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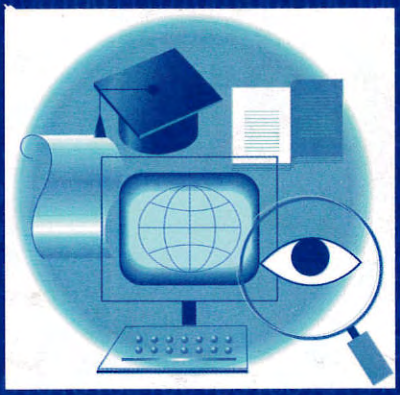

From Literacy to Electracy

Gregory L. Ulmer

INTERNET INVENTION

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"Nowadays," complained Mr. K., "there are innumerable people who boast in public that they are able to write great books all by themselves, and this meets with general approval. When he was already in the prime of life the Chinese philosopher Chuang-tzu composed a book of one hundred thousand words, nine-tenths of which consisted of quotations. Such books can no longer be written here and now, because the wit is lacking. As a result, ideas are only produced in one's own workshop, and anyone who does not manage enough of them thinks himself lazy. Admittedly, there is then not a single idea that could be adopted or a single formulation of an idea that could be quoted. How little all of them need for their activity! A pen and some paper are the only things they are able to show. And without any help, with only the scant material that anyone can carry in his hands, they erect their cottages! The largest buildings they know are those a single man is capable of constructing!"

Bertolt Brecht, *Stories of Mr. Keuner*

Preface

This book is a textbook for teaching with and about the internet, based on my experience with a pedagogy called mystory first developed in the early 1980s. I have been trying to write this book since I started teaching with computers in the Networked Writing Environment at the University of Florida (1994) and was never satisfied with the results. I decided to try a hybrid form that combined a textbook of readings and assignments with the theory that motivated the pedagogy. We no longer need to include the history of literacy and the theories of Aristotle in our textbooks designed to teach the apparatus of print, since there is a disciplinary consensus about this background and the effectiveness of the practices for turning information found in libraries into knowledge organized as arguments on sheets of paper. It is a different story when it comes to teaching "electracy"—which is to digital media what literacy is to print. How might information stored in databases be turned into knowledge on screens hyperlinked globally and designed with graphics? There is no consensus about new media education, about what skills are needed, what practices are available, for citizens to be fully empowered as native producers of digital texts, authored for the full range of private, personal, social, political purposes as well as for business or professional interests.

Internet Invention is offered as a singular example, representing my pedagogy and curriculum in which I use the website as the medium of instruction and learning in courses ranging from freshman general education composition courses, through courses for upper-division majors in media and cultural studies, to graduate seminars in "Digital English." The "wide image" experiment framing the assignments has been tested not only in such courses but also in workshops with colleagues as well as with students from the Liberal Arts, Fine Arts, and Architecture. This book is a record of and guide to what I actually do in my classes, and why I do it. Although the pedagogy was first developed in a conventional classroom, its primary purpose is for online learning. The book makes no attempt to simulate the Web projects (the few illustrations are personal photographs and drawings, intended to encourage the use of such materials as documents in the projects). Examples of student work and related supplemental materials (syllabi, sample email discussion, commentary, illustrations) may be found at the companion website: www.ablongman.com.

Taking my motto from the Japanese poet Basho, who advised not to follow in the footsteps of the masters, but to seek what they sought, I use the invention of literacy by the Ancient Greeks as a "relay" (heuristic) for the invention of electracy. *Internet Invention* brings the students into the process of invention, in every sense of the word. My optimism about new media for the society as a whole is

based on the correspondences among the features of digital hypermedia, the associative logic of creative thinking, and the aesthetics of popular culture. The fears about the *society of the spectacle* based on a culture of images that undermines critical thinking are countered in this pedagogy by the importance of imaging in the creative process and the contribution of imagination and visualization to problem solving.

The best way to learn about the potential of websites and the internet for supporting learning in the Arts and Letters disciplines, is to invent a new practice of writing native to hypermedia. At the heart of this new practice is the old humanities wisdom: know thyself. This book is organized around a project based on the "image of wide scope" discovered by historians of science to exist as a pattern in the careers of the most productive people in our civilization. What if it were possible to discover this "wide image" at the beginning of one's career, rather than waiting for an historian to find the pattern? The project, exercises, and readings take students through a series of Web assignments (the "widesite") designed to produce a version of the wide image organizing their creative imagination.

The convention of many argumentative writing textbooks (organized around controversial issues) is approached from the side of creativity in electracy. The generation of the wide image is framed as an apprenticeship for a virtual consulting agency—the EmerAgency—that places the text-image forms of screen compositions within the global institutional setting of the internet. The EmerAgency proposes through this setting to give education a new voice as a "fifth estate" in community problem solving. The lesson of a century of theory and art is that new forms require new institutional practices. The premise of the widesite (that problem solving in a career domain is guided by one's experience with problems in the other institutions of identity construction such as Family, Entertainment, and Community History) is that the creative wide image is easier to discover in the context of public policy dilemmas. Electracy is not invented in the abstract, but through the formation of a virtual civic sphere. Such is the framing premise of my networked courses.

Internet Invention is a "next generation" textbook for online writing and design that supplements existing print and web primers on HTML and graphics production with a proven pedagogy that puts these tools and techniques to work with a purpose. Designed as a passage from the more familiar rhetoric of the page to the less familiar one of the screen, the book is a hybrid workbook-reader-theory with chapters divided into the following subgenres:

- Studio: An integrated set of assignments and exercises for website authoring, supported by readings, descriptions, and models based on important works of literature, art, popular culture, and critical theory.
- Remakes: In the tradition of rhetorical meditation and arts improvisation, these sections demonstrate how to use the methods of image reason by bootstrapping electracy out of existing classics of arts and entertainment.
- Lectures: Scholarly discussions on the background, context, and rationale for the project and assignments, to share the logic of the pedagogy with

students and instructors, in order to invite them to participate in the invention of electracy.

- Ulmer File: Acknowledging that this textbook expresses the pedagogy of an individual rather than a disciplinary consensus, these sections describe and demonstrate my own performance of the assignments, adding to the background on how the pedagogy evolved, not as a model but as a "relay" to orient further work.
- Office: Informal comments, asides, clarifications distributed throughout the chapters, of the sort one would find in email, frequently-asked-questions files, or instructors' manuals, especially addressed to beginning students.
- Companion Website: Correlated with the table of contents, the companion website features student websites composed in my classes, with analysis, commentary, sample email discussions, and step-by-step instructions for the assignments.

Internet Invention expresses much of what I have learned in 30 years of teaching, which means that I have accumulated many debts along the way. The first acknowledgment must go to my dissertation director, Robert Scholes, who got me started. The greatest debt is to the students who attend the University of Florida. They have always responded well to the challenges of experimentation, and I continue to look forward to their projects. You may browse the mystories authored at UF, and catch up on the present state of the EmerAgency by visiting www.nwe.ufl.edu/~gulmer. My work has benefited from the context provided by Robert Ray, through his directorship of film studies and his own heuretic teaching and research. The Florida Research Ensemble (Barbara Jo Revelle, William Tilson, John Craig Freeman, Will Pappenheimer) demonstrated the generalizability of mystory to collaborative group work. I am grateful also to Wolfgang Schirmacher and the students at the European Graduate School in Saas-Fee, Switzerland, who tested the viability of mystory and choragraphy in relation to their diverse backgrounds, interests, languages, and career contexts. Some of the lectures and remakes appeared in earlier versions in *Works and Days; Parallax; Space and Culture—The Journal; Psychoanalysis and Performance* (Routledge, 2000); *Language Machines* (Routledge, 1997); *Interface 3: Labile Ordnungen* (Hans-Bredow Institut, 1997). Thanks to the Power Institute, University of Sydney, Australia, and the EcoDesign Foundation for their sponsorship of a lecture visit in 1994 that gave me an opportunity to test many of these ideas. Thanks finally to Victor Vitanza for his continued support. I am grateful for the support and understanding of my family—Kathy, Ty, and Lee. This book was written with the help of a semester sabbatical from the University of Florida and benefitted greatly from readings and comments provided by a number of colleagues, including David Blakesley, Purdue University; Diane Davis, University of Texas; Michael J. Salvo, Northeastern University; James A. Inman, University of South Florida; and Collin G. Brooke, Syracuse University.

INTRODUCTION: THE EMERAGENCY

Not to follow in the footsteps of the masters, but to seek what they sought.—Basho

HOW TO IMPROVE THE WORLD?

The internet as a medium of learning puts us in a new relation to writing. First and foremost is the fact that someone besides the teacher may read what students write. One of the first things some students want to do is put a counter on their homepage, to keep track of hits on their site. The internet brings into potential communication all the institutions of society. To dramatize that reality I (along with some colleagues in a creative research group called the Florida Research Ensemble) created a thought experiment—a conceptual consulting agency called the EmerAgency—as a framework to motivate the website projects in my classes. The EmerAgency is a consultancy "without portfolio." We imagine it as an umbrella organization gathering through the power of digital linking all the inquiries of students around the world and forming them into a "fifth estate," whose purpose is to witness and testify, to give a voice to a part of the public left out of community decision making, especially from policy formation. The philosopher Wittgenstein once said that even if we could solve all the technical or scientific problems, we would still leave the human question untouched. The EmerAgency approaches public or community problems in terms of this human question, from the perspectives of the humanities and liberal arts.

