection. For it is around these visions that people can actually "see" their organization, as it has been, as it is now, and how it wants to become. They "see" how their jobs and their lives are connected to each other, to larger ideas, forces, movements and to the organizations of which they are a part. They "see" how their organization is connected to the wider world. In short, narrative is restored, context is rebuilt, meaning is enhanced. This "action art" aspect also responds to the rapidly changing nature of our lives and culture and to the "vision in motion" of Moholy-Nagy. It does this by a new development in muralmaking. These days, the murals of information designers can be stored on computers, can be updated and changed in front of our eyes, as new context emerges. I would like to emphasize that these murals come directly out of the information design field. They arose for the same practical reasons that all information design is done—for efficiency and effectiveness in communication. And I would assert that they have grown into a distinctly fine art capable of serving the great challenges of thinking today.

Patronage at the birth of information murals

Note that there is a new group of financial patrons for this new mural art, typically the large corporation, non-profit, or governmental agency. Well, perhaps not so new, as the Medicis (who were the government) and later the bourgeoisie were the equivalent of today's financial sponsors. But we can note that the context and patronage has had a

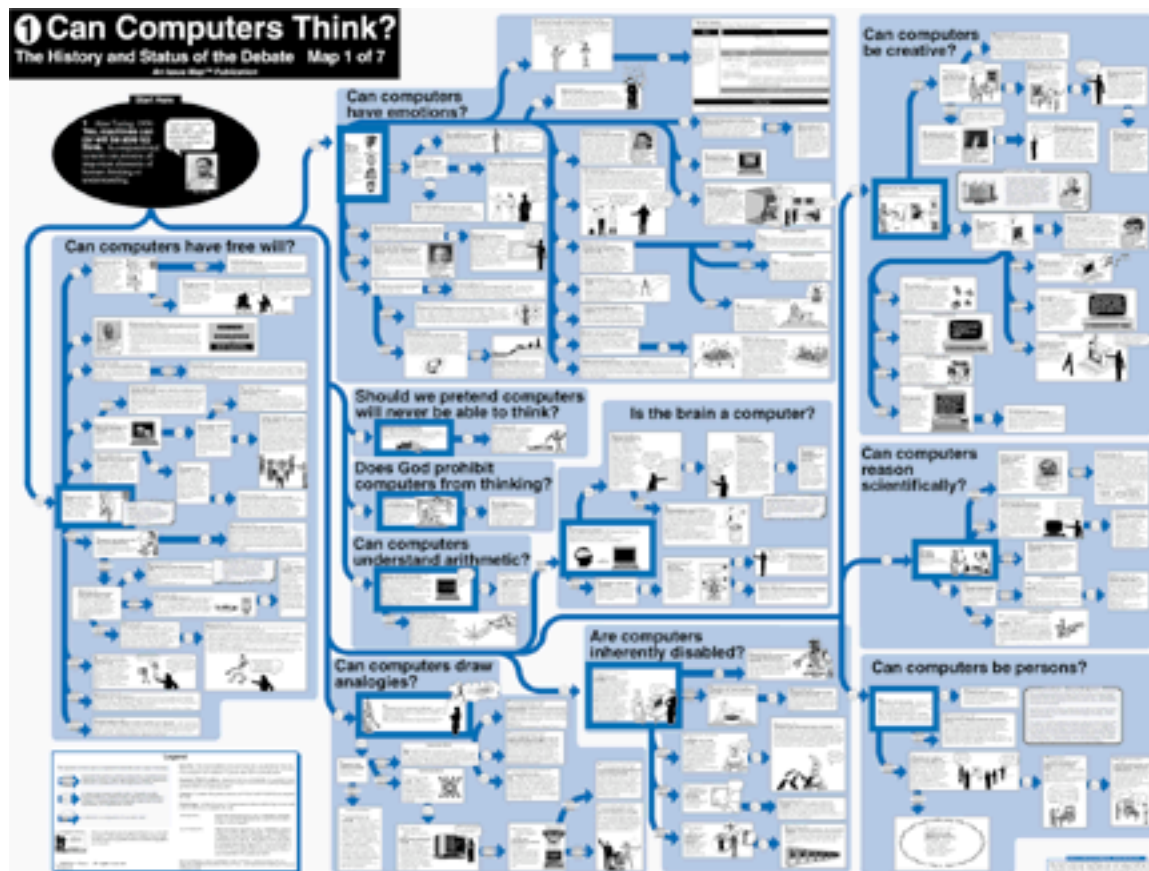
direct effect on the subject matter content, just as the patronage of the Christian church and the Renaissance political leaders had major effects on the content of Michelangelo and da Vinci.

A terminology question

I have called these "information murals." But that term is perhaps not robust enough for the job it is called on to designate. As I have noted, there is great narrative in them. And narrative is the intention to interpret and express at the emotional and conceptual level. Perhaps they should be called "info-narrative murals." Perhaps they should be called "context murals" or "meaning murals" or "narrative context maps." But one should be cautious in putting to heavy a burden upon the adoption of any single defining name. So, perhaps "information mural" is the best term. Maybe as this movement proceeds, we simply call them murals.