Reflecting on my own desire to improve the world by means of humanities learning reminded me of a scene that dates from 1964, set in Miles City, Montana, when I tried to explain to my father (a representative to the state legislature from Custer County), and his good friend, Mr. Richards (an area rancher who was also chairman of the Montana Board of Regents), why that spring (my sophomore year in college) I had changed my major from Economics and Political Science to English. That this decision was incomprehensible to them was understandable in that Custer County High School's college preparation track had led me to believe that higher education meant learning a practical trade or profession such as engineering (my father's degree was in Civil Engineering). I actually won a slide rule in a problem-solving competition during a high school recruitment visit to Montana State University in Bozeman.

These adults explained to me that real work added value to the world by taking something and making it useful to society, the way Mr. Richards turned his cattle into beef, or the way my father in his business took sand and gravel out of the hills (deposited thousands of years ago by a retreating glacier and full of the bones of mastadons) and turned them into building materials. What about poetry, didn't poetry add value to life? No, was the unequivocal answer. Poets and people who taught poetry were parasites living off the labor of others—those who turned the stuff of nature into (commodities). "You are wrong," I insisted, "and I can prove it." My proof at the time did not go much beyond the fable of the ants and the grasshopper.

Image Reason

I never won the argument with the patriarchs of my parents' generation but I am still trying to prove something. I mention them to remind myself about the context of writing—the community, the society of which we are a part (nor is it "one," unified, self-consistent). The EmerAgency is an experiment to see if I can make good on my claim on behalf of the Arts and Letters disciplines. The scene of 1964 shows me the poles of my purpose, a tension, contradiction, dialectic between art and instrumentalism. What I intuited in that argument was that art in its purest form had a contribution to make to the practical world. To put it now more strongly: the dilemmas of the practical world are fundamentally resistant to policies that neglect the human question. Nor is it a choice between two different approaches, but the interdependence of arts and sciences. The slogan of the EmerAgency is: Problems B Us.

The second feature that one immediately notices in a networked classroom is that the technology supports graphic imaging along with text: one writes with the whole page, so to speak—text, picture, layout. Moreover, there is an exact correspondence between the cut-and-paste tools and the collage and juxtapositional rhetoric of twentieth-century vanguard poetics. And it is just this fit between technology and aesthetics that constitutes my renewed confidence in the practical relevance of Arts and Letters materials to community problem solving. Electracy is an image apparatus, keeping in mind that "images" are made with words as well as with pictures. I am starting now with one pole of the binary, whose qualities might be found in the opening stanza of "The Lost Son" by Theodore Roethke.

> *"At Woodlawn I heard the dead cry:*
> *I was lulled by the slamming of iron,*
> *A slow drip over stones,*
> *Toads brooding in wells.*
> *All the leaves stuck out their tongues;*
> *I shook the softening chalk of my bones,*
> *Saying,*
> *Snail, snail, glister me forward,*
> *Bird, soft-sigh me home.*
> *Worm, be with me.*
> *This is my hard time."*

The point I want to make does not depend on this poem in particular. What was the effect when I first read "The Lost Son" in college? The memory of it can only make sense in the context of how surprising to me was everything about "English." Now I understand that there were precedents in my history of learning to read, such as my first encounter with a science fiction story as an elementary student before I knew anything about genre; or when in middle school I discovered at O'Connor's Newsstand my first copy of *Mad;* or the influence of *The Ugly American,* read for a high school book report, on my first choice of college major.

The English Major

When I arrived at the University of Montana in the fall of 1962 as a 17-year-old freshman I did not know that the humanities existed as disciplinary knowledge. Having made this discovery through required general education classes, and learning that it was possible actually to major in English, I enrolled in creative writing courses. Perhaps I was working by analogy with sports: football and baseball were not something I watched or appreciated, but something I did. Literature was not something to be read, but something to be written. I did not want what seemed to be the half-measures of prose either, in my enthusiasm as a convert. I went straight to the essence: poetry. My first poetry instructor was Richard Hugo, and his instructor had been Theodore Roethke.

What did I learn from Hugo? First, that men can be poets. I tell you this good news as part of my exercise in anamnesis recalling the extent of my ignorance and naiveté . . . (mine and the community that educated me). As a young child I believed for a time that dogs were male and cats were female. As an adolescent, to the extent that I thought about it at all, I assumed that engineers were men and poets were women. The canon was a revelation: Hemingway? And the poets at Montana at that time were megahemingways (and perhaps still are). I recognize now the compensation, the overdetermination of the lumberjack brawler stance of some of the Montana writers, as a symptom of that same context that prepared me to be an engineer.

The second thing I learned from Hugo is that my emotions were too raw, too unconditioned perhaps, to work with poetry directly. I am not sure that I am expressing properly this lesson. The way I would say it now is that I went straight from an anesthetic insensitivity to the sublime without passing through beauty. "The roses kept breathing in the dark. They had many mouths to breathe with. My knees made little winds underneath where the weeds slept" (Roethke). An image for it might be the orientation of Uranus, with its magnetic field knocked off the north-south axis that is the case for all the other planets. The solar wind of aesthetically designed language slammed my magnetosphere on its side so that it streamed away from me in the form of a turning curving field. Perhaps this is why I can stand for hours in a bookstore, head cocked sideways to read the titles on the spines of shelved volumes. Theory was as close as I could get to beauty for

a long time (imagination in full armor, ready for the joust, requiring a herald of abstraction to recognize the contending parties). Poetry is the calculus of theory in the domain of arts and letters. It is the logic X = Y. The gardening greenhouses of Roethke's childhood = X. He shows us the scene ("scurry of warm over small plants") and suggests "that is me" (Y, the unknown). Here is the logic, the reasoning, to be put to work in the EmerAgency, because it is the basis for the inference system of a digital apparatus.

Perhaps the strange polar dynamics of Uranus tell me something about the poles of my imagination—poetry *applied*. A title of one of my books is *Applied Grammatology*, alluding to Jacques Derrida's *Of Grammatology*. "Ah, the American version," Europeans say when they hear my title. Yes; if it is not *useful*, I am not interested. The kind of uncanny evidence I have learned to trust suggests this possibility, in that the moons of Uranus bear the names of characters from the plays of Shakespeare, including a keyword from my mystory—Miranda. This aesthetic reasoning is not taught in the schools after about the third grade. As a civilization we have preserved the memory of the poetic and we continue sometimes to honor its diviners without knowing why or what purpose might be served by the dimension of language (the remainder) that they operate.

INTERNET INVENTION

The EmerAgency as thought experiment organizes my curriculum. Could it become something more than a pedagogical fiction? Yes, that is my hope and my plan, to be achieved in part by means of this book. The purpose of the course is to approach electracy by trying to invent it (what I call "heuretics"—the use of theory to invent forms and practices, as distinct from "hermeneutics," which uses theory to interpret existing works). It does not matter how a discipline goes online, so long as it gets there, and the sooner the better. The history of writing shows that one of the first uses of a new technology of memory is the recording of the extant works of the culture: the epics of Homer inscripted in Ancient Greece; the Bible printed in Renaissance Europe; the novel filmed in modern America. The content of the new media, Marshall McLuhan observed, is the old media. The consequence of these recordings was a mutation or reformation of one degree or another. Walter Ong and other grammatologists have shown, for example, that school with all its practices such as concept formation and method is the institutionalization of alphabetic writing. Once the move was made from manuscript to print, at least two foundational practices of medieval schooling were abandoned: mnemonic training and scholastic logic. The practices of writing invented by Peter Ramus and others simplified immensely the experience of learning.

In our case, the translation of the literate categories organizing knowledge into cyberspace makes explicit that these categories or specializations (English, History, Sociology, Physics, Architecture, Engineering) are relative to the social machine (apparatus) of literacy and have no absolute necessity. They correspond, that is, to the requirements of the apparatus, not to the nature of the conditions in the real that cause us so much trouble (which we configure as "problems"). While the entire administrative superstructure of literate specialized knowledge will be translated into cyberspace, once there much of it will evaporate. The practices that will replace specialized knowledge remain to be invented. Who will be the inventors? Why not us?

"Diegesis" is a term naming that part of a narrative that persists across all media, all adaptations, translations, remakes. The EmerAgency may help to sort out the diegesis of our disciplines from the accidents of literacy. For example, general education writing courses, staffed by English departments, serve at least the following consensus needs, listed in order of current priority—methods for using the language to learn specialized knowledge; practices of rhetoric and logic required for citizenship in a democratic society; models of self-knowledge for living the examined life. We may assume that these needs continue in electracy, but that they will be articulated differently. The "mystory" genre featured in this book, for example, assumes an inversion of the literate hierarchy: the first communication of an electrate person is reflexive, self-directed. The kind of "belonging together" experienced in electronic culture will not be the same as what was fostered by the novel and print journalism, described by Benedict Anderson in *Imagined Communities*. Taking responsibility for these experiences must be separated from the literate formats of courses, exams, lectures, semesters.

The invention concerns how the new technologies might affect our working conditions and teaching practices, and what we might do to reduce the negative aspects and enhance the positive. The history of literacy shows that we may expect profound changes to result from the changes in the language apparatus of our civilization that have been underway at least since the invention of photography in the early nineteenth century. As I understand it, the one negentropic force in the world is human intelligence (creativity): we should consider this moment as a time for invention. Our discipline, like most others, has neglected the inventive side of its history, but it is present in almost every story we tell.

THE PROGRAM

Internet Invention is divided into five parts, reflecting a basic template of my pedagogy, organized around the composition of a mystory. "Mystory" is the name for a pedagogical genre I introduced in *Teletheory: Grammatology in the Age of Video* (Routledge, 1989). It was a response to a suggestion by Hayden White that if history had been invented in the twentieth century rather than the nineteenth, it would be quite different, reflecting a different science and a different aesthetic: not positivism but quantum relativity; not realism but surrealism. Mystory is a version of this twentieth-century historiography that White proposed.

The Motivating Hypotheses of the Project:

1. that disciplines are organized around paradigmatic problems and their solutions; that the solutions to these problems are important to the society to which the disciplines contribute as a mode of collective intelligence. The

emerging predominance of the image as technology and culture is a problem of the society, which is stated in disciplinary terms as the "spectacle"—the convergence of image and reality into a virtual condition of simulacra. A proper task for English departments in particular, or Arts and Letters programs in general, is to develop rhetorical and composition practices for citizens to move from consumers to producers of image discourse.

2. that there is a promising correspondence of features (isotopy, homology) aligning digital hyperlinked media, the associative "lateral" reasoning described in studies of creative thinking, and the "dreamwork" of entertainment narratives. The imaging condition of the spectacle therefore has a positive side, which is that the new media culture potentially supports and could be designed to augment and enhance individual and collective creativity: that a wired community in principle may be fundamentally "creativogenic."
3. that we propose to test this possibility by organizing a course about the internet and World Wide Web as a workshop devoted to the composition (invention/discovery) of the students' *images of wide scope* (the founding pattern of their signature style of learning and making anything).

Make a Mystory

1. The five parts of the book reflect the steps of composing a mystory. Students map or document their situations or relationship to each of four institutions: Career field or major; Family; Entertainment; community History (as taught in school or otherwise commemorated in the community). The final section is treated separately here but in practice may be folded into the process of the other assignments, the purpose being to interlink the four sites in a way that brings out a pattern. The pattern emerges not at the level of meaning or theme (these may be derived or inferred from the pattern). Rather, the pattern forms at the level of repeating signifiers—words and graphics—which is why each discourse level of the mystory must be documented with details that address the senses. If the History information concerns the Alamo, for example, we want not an abstract discussion of manifest destiny, but Davy Crockett's coonskin cap. Freshmen do the project in four installments, upper classmen in three, graduate students in two.
2. Assignments are stated simply in a sentence or two: "make a website documenting a memory of an incident from your family-entertainment-history background." Then the daily work of students in class meetings and email lists is to use the readings, lectures, tapes, websites as sources from which must be derived the instructions for completing the assignment. Assignments usually include a required "guide" or recipe, collectively brainstormed, that explains the "rules" for making that website, and the maker's

specific plans or proposal for performing the task. Memory is crucial, since we are testing the power of the punctum (Barthes) or memory sting as the connection between personal organic (living) memory and the artificial memory of computing and the Web.

3. An eccentricity of my context in an English department perhaps is the emphasis on the transition from literacy to electracy. In practice this means that the sources for our theoretical rationale and exemplary or model relays of prior work come not from the Web but from Arts and Letters productions. An additional justification for this approach is that the work being produced offline is still superior to work originating online. Certainly there are exceptions to this rule of thumb, and in any case an assumption of apparatus theory is that this difference in quality will disappear as electracy matures. This use of readings and relays is simulated here in the usual way of textbooks, with excerpts and descriptions.
4. I do not provide here discussion questions, instructions on HTML tags, graphics software, Web search engines, and the like. The chief purpose of *Internet Invention* is to provide something to do with the internet either while working out these fundamentals or after they are learned and ready to be applied. There are many useful guides for the skills, and everything students need is available online as well. Mystories are made by students with computer skills ranging from none to expert. For that matter, I taught mystory as a genre for media studies as "paper" assignments in conventional classrooms before the World Wide Web existed.

Narrative Suspense

Once we have established the point of view of the project within the specialized knowledge of the Liberal Arts, the course unfolds as a narrative, with a basic narrative adventure structure (the myth of the hero) providing a literal and figurative outline and guide to lend coherence to the inquiry. A working premise that is an explicit part of the pedagogy is that we are inventing electracy. Electracy does not already exist as such, but names an apparatus that is emerging "as we speak," rising in many different spheres and areas, and converging in some unforeseeable yet malleable way. A benefit of the textbook format providing readings rather than mere citations is that it allows second guessing, alternative emphases, different interpretations, further elaborations. At the same time, the readings address the need for persuasive proof that what we are asked to do is logical, necessary, productive, relevant, possible. The students are helping to invent the future of writing. This attitude and relationship to learning has to be made explicit and encouraged, since students are unaccustomed to working in an experimental way.

A perhaps surprising theme or motif emerges and develops through all the chapters related to the experience and behavior of identity in electracy. The theory predicts that identity behavior or subject formation is as much a part of an apparatus as are technology and institutions. The changing nature of identity in

digital civilization is manifested here in the theme of impersonation, both literally in the lives of citizens, or figuratively in the virtual play of media consumption and production. Eric Havelock documented and argued in detail in such books as *Preface to Plato* about the invention of "self" as a byproduct of the experience of interacting with the page. A habitus of reading to oneself caused the voice of thought to move from outside (spirit speaking through nature) to inside (the ghost in me—psyche). Now a habitus of imaging is spreading in which people see themselves on a screen, sometimes literally from the moment they emerged from the birth canal (in home movies) to the present. The subject is observed as "body," surface, gesture, look.

What are the consequences of such a habitus in the long term for human identity both individually and collectively? Oral peoples who experienced thought as spirit were organized collectively in tribes; literate peoples who experienced thought as self are organized collectively in nation states. The heuretic principle suggests that electrate peoples who experience thought as virtual image will organize collectively in some new way that as yet has not come fully into view (but perhaps is glimpsed in multinational corporations). Part of the interest of the book and of the pedagogy is the open question about the coming community (to borrow Agamben's title and phrase). The EmerAgency apprenticeship is quite real in inviting students to participate in testing the claims and possibilities of electracy and in inventing the practices for an electrate virtual civic sphere.

As for the functionality or practicality of the wide image (explained in the next chapter), some students are skeptical. However, the project is explicitly an experiment; its provisions are not to be accepted without question, but only provisionally, for purposes of testing. Students are not asked to "believe" but only to suspend their disbelief while trying the mystory as a genre for *simulating* the wide image. Doubters have literally changed course in the middle of an email complaining that they fail to see any connection between one discourse and another, suddenly (in response to the sheer magic of writing) to be struck by a connection. Is it discovered or invented? Both. That some pattern will emerge through the process is guaranteed due to the very nature of language and design: there will be repetitions. A further guarantee is based on the fact that people's lives have some continuity and coherence, some style, shape. Most students who make a mystory experience some degree of illumination. The pleasure involved in making a self-portrait is as old as the humanities itself: the unexamined life is not worth living. Who knows if composing a version of the wide image in advance will increase the creativity of students? Perhaps. Regardless, the quest for the wide image produces a powerful learning experience, and that is sufficient justification for any pedagogy.

Remakes and Improvisations

The final feature of the book to note is the organization of the chapters into different subgenres.

- *Lecture:* based on previously published articles exploring the theory of electracy, grammatology, choragraphy, and the rest. Some of this material may be skipped by general education students, or they will need help with it. The lectures remain in the form of arguments conducted in the language and style of specialized knowledge, in keeping with the hybrid nature of *Internet Invention*.
- *Studio:* foregrounds assignments and exercises, with related readings and relays to guide and inform how the websites (projects) are designed. These are stated in simple terms, and may be supplemented and elaborated upon as needed. I have used these assignments in workshops independent of the lectures.
- *Ulmer File:* presents the results and process of making my own mystory—the reasoning, difficulties, decisions, and outcomes.
- *Office:* at the end of each chapter, a few comments addressed to the student about where we are at that point, some background on what has happened. Also the sort of thing one might find in a teacher's manual.
- *Comment:* interventions or asides distributed throughout the chapters, as an extension of "office hours" discussion into the more formal lectures and studios.
- *Remakes:* This mode overlaps with the others, and reflects a heuretic way of generating research writing by starting from some work from theory, literature, the arts, entertainment, or popular culture that is important in some way to the project, and using it as a guide or singular "genre" for generating further thought and insight. This mode reflects at least three sources of inspiration: postmodern appropriation; the Hollywood practice of remaking American hits or foreign films every so often; jazz structure, which often begins with a standard piece and then riffs on it to produce new and transformative versions; theater and stand-up improv routines. Another source is the meditational practice during the manuscript era of selecting and isolating for contemplation and generation of thought certain "gems" of the canon. Distributed through the chapters are meditations on the following gems or relays:
  - "Kubla Khan," poem, Samuel Taylor Coleridge;
  - *Phaedrus*, dialogue, Plato;
  - Meeting the devil at a crossroads, blues legend, Robert Johnson;
  - "Marlboro Man," advertisement, Leo Burnett;
  - "Meeting a remarkable person," essay, G. I. Gurdjieff.