Argumentation maps as an example of information murals

My own argumentation maps, which are a part of the InfoArcadia exhibit, show how the overall pattern is dictated by the new genre of diagramming I invented for this series. (Horn, 1998b)



This tree-like branching carefully separates the 800 major claims and rebuttals in the debate into 70 subarguments. The diagrammatic structure provides a strong visual framework. It is not arbitrary. It reflects the deep structure of the thinking framework that is being portrayed in these maps. The arguments are made up largely of text, although many examples are visual. Here, text is doing what text does best. No amount of drawing is going to convey the subtlety of the arguments that the text provides. And the visual framework is providing what visual elements do best. I have called this study of the best roles for words and visual elements --while working together--"functional semantics." (Horn, 1998a) The some 300 illustrations provide practical examples of the arguments, navigational signposts, and visual delight. The total is a different mix than traditional murals. And with the capability of computer generated graphics and large printers, the maps can be made to any size of mural.

The Turing argumentation maps and meaning

What is the connection of these maps to my discussion of meaning? They illustrate how a contemporary conversation or interdisciplinary debate takes place around the world. They illustrate how the whole human community is trying to comprehend the effect of these new developments in computer and cognitive science on the question of human identity. The topic of these maps is directly relevant to who we are and who we will become as human beings — certainly one of our greatest challenges in meaning-making.

The evolution of information design murals

Where are we in the evolution of all of this? We are in the midst of creating shared understandings about our world. The important future task of these muralists and those not yet working in this medium is to dig deeply into what are the needs of meaning in our time. It is probably not a task for a single person. It is probably a task for a group of thinkers from different specialties whose insights need to be integrated and expressed by the new information design muralists. Here information designers will lead in the team because they are skilled at sorting out levels of discourse and keeping them sorted out visually. Leadership must come out of the integration of art, design, logic, deep systematic, interdisciplinary study, and ethically committed information designers.

The future of meaning and murals

To answer the demands of the creation of meaning in our time, I think that we must use all of our symbolic and artistic tools together. We need all of the devices of illustration, design and rhetoric to convey the richness and detail and complexity of our world. That is why visual information design art is such an important development. In this talk, we have looked particularly at information murals manifesting both as a performance art (graphic recording of meetings) and a studio art. The murals I have shown you -- current practice -- have not arrived at a full flourishing of what is possible. Partially, that is because the subject matter content -- with certain exceptions -- has been relatively

narrow, confined to one workgroup or a single company. That, as I have noted, is a result of the current patrons of these information design muralists.

But soon we will see these muralists move beyond the contexts set for them by their current patrons, and take on the great questions and issues of our time and enrich our understandings and our appreciations of the great trends and dilemmas facing us today. We will begin to see commissions from patrons, public and private, begin to attract these muralists from their practical workgroup and company surroundings into the public sphere. We will see their work on the sides of buildings or at the entryways to public edifices.

Taking information design to the limits of understanding

I believe that the vital creativity and especially the values at the center of information design art are providing the representational tools to make this all possible.

We have to meet the challenges of our world today. We must become the meaning makers. In the midst of our contemporary complexity and fragmented life, we search for synthesis, integralism, wholeness. I don't think we can ever achieve a final, perfect expression of these unities. We are always limited by our mental models. But out of our limited human capabilities we must extend our meanings to as wide a context as possible. I believe information design art -- especially in its expression as murals -- is beginning to do that in our time. We should not expect perfection or universality in this endeavor. But we can expect clearer portrayals of our problems and dilemmas and our solutions and visions. We can expect that information design artists, informed by their deep respect for ideas and systems, by their talent for narrative, and with their new esthetic of visual language integration of words and images will help us build more understandable models and meanings in the 21st century.

To close, I again appreciate the role that the InfoArcadia exhibit has played in focusing attention on these great challenges and the current state of the accomplishments of information design.

Acknowledgements

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References

Gombrich, E. H.(1954) *The Story of Art*, Garden City, NY, Phaidon

Horn, Robert E. (1989) *Mapping Hypertext: Analysis, Linkage, and Display of Knowledge for the Next Generation of On-Line Text and Graphics*. (Available from Information Mapping, Inc., Telephone 1-800-627-4544 or 617-890-7003.)

Horn, R. E. (1992a) Clarifying Two Controversies about Information Mapping's Method. *Educational and Training Technology International* 2 (no. 29):109-117.

Horn, R. E. (1992b) *How High Can It Fly? Examining the Evidence on Information Mapping's Method of High-Performance Communication*. Lexington, Mass: The Lexington Institute. Available from <info@infomap.com>

Horn, R. E. (1993) Structured Writing at Twenty-five. *Performance and Instruction* (Feb.):11-17.

Horn, R. E. (1997) Structured Writing as a Paradigm. In *Instructional Development, State of the Art*, Charles R. Dills and Alexander Romiszowski, eds. Englewood Cliffs, N.J.: Educational Technology Publications.

Horn, R. E. (1998a) *Visual Language: Global Communication for the 21st Century*, Bainbridge Island WA: MacroVU Press.<www.macrovu.com>

Horn, R. E. (1998b) *Mapping Great Debates: Can Computers Think?* Bainbridge Island WA: MacroVU Press (7 argumentation maps and handbook)
<www.macrovu.com>

Horn, R. E. (1999) "Information Design: The Emergence of a New Profession." in Jacobson, Robert (Ed.), *Information Design*, Cambridge MA, MIT Press

Moholy-Nagy, L. (1965) *Vision in Motion*, Chicago, Paul Theobald