The person or address varies according to the purpose of each of the genres. Studio, Office, and Comments use second person, speaking to you, the one making a widesite, or consulting as an egent. Lectures and Remakes refer to the students or teachers in the third person. The Ulmer File is in the first person and I address myself.

The larger goal of the remakes, related to the larger purpose of this book, beyond the wide image and the EmerAgency, is to explore and demonstrate the logic native to electracy, that I call "conduction," the fourth inference (adding to

the inference methods invented in literacy—abduction, deduction, induction). There is nothing exotic about conduction. The only thing that makes it difficult to follow a work organized conductively is lack of practice or failure to recognize the mode out of context. Conduction puts into logic the aesthetic operations of images (word and picture). Conduction is the inference proper to images.

The EmerAgency is my answer to the position posed to me in 1964 by the patriarchs (the late great fathers). Has the lost son been found? Or are the poets parasites on the working community still? Knowing how to make leaves stick out their tongues *may be* the calculus of electracy. Uncannily, this answer is the same one I gave then, the very same one, except that I only had half the puzzle. "Pipeknock (who stunned the dirt into noise)." Walt and Mr. Richards were not wrong, exactly, for I take their point: in some ways we theorists, scholars, poets are like those indigenes living among the stone monoliths of Easter Island, having forgotten what the heads were for or how they got there. Or had they? Did not some anthropologist finally get them to move and erect a head, showing that the knowledge was not forgotten but secret? We live in a world of images. Who best can teach us how to make images for ourselves?

WIDE IMAGES

In anticipation of the project to come, I cite here the self-assessments of some upper-division students at the end of a semester, after having completed the mystory search for their image of wide scope (the core image guiding their creativity). While they may make more sense after completing the mystory for oneself, they provide some context for the work to come. What is called the "widesite" in this book was the "noteweb" in the course. The following responses are divided into three parts of a template assessing how an image produces meaning. The parts are (1) the feeling evoked by the image; (2) "metaphysics"—what the image reveals about what the world is like, how things are or how the world works; (3) morality: given the first two points, how one should live (what one must do).

Brent

1. Feeling: always trying to move forward, cover new ground, meet new people, mostly achieve what one's superiors have. In project one, I described the parade of homes, where a bunch of wealthy homeowners vote on the best wealthy home. The guard gate is explicitly described here. In project two, Danny and his father live just off the property of a rich man. He doesn't want them on his property. This is an example of gate keeping. Danny and his father, however, do not have a desire to enter the gate and be part of that group. Further, Danny and his father live in a gypsy caravan. The gypsies themselves faced much gatekeeping, and also chose to exclude themselves. In project three, I have the Lincoln conspirators all given equal punishment, including Mary Surratt. Lewis Paine seems boldly to accept his punishment, but wants to exclude Mary from the group. On the personal side, I aspire to be like my friends (the cool kids) and doing so gets me in trouble.

2. What is: I see things as always separated into groups/cliques/sectors/whathaveyou. I think people (at least in my cultural atmosphere) generally want to participate in activities while excluding others. This can be seen in all sorts of segregation and persecution, and at all levels of severity. At the smaller levels this segregation can be a great motivational tool (smaller meaning that which is not intense bigotry). At larger levels, this segregation can of course be very dangerous.
3. Morality: I have always felt left out at some points, and have made it my goal to be accepted into whatever specific social group I aspire to belong to. Clearly segregation and bigotry will always exist in some form. While the person on top may be very evil in segregating, the person on the outside trying to get in can certainly use whatever method they have to include themselves in whatever group they wish. Once inside, the ultimate goal is to challenge the system we have entered and mold it to our needs, to set the rules and the trends.

Emily

1. Metaphysics: The Way the World is in Emily land. My life has been marked by long periods of absence and loss. My father's job as a naval pilot included deployments of 3–9 months. These deployments are almost like time markers for my life. Sugarplum Fairy is a reflection on one deployment when I was five. Yet this did not negatively impact my childhood experience. The experience makes my childhood unique. Rather, P-3 jets and airplanes symbolized (and still do) my father, and I have a sentimental attachment to this image. And I continued in the pattern of absence in my family by choosing to go to school 1000 miles away from home. It seems inherent to my life. Autumn leaves, changing composition and texture and departing for a period of time, but returning annually in Spring, signifies how absence was a staple of my childhood. My grandparents on my father's side passed away when I was a young teen, and my heritage on the Carman side is a bit of a mystery to me. While this loss has shaped me in my life, it is more of a fascination with my past than a devastation. My family history is also like a changing leaf of Fall, losing its life and departing from earth, but that always returns in new forms, as I am a descendent of my grandparents carrying on their legacy in the 21st century.
2. My Feeling and its Meaning: I have always known that the sense of absence that marks my childhood was never a negative experience. Absence was rectified through a strong relationship and emotional bond with my parents and family. My mother's family is very close, so there was never an extended family void. Ironically, one finds joy in the midst of melancholy or loss. The colors and visual composition of my notewebs construct a consistent pattern of bright/soft pastels and lush textures. These colors illustrate how the absence in my childhood had a positive impact. Pastels are associated with happiness and spring. I think this metaphor is most

apparent in my second project on the song "What's the Matter Here?". The message about child abuse is contrasted with a light, upbeat tempo (represented with bright colors/happy images). The song cites how important a positive and loving parent is to a child, hence reflecting my positive childhood and feelings (the pastels).

Again, the theme of absence in childhood was reflected in my third project by choosing Chaplin as my historical figure. I used Chaplin's autobiography as a foundation to select a hardship from his life. Although his childhood was marked by tragedy (a departure from my own), he rose to become the first icon of cinema as the Tramp. The themes of his films evoked a sentimental bond to reach out to his audience and connect with them. And, just like Autumn leaves, Chaplin's pratfalls symbolize the act of falling down but always getting up and returning to make more films and garner more laughs. Which is exactly how the season of Autumn, and the trees relinquishing their leaves, affects me. I feel rejuvenated and fascinated by the coming of a colder season (well, if you are anywhere north of Florida) and the loss of life. I am equally enamored with my own loss and absence.

3. Resolution: The Emily moral and how to prevail. The moral of my wide image is that the absence in my childhood is rectified through family bonds and relationships. The periodic physical absence of my father and my grandparents' death left a profound but poetic impression upon me. The time I spent with my father when he was home was wonderful and special, as we enjoy a close relationship to this day. And I am fascinated by my father's side of the family, no matter how ambiguous it is. Thus, the running themes of parent-child bonds, absence, and loss are juxtaposed with the images of falling and rising in pastel colors. And my wide image of the Autumn leaf is an accurate manifestation of my feelings and life. Colors and presence change and depart, only to return every season.

Crystal

1. The world according to stickman: This is stickman. S/he is the most basic and iconic form of my wide image. S/he is the generic human being—small, simple, and alone in the big, busy, and crowded world. S/he has infested my pages looking for refuge. The modern world keeps people apart. How much time in the day do I, or you, stickman, spend in a box? alone in a bedroom? alone in a cubicle? alone in a car? alone in a computer? I have never been a social butterfly. But the people in my notewebs seem to be absolutely isolated by external circumstances. In both of the microfictions I am five years old and entertaining myself. There was no one to play with because I grew up in the middle of nowhere and no kids my age lived down our dirt road. Many of the anxieties in "Ok Computer" are brought on by

the social isolation and relentless individualism of the modern western moment. Finally, because of her gender, Annie Oakley was alone in being a celebrated female marksman. I am, however, rather ambivalent. Frankly, I don't feel that my situation is as dire as this. I feel some connection to this isolation but it's not as if I spend the day without speaking to anyone.

2. How it feels to be stickman: Yes, I am obsessed with stickman. I am obsessed with the simplicity of the figure, the chameleon quality of the figure to represent anyone, the ubiquity of the figure in all variations on bathroom doors and crosswalks. In all of the variations I draw or find stickman, s/he is the same person. Singular and multiple at the same time, stickman only has her-/him-self for company. Isolated in the box, stickman is, essentially, a lonely figure. The low-light blues and grays scattered through the pages suggest melancholia stemming from the fact that these are not welcome, chosen, isolations. Everyone is lonely sometimes, everyone feels disconnected sometimes, and I am no different.
3. What stickman does about it: Stickman is peculiarly modern. S/he is, by definition, isolated and individualist, but s/he seeks the connections anyway—between sea and sky, between natural and man-made, between isolated and networked. In each of the microfictions I am a five year old child, alone. In one I find company in an imaginary friend; in the other I find company in books. I relied on the resources at hand, those within myself, to pass the time. In "Ok Computer," there is a desperate comfort in the double, a person sung to and of throughout the album. In my third project, inner talent triumphed for both Annie Oakley and myself, even though it was a talent we, as women, were not supposed to have, even though it was a talent that contributed to isolation in the first place. Perhaps the reason I am ambivalent about the loneliness is that my moral sensibility that accompanies it seeks to make connections, even if they are indirect, mediated, or even fictional. The solution is not to wallow in loneliness but to realize that no isolation is total.

Kara

1. The image that I am confident in calling my wide image is a highway More specifically, it is an empty two-lane highway with dotted lines running along the center. I feel this is an accurate reflection. When I an faced with any creative problem, the solution I come up with is almost a ways in some way or another repetitive. The repetition is usually of th same thing over and over. Even unconsciously I create multiples. If I an sitting with a pen and a piece of paper and my mind begins to wander, will draw a series of squares running down along side the edge of th paper. The dotted lines in the center of the highway are an enhancemen of this doodle. The idea of a highway implies movement, a monotonou repetition of continuous motion.

2. Repeated squares running in a vertical line also signify movement. This image is the embodiment of the way I feel about the world. It represents my atmosphere. I feel the constant desire to move forward, either metaphorically in terms of school or a career, or physically in the sense of moving to another city (I always feel the need to move after I've lived in a city for a few years) or simply just moving down a highway to visit another place. I get satisfaction out of getting in my car and driving 3000 miles by myself. The fact that the lines in the middle of the road are dotted and not continuous probably signifies my insecurity as to where that movement will take me and my constant doubts as to whether or not I have turned the right corner. Perhaps this feeling comes from the fact that my parents moved us so much as I was growing up and the fears I had about going to a new place that the need to constantly move on has now become imbedded in my psyche.
3. I feel that we choose our own path in our lives and that path can change according to what corner we decide to turn. I don't believe that Fate has predetermined our existence. For whichever path we choose, there are a few outcomes that can occur. Our resulting action will cause us to go down one of these paths which then splits to a new set of choices. For me, this means that the actions I take must be chosen carefully. Since the ultimate outcome can vary immensely, I will always be unsure as to whether or not I have chosen correctly and the future will be unclear to me. Yet I continue to strive forward and reach those places to which I have not yet been.

Leigh Ann

1. The image of wide scope that has arisen from this experimental noteweb of my mind is one that I would have never thought of when I first started this project, yet I recognize it as my own. The material image is a lock, more specifically an unlocked lock of a fence. This image encompasses the feeling that was an undercurrent in all three projects, that of wanting to break free, to be released, to let go. I can best sum up this feeling with the words "let me out." Process of Recognition: I had an undeveloped idea early on that my two micronarratives dealt with that feeling of being held back. I was surprised to find this connection because I had selected them independently of one another and only after they were finished did I begin to notice similarities. Both mentioned the idea of play and playgrounds. In the first micro, "The Price is Always Right," I had linked the words "day care" to an image of a chain-link fence. With "House Moving," the image of a fence crept in through words. This connection was interesting, but it didn't seem very important at the time.

   I continued to be surprised by the connections as I added to my noteweb with Project 2. The entertainment narrative I chose was *the Goonies*, a movie that centered around a group of kids that went on a real treasure hunt, successfully unlocking the traps of One-Eyed Willie. Project 2 was a big undertaking. I ended up trying to recapture the entire atmosphere of the movie, rather than concentrating on one particular set of details. My goal for that project was to create what I really loved about the movie, the idea of having a great adventure with a bunch of friends. At the end of Project 2, however, I was beginning to doubt that this "wide image" could really exist. It was with Project 3 that I began to zero-in on a wide image. Similar to the effect of Tarkovsky's finding the Soviet Army footage for *Mirror*, the use of the historical figure as a metaphor for my own experience was what made this image become clear. I chose Hamilton Disston without knowing exactly what his metaphorical connection to me would be. I just had a feeling that it was there.

2. I started to make connections all at once towards the end of Project 3. I thought about why the canal lock had always stuck out in my mind. I recognized the function of the canal lock, to hold back and regulate water flow, as central to the feeling of repression that is prevalent in the way that my family always dealt with problems. It was there that I connected to the story of my talk with my dad which was a rare moment of release, unlocking my own true feelings and my dad's in the process. The canal lock is it's own type of fence and I remembered the prevalence of fences in my other projects. When making links throughout the three projects, I knew the fence image worked with my feeling of holding back. Although I used the icon of a small part of a fence to connect the pages, I wasn't settled on the image of a fence alone. For the enhancement, I was able to zero-in on the specific detail of the fence that I recognized—the unlocked lock.
3. Effect of Retrospection: Thinking about the unlocked fence image connected to my first memory ever—looking out from my crib and crying in the dark, wanting to be picked up. This thought led me to remember a quote that stood out from reading Vera John-Steiner in *Notebooks of the Mind*. She discussed children in industrialized societies being raised in cribs and how this affects their need to connect verbally rather than with touch, as is the case for children in tribal societies. Before this noteweb I could never really explain why I have always dreamed about traveling to far away places. But now it seems that part of this explanation relates to this feeling of wanting to unlock and step out of the fences of my everyday life. This feeling of wanting to be "let out" (and now to help others do so) is even at the core of my choice of career, to become an international educator and help get students to study abroad. Although my noteweb isn't quite as cheery as I would have first envisioned it being, it is a true representation of a part of me. And I'll never look at locks and fences the same way again.

Rania

1. Reflection: I attempted to create a feeling of optimism throughout my three notewebs through narrative and atmosphere. Starting from the first project when in both my micro-narratives I show how life for me as a

child seemed to be at its worst yet there was still a way to pull through and at the end everything worked out for the best. In the second project I picked Cinderella as my entertainment story and we all know that her optimism got her the prince at the end. To follow along with this theme (although it was unintentional) in my third project both my personal difficulty and the historical events of the Coptic Church also evoke this theme of optimism. This optimism was revealed to me as I flew through all three notewebs connecting all the images and words that corresponded or resonated. It produced my Image of Wide Scope. As I reflect on my semester of work I must say that all three of those notewebs are me in every sense of the word.

2. Everything happens for a reason. Sometimes people come into your life and you know right away that they were meant to be there, to serve some sort of purpose, teach you a lesson or help figure out who you are or who you want to become. You never know who these people may be but when you lock eyes with them, you know that every moment that they will affect your life in some profound way. And sometimes things happen to you at a time that may seem horrible, painful and unfair, but in reflection you realize that without overcoming those obstacles you would have never realized your potential, strength, will power or heart. You must always look for the good that is hidden underneath the bad. Everything happens for a reason. Nothing happens by chance or by means of good luck. Illness, injury, love, lost moments of true greatness and sheer stupidity all occur to test the limits of your soul. Without these small tests, life would be like a smoothly paved, straight, flat road to nowhere. Safe and comfortable but dull and utterly pointless.
3. The people you meet affect your life. The successes and downfalls that you experience can create who you are, and the bad experiences can be learned from. In fact, they are probably the most poignant and important ones. If someone hurts you, betrays you or breaks your heart, forgive them because they have helped you learn about trust and the importance of being cautious to whom you open your heart. If someone loves you, love him or her back unconditionally, not only because they love you, but also because they are teaching you to love and open your heart and eyes to the little things. Make every day count. Appreciate every moment and take from it everything that you possibly can, for you may never be able to experience it again. Use your own "vehicle" to help you deal with the difficulties that may arise. Finally, create your own life and then go out and live it.

Part I

CAREER DISCOURSE

XANADU–Ulmer at Kanapaha Gardens, near Gainesville, Florida. William Bartram's *Travels* was one of the books that inspired Samuel Taylor Coleridge to write the poem "Kubla Khan."

"I live in Xanadu."

Chapter 1
Mystory

STUDIO
The Image of Wide Scope

The first requirement for becoming a consultant for the EmerAgency is to design a website version of an "image of wide scope." We will call ourselves not "agents" but "egents," since the nature of "agency" (both individual and collective) is undergoing mutation in electracy. The notions of the "wide image" and "themata" were developed by Gerald Holton in his studies of scientific creativity, for which the prototype is Albert Einstein. Holton and other students of creativity discovered the wide image by submitting the lives of especially productive people to close scrutiny. The pattern that emerged from such case studies confirmed the philosopher Friedrich Nietzsche's observation that it is possible to find in a career that secret point at which *the aphorism of thought intersects with the anecdote of life.* Nietzsche was making a similar point when he said that life is the iron hand of necessity shaking a dicebox of chance. One implication of these observations is that everyone's life manifests such patterns: every person possesses a wide or guiding image (actually an interrelated set of four or five primary images) if only in a potential state, as a disposition or propensity. Moreover, all the elements contributing to the pattern of "being"—the state of mind—expressed in the image of wide scope are in place by the time a person reaches the age of eighteen (upon graduation from secondary school).

The first initiative of the EmerAgency as a consulting agency engaged in pedagogy aimed at institutions rather than at individuals (and at individuals through their participation in institutions) is to perform a Copernican Revolution in education. Rather than waiting until after an individual has made a contribution to a knowledge domain, and as a supplement to literate schooling that focuses on verification of what is already known, the EmerAgency is developing a "practice" for helping individuals to generate a version of their wide image before they engage in disciplinary or applied problem-solving in their chosen careers. What if people became aware of and learned how to tap into the wide image as a resource in their career work? To answer this question the EmerAgency proposes to use the internet as an invention bank, using the database and search capability of digital networking to match wide images with problems confronting both specialized disciplinary and public policy arenas. This book

constitutes a rationale for and guide to the making of a wide image, or widesite, within the context of an internet public policy consultancy.

General Project: The Widesite

Design a website version of your image of wide scope (a "widesite").

- This project may not be completed all at once, but will be approached through a series of more narrowly focused assignments and related exercises. The first step is to find out more about the wide image and what Holton calls "themata."
- Everything that follows in this book contributes to the process of making the widesite, including not only direct assignments, exercises, and instructions, but also theoretical and historical rationales for the project and examples of work by artists and authors relevant to it.

Gerald Holton on Einstein's Themata

"It is surely significant that these personal 'odd contrasts' have their counterparts in polarities that run right through [Einstein's] scientific work. The most striking of these is the well-known dichotomy between Einstein's devotion to the thema of the *continuum*—expressed most eminently in the field concept—as the basis for fundamental, scientific explanation, and, on the other side, his role in developing quantum physics in which the key idea is *atomistic discreteness.* This merits some amplification. [. . .]

"We can go back even further when searching for the point where the thematic commitment to the continuum was formed. It is well known that, as a child of four or five, Einstein experienced what he called 'a wonder' when his father showed him a simple magnetic pocket compass. It was an experience to which Einstein often referred. His friend Moszkowski reported him in 1922 to have said, 'Young as I was, the remembrance of this occurrence never left me.' His biographer Seelig wrote in 1954 that the compass 'to this day is vividly engraved in his memory, because it practically bewitched him.' In his autobiography, written at the age of sixty-seven, we read: 'I can still remember—or at least I believe I can remember—that this experience made a deep and lasting impression on me. Something deeply hidden had to be behind things.'

"This scene is most suggestive. There is the mysterious invariance or constancy of the compass needle, ever returning to the same direction, despite the fact that the needle seems free from any action-by-contact of the kind that is usually unconsciously invoked to explain the behavior of material things; despite the vagaries of motion one may arbitrarily impose on the case of the compass from the outside; and regardless of personal will or external

Zwang or chaos. If Einstein remembered it so well and referred to it so often, it may be because the episode is an allegory of the formation of the playground of his basic imagination" (Holton, 1973: 357–360).

John Briggs on the Wide Image

"Gerald Holton has discerned that the work of scientific creativity is shaped by clusters of presuppositions and 'gut' assumptions which each scientist has about the universe. He calls these gut assumptions 'themata': themes. For the most part themata are aesthetic qualities like the assumption that the universe is basically symmetrical, or the opposite assumption that it is asymmetrical. . . .

"Holton says, 'My guess is that there's a focusing of these ideas fairly early, in childhood. What is impressive is the stability they show over many years. Once the scientist has committed himself to one particular set of presuppositions, the set doesn't change very much.' The themata are central to scientific process because they are imposed 'on your observations and they often tell you which kinds of experiments to try or not to try.'

"Holton's themata sound like abstractions but they aren't abstractions in the usual sense. They're a concrete feel for the surrounding world. 'Quite a few of the themata have a visual component,' Holton says, 'very often they're not even conscious.' Though he terms them thematic ideas, they might also be called thematic perceptions, for convictions about symmetry or complexity, simplicity, even formalism are convictions about the way things 'look' or should look. . . .'

"Holton believes that that 'direction' Einstein felt, his vision, had something to do with the compass story and a very early commitment to the theme of the 'continuum,' or 'field.' This sense that the 'something deeply hidden' in reality must be a form of continuum, like the magnetic continuum that held the compass needle, guided Einstein in his later work as a physicist. But that wasn't all. For, as the boy had gazed at the amazing instrument that his father had brought to his sickbed, another primitive presupposition must also have been awakened, Holton believes. Perhaps the constancy of the needle that always points north convinced Einstein that there must be a fundamental 'invariance' in nature. Significantly, Einstein first called his theory of special relativity 'Invarianten Theorie.' [. . .]

"Themata are never resolved. Depending on the problems being confronted at any given period of history, some themes may produce real insights into nature and others will not. One could reasonably speculate that great scientists have a much higher commitment to the pursuit of their idiosyncratic ensembles of themes than their less creative colleagues. Colleagues may ignore, even suppress some of their own subliminal thematic perceptions because they are not perceptions that people around them acknowledge" (Briggs, 1990: 26, 32).

Comment

- There is a further biographical factor in Einstein's case. Einstein in retrospect recognized the symbolic value of the compass gift since he of all people became the one to explain the physics of the electromagnetic field that caused the action of the needle. He might also have noted a more obvious personal connection between his aphorism of thought and the anecdote of his life: the fact that his father and uncle operated for a time a small factory in Munich that manufactured dynamos, electric instruments and electric arc lights. The compass anecdote condenses this larger story in which the son of a man who worked in the German electrical industry would be the one to revolutionize the physics of light.
- It is important to note that themata have been found in work produced across the divisions of knowledge and the professions, among artists and humanists as well as natural and social scientists.
- The General Project is to extrapolate from the paradigm (Einstein) to your own case, to ask *what is my image of wide scope?* Einstein's example gives us an idea of what to look for: a childhood experience (the compass memory) expressing an abstract theme (invariance). Extrapolation is central to the project in that every example constitutes a "relay" that helps direct you to your own material. The assumption is that the wide image exists as a potential, a propensity, and that our project is as much an invention as a discovery.
- Keep in mind that the widesite is a simulation of the wide image. You will not know for sure what your wide image will have been until the completion of your career. The methods we are using—the popcycle and mystory—are means to approximate this founding mood in the absence of products or works.

Disciplinary Discourse

Assignment: Career Discourse

Make a website documenting an important discovery, or a (founding) invention, in your career domain (your university major, or a field of disciplinary knowledge in which you have some interest).

- At this point we are not concerned about form and style. The goal is *inventio*—the stage of gathering the materials with which to work. Think of this site as a documentation, a curated display of details related to a discovery,

invention, and a figure responsible for it. There is no need to interpret or explain, but just to assemble a collection of details of whatever catches your attention. The figure or invention may be major or minor, so long as it is part of the career field that interests you.

- We will make a series of individual websites, devoted to different areas or institutional experiences, and look for the "constellation" pattern that constitutes the wide image at the end of this process. You likely will notice potential patterns as soon as you start the second assignment, and this awareness of an emergent shape (*eidos*) should be allowed to contribute to the selection of materials to include.
- This first assignment resembles a conventional research topic, except that rather than being asked to form an argument, you are considering the material in terms of your identification with it: an event in a field of knowledge used as a feature in a self-portrait.
- In every case these assignments may also be done on paper, as folders, files, or archives of mixed documentation, using photocopy and assemblage or collage juxtaposition.

Example: Identification with Career—Eunice Lipton, Alias Olympia Lipton, a professor of art history, influenced by feminism, took a different approach to one of the most important paintings of the nineteenth century—Manet's "Olympia." Rather than undertaking the conventional reading of Manet's style, Lipton identified with the model who posed for the painting, Victorine Meurent. Her book is an account of a search for information about the mysterious beauty, who supposedly had fallen into prostitution and alcoholism, which led to an early death. Lipton finds evidence that Meurent was a painter in her own right, and she composes an imaginary dialogue with her object of study. Meurent's life in the bohemian environment of nineteenth-century Paris represents a fantasy in forming Lipton's choice of career.

If you are just beginning in a major (business, journalism, pre-med) your identification with the field will not be as specific as is Lipton's. Nonetheless, you probably do have some fantasy image or intuition about the career that motivates your choice. The special interest of Lipton's case for us is that she makes explicit the "identification" with her object of study. Of course it is possible to do a conventional biography of Victorine Meurent. What sets Lipton's study apart is her mix of autobiography and disciplinary research. Given the mood of skepticism and objectivity that is the prescribed state of mind for science, most disciplines ignore or deny the importance of identification in education. The wide image, in contrast, emphasizes the subject of knowledge as much as the object of study: the desire to know is prior to any research.

> "I had no idea what the ramifications of the search would be. I didn't even realize that our names were the same: 'Eunice' is a translation from the Greek of 'Evnike': it means 'Happy Victory.' And I certainly didn't *intend* to end up a redhead. All I knew was that I envied Meurent her autonomy even as I acknowledged the paradox that I was a well-paid American professor in the late twentieth century, and she a working-class model in nineteenth-century Paris. I was convinced that she had had more choices than I, and that she had acted on them. The dare of her gaze was the proof" (Lipton, 1994: 16).

Comment

- The discovery or invention may be historical (the work of Copernicus, Darwin, Edison), or the site may treat a current question or problem whose solution has not yet been found or which is controversial (stem cell research, greenhouse gases). Every field has a history of innovations: advertising (who first realized that marketing was about values and lifestyles rather than products?); politics (the Bill of Rights); psychology (the rat maze); law (landmark Supreme Court decisions); computers (the microchip). The point for now is to appreciate the difference of disciplinary reason from reasoning in the other institutions that form identity, and to recognize the dynamics of the narrative that is already underway when one enters a language. Institutions have default or ready-to-wear themata that they offer to their initiates.
- The only formal point to insist on is that the documentation consist of details, particulars (both textual and graphic) accessible to the senses and imagination. It should not be homogenized into an abstract explanation, for reasons that will become clear eventually.
- These examples (and most of the others throughout this book) are presented through verbal descriptions, which of course are not adequate to convey the effect of the works described. Rather, they serve to illustrate the kind of thing you could do with your own materials. Translate them into instructions to be applied to the details relevant to your own case.

LECTURE

I Am Speaking "Theory"

The purpose for this first installment on the widesite is to foreground the specific features of the discourse in which this book is written. The General Project is not conducted in some neutral, transparent, or objective way. This book is composed within a discipline—media studies—in the liberal arts, humanities division of knowledge. Everything we are doing is motivated by my situation, including my stance within the normal science of English department media studies and rhetoric programs. I am writing not as a scientist or social scientist, nor as an artist or journalist, let alone as an employee of the entertainment industry or as a private citizen. This point is obvious yet often overlooked by students.

This first entry into the widesite calls attention to the specific nature of specialized discourse.

The project does not assume specialization in media studies, but only that students have a specialization or career domain. The premise of the wide image is that nothing is created or invented in general, but only within the parameters and paradigms of the disciplines and professions that set the problems and determine the criteria for evaluating proposed solutions. At the same time, it is important to remember that knowledge domains are invented. Part of the story of the wide image is the adventure by which one individual's themata become the paradigm (authoritative example) for a normal science.

Comment

- It is worth emphasizing that a conversation conducted in a classroom is not the same as one carried on at home with the family or in the street with friends. Someone speaking calculus may mention "functions," "rational numbers," "intervals," "derivatives"—all words with meanings specific to mathematics, even if they also have more familiar meanings used in common parlance. This same difference between vernacular and specialized language exists in the humanities and arts disciplines, but it is less obvious.
- Some of the terms we will be using are neologisms, meaning that I invented them. The proof of the value of an invented term is in its use. "Popcycle," "mystory," "electracy," are not in the dictionary, but they may be eventually. Meanwhile, I propose the neologism "neopest," to name a person who makes up words needlessly.

Popcycle

By the time students attend a college or university and undergo initiation or socialization into specialized knowledge they are already native practitioners of at least three and perhaps four or more different institutional discourses. I say "institution" to point out that the "discourse" (all language or meaning-producing activities, verbal and nonverbal, behavioral, all the "practices" of the domain) is moderated by administrative entities with actual powers of oversight, such as (in the case of career domains) professional organizations, journals and presses, licensing boards, accreditation procedures, degrees, and the like. "Popcycle" refers to the ensemble of discourses into which members of a society are "interpellated" (a specialized term in my field). "Interpellation," nicknamed "hailing" or "appellation," refers to the social and psychological processes by which our identity is constructed. A career-day exposition, with representatives of various companies and professions manning information booths and perhaps conducting job interviews exemplifies hailing in practice. One is hailed

or called by these booths, and the selection is limited, as are the openings within the selection. The theory of "ideology" (which is to my domain what "evolution" is to the life sciences) classifies our identity into such categories as race, ethnicity, religion, class, gender, sexuality, nationality. We enter into or learn the beliefs and behaviors named by these terms in an interrelated set of institutions. The core or dominant institutions (identified by being capitalized) of the popcycle include:

- Family: beginning at birth in the Home one enters oral culture (orality), learning a native language along with an ethnicity, a gender, and many other features fundamental to one's identity, based on the preexisting commitments of one's parents. Family discourse includes such oral or "simple" forms as the anecdote, the joke, proverb, homily, and the like, embedded in conversation. "Einstein" might occur in this discourse as an insult: "Smooth move, Einstein!" stated in a sarcastic tone. The logic of this phrase is common sense, and the proof that it is true is assumed to be self-evident.
- Community (History): from about age five in school one formally enters literacy, learning the attitudes and some of the methods of science (but not yet the specialized discipline of a career domain). The sponsoring administration of school is the local political community, so that one of the chief lessons is training in nationality, as expressed in the official history of the state (local, regional, national). School discourse takes the form and style of the textbook, translating the established, conventional ideas of specialized knowledge into general literate language. In addition to interpellating children into the beliefs of science and nation, the logic of the curriculum is "cultural literacy," aimed at providing a common body of references or symbolic capital. Proof is by authority. "Einstein" might occur in a textbook as the inventor of the formula "$E=MC^2$," taken out of the context of mathematics and physics and explained as a detail of history, often the history of the atom bomb, despite the fact that relativity theory has nothing to do with the bomb.
- Entertainment: from earliest infancy one enters "electracy," learning the mythologies, dreams, anxieties, and emotional dimension in general of the ruling (hegemonic) values of the society, conveyed through the televisions and radios that are found in virtually every household in the United States. Entertainment primarily hails one into commodity capitalism as a consumer. The forms of this discourse include all manner of narrative genres, from news to advertising. The logic is "mytho-logic," also characterized as "dreamwork," based on the same associative operations of condensation and displacement of terms used in aesthetic practice. Proof is by fashion. Something is hot, or not, cool or a fool. "Einstein" as myth personifies "science" imaged as an eccentric but famous genius or "wise old man" even though Einstein made his discoveries as a young man, working as an unknown patent clerk.

Example: Susan Van Dyne on Sylvia Plath's Interpellation

"In Hollywood cinema of the decade, the female body was pushed in extreme directions, toward voluptuous but vulnerable sensuality and toward an impish asexuality. Underlying both inscriptions is an association of the female body with the child. Feminist film theorists have shown that, even in movies directed primarily at women, what the female viewer reads is not herself but projections of male fantasies. In the antitypes of Debbie Reynolds and Marilyn Monroe, the exaggeration of physical differences becomes synonymous with moral values; body becomes character, and each body has its unvarying script. In the Debbie Reynolds plot, the sunny, ingenuous, freckled heroine is corny but cute, comically inept but always a good sport; she is thoroughly competent, however, in her main project, which is to become a wife, often by tricking her unsuspecting mate into marriage for his own good. Marilyn Monroe, and her dark twin, Liz Taylor, offer erotic gratification without commitment. Sultry, languorous, sexually experienced, and usually undereducated, they can be maternally understanding and yet are rarely rewarded with wifely success. . . .

"Plath saw herself in both figures. As a young wife she viewed all women as her rivals, and in observing Reynolds's defeat she mirrors her own insecurities: 'Liz Taylor is getting Eddie Fisher away from Debbie Reynolds, who appears cherubic, round faced, wronged, in pin curls and house robe . . . How odd these events affect one so' (J 259). In Monroe's marriage, Plath reads her own more ambitious script: 'Marilyn Monroe appeared to me last night in a dream as a kind of fairy godmother . . . I spoke, almost in tears, of how much she and Arthur Miller meant to us.' . . . To Plath, Reynolds is the monitory image, the cautionary tale of sexually inept virgins who are unable to hold onto husbands. Monroe is not punished but rewarded for her extravagant sexual appeal and, in Plath's dream, will gratify Plath's similar aspirations by sharing her beauty secrets" (Van Dyne, 1993: 71–72).

Comment

- Every institutional discourse has its own star icons that function as emblems for scripts of normative behavior, in the same way that Reynolds and Monroe are described as doing in entertainment.
- The experience of the gaze, in which Plath's "self-perception always includes an awareness of herself as spectacle, and her self-representation contains an element of performance" (73), is extended to everyone in electracy, men as well as women.

Two other institutions and their discourses are important—Church and Street—which will be addressed later. For now this brief review of the popcycle is to note that it is the source of the wide image. The term "popcycle" designates

the way ideas important to the culture may arise in any one of the institutions and then circulate through the others (invention is an ecological process). The insight that the notion of themata gives into academic learning is that problem-solving in general, and inventive thinking in particular, draw upon all the discourses that one knows. We will find or produce what will at least be a simulation of the wide image by mapping and documenting our own location or position within each one of these discourses. The genre capable of writing with the popcycle as a whole is called "mystory" (Ulmer, 1989). The wide image is generated out of a synthesis or syncretic scene that captures holistically a pattern of correspondences that appears when these discourses are brought together and juxtaposed. In subsequent chapters we will work our way through each level of the popcycle, using their forms and logics, in order to externalize and give expression to what we internalized during our first eighteen years of life. The mystory is designed to reveal/compose or "model" our wide image at the beginning of our career education, rather than waiting for it to emerge at the end of our careers as the style running through our accomplishments.

Part of the value of Einstein as paradigm is that his themes are imaged by a compass. The story of his compass becomes a parable for our own search, in that we must find our equivalent of the compass—the scene that we recognize as having this guiding role in our orientation to the world and to life. No matter what object or "prop" might embody our themata, it will serve as our *compass*. The further value of the compass as parable is that it answers at once the question of "determinism": it is true that the needle always points north, but once one has this orientation, one may go in any direction.

Comment

- While you are doing some research on an invention in your career field or major for the first assignment, I will explain my orientation in my own career field. In conventional textbooks it is unnecessary to include the background, orientations, and purposes of the authors, since these are assumed (they express the domain default themata). No such consensus exists regarding electracy, and one purpose of the EmerAgency is to assist in this very invention.
- Throughout the book I will present parts of my mystory, in search of my own wide image. What is the point of intersection between the anecdotes of my life and the aphorisms of thought in my career field of media rhetoric? There is a certain poignancy in the theory due to the possibility that a person's wide image may not be well-suited for the paradigmatic problems of a given field of knowledge. At the same time, this possibility indicates that one practical use for the wide image could be as an aptitude test.

Grammatology (The Ulmer File)

This lecture is part of the Ulmer File because it represents my adherence to a particular school of thought within the liberal arts. Not everyone agrees with this approach. Most textbooks are written in the voice of a disciplinary domain, with the confidence of field consensus about paradigms and themata, problems and methods. *Internet Invention* is a textbook, but it is written in the first person, without consensus. It proposes an institutional practice for electracy, including the EmerAgency, without knowing whether this commitment will have been normal or utopian (*the proof is in the pudding; try it, you'll like it*). The safety net is that the EmerAgency is a practice for invention. Am I the one whose wide image will become the default for a discipline? Is there a fit between my story and the paradigmatic problems of my career domain? Perhaps not. At the same time, I am optimistic about the possibility of the EmerAgency to facilitate the formation of digital rhetoric, even if it is not the rhetoric that I propose, since it does not claim absolutely to be that rhetoric, but rather a means to invent an appropriate internet practice. Meanwhile, I have to explain the disciplinary identifications guiding my approach to the paradigmatic problem of new media culture: *the image*. My own case stands in as the prototype of mystory.

Aristotle As a professor of English, I work in the only discipline that has not broken with the paradigm of knowledge set by the Classical Greeks. Aristotle's physics has long since been superseded, but his rhetoric still informs every introductory textbook of writing. And for good reason. Aristotle along with his teacher, Plato, and the pupils of the schools they founded (Plato's Academy and Aristotle's Lyceum), invented the institutional practices needed to exploit alphabetic technology. My attitude to the great inventors of literacy comes from the Japanese poet, Basho, who wrote that "one should not follow in the footsteps of the masters, but seek what they sought." My responsibility as a research humanist is not simply to pass along a tradition, but to help do for my society what the founders of my discipline did for theirs. They were confronted with the products of several hundred years of cultural experience with alphabetic writing. Grammatology—the history and theory of writing—uses an analogy with the literate apparatus to set up the terms for the invention of "electracy" (a neologism coined to distinguish the emerging apparatus from the established one). What we are attempting through our projects, then, is not only a practice for the new apparatus, but the very reasoning process of that apparatus in general.

The equivalent for us of the acquisition of the alphabet is the invention in the nineteenth century of a series of new kinds of recording devices, beginning with the camera, capable of registering and manipulating not only the words of a language, but the visual and auditory image of the speaker. The technological dimension of the electrate apparatus consists of this evolving series of recording machines, from the first camera through contemporary digital imaging, an evolution whose end is not yet in sight, but whose fantasy future is figured in the term "cyberspace." In the same way that Socrates, Plato, and Aristotle did not ask

how writing might serve the needs of the institutions of orality—religion, ritual, magic—but instead invented a new institution—school—and new practices native to writing (method, dialogue), it is my responsibility (the responsibility of my discipline) to find an equivalent for electracy. The goal is not to adapt digital technology to literacy (anyway, that is happening as a matter of course), but to discover and create an institution and its practices capable of supporting the full potential of the new technology. The EmerAgency is an institutional form, with the mystory as one of its practices, designed to work with the internet as the larger institutional context that will be to electracy what school was to literacy. Literacy shows us by analogy what we are looking for, but it does not give us the answer. The first thing to establish then are the terms of the analogy.

Comment

- To restate the present discussion in terms of your assignment, I am presenting information about an important invention in my field of knowledge, specifically, the invention of writing. This topic is still too broad, obviously, and I will narrow it down eventually. The difference between my purpose and yours is that I am focusing on a specific invention within literacy as a relay for understanding what needs to be invented for electracy.

Literacy Eric Havelock's account of the invention of the mode of categorization we call "concept" in literacy provides an important analogy for understanding what is happening in our own moment. The implications of the technological ability to record speech by means of the alphabet developed over several centuries, culminating finally in the invention of philosophy: dialectic, method, and their formal teaching in Plato's Academy—itself constituting the invention of a new institution: school. The first concept, the prototype of a new category formation, a new system for classifying the world (the original function of metaphysics), was "justice" (*dike*), extracted from the Homeric epics once they were available in manuscript form.

Eric Havelock on the Invention of "Justice"

"Hesiod affords an initial example of a process which was to gather momentum later, when he chose the term *dike* (usually translated 'justice') as the formal subject of a 'discourse.' The term occurs incidentally and not infrequently in orally preserved speech (as in Homer) but never as

the topic of a formal discussion. The narrative laws of oral memorization would discourage such a choice.

"Having made his choice Hesiod cannot conjure the required discourse out of thin air. We could easily manage it today, because we inherit two thousand years of literate habit. He, on the contrary, must resort to the oral word as already known—the only preserved word that is known. He must build his own semi-connected discourse, either some pieces in which the term *dike* happened for whatever reason to occur, or others in which incidents occurred that he felt were appropriate to connect with the word. His decision is compositional (rather than ideological), or perhaps we should say re-compositional.

"If he must do this, he will be forced to continue to utilize the narrative forms which control what he is borrowing from. He still will not be able to tell us what justice is, but only what it does or suffers. He has taken one decisive step toward the formation of a new mentality by inventing the topic to take the place of the person. But he cannot take the second step of giving his topic a syntax of descriptive definition. It will still behave rather than be" (Havelock, 1967: 101–102).

The gathering of disparate materials under the new principle of categorization at first seemed chaotic. When the oral narratives were recorded or written down in the alphabet, it became possible to discern a pattern, a repetition of signifiers that was not perceptible in spoken discourse.

"The psychological push needed to bring this about must have been the use of vision as supplement to hearing. An architectural rearrangement has been performed on language as previously used. The various 'justices' which perform one after the other in Hesiod's account echo each other acoustically to some extent, but they are also all 'look-alikes.' The reading eye has been able to perceive them as located in an oralistic flow that has now been written down in the alphabet, which can be looked at, read, and 'backward-scanned.' Hesiod could have so composed only if he was able to 'read' oral texts of Homer (and perhaps others). The first beginnings of the alphabetic revolution have occurred, in the creation of a topic as a subject of a 'discourse' made possible by the conversion of acoustically preserved memorized speech into materially preserved visible artifacts that are capable of rearrangement" (103).

The First Concept Hesiod noticed a pattern of words that had been overlooked in the oral performance of the epics. "Whereas it would be an easy matter for oral memory to recollect what Agamemnon or Achilles did or what happened to them, the names of 'dike' and 'hubris' and related terms were buried deep in the oral matrix. To rely on oral memory not only to recollect but to collect what happened to them would be beyond existing capacity. But place the language of the story visibly before the eye, so that the flow is arrestible and the words become fixed shapes, and the process of selection and collection can begin" (Havelock, 1978: 228). Hesiod discovered in the epics a "field" of meaning that he labeled with the abstract term for "justice." Plato completed the extraction of "justice" from its setting in the dramatic action of the epics when he wrote one of his most famous dialogues, *The Republic*. Plato asks after the "being" of "justice," thus undertaking the project that Aristotle later dubbed "metaphysics." Plato assumed that justice, as a universal principle or form, has an essence. To discuss this essence required Plato to separate his discourse from that of everyday life, to create philosophy as the first specialized discipline of knowledge, by introducing a specialized use for the verb "to be," whose normal function was that of copula, connecting subject and predicate.

The enormity of Plato's achievement is perhaps hard to appreciate today. He did not invent philosophy in isolation, of course. Some have said that he is to Socrates what St. Paul was to Christ (founder of the church). Plato founded the first school—the Academy—and introduced the practices of dialogue and method. In the dialogues Socrates's conversations with various sophists and citizens serve as a kind of oral interface metaphor to bring the reader by this more familiar means into contact with the inner nature of writing—dialectic (method). We have to remember in the invention of electracy how basic were the first inventions of literacy. In the first discourse on method in the West—*Phaedrus*—Socrates shows his pupil the procedures of analysis and synthesis: first break a problem or question down into its most basic parts or elements, and then put the parts together in a logical order (an order of intelligibility rather than of mimesis). The practice of definition was introduced and demonstrated in such dialogues as *Euthyphro*, in which Socrates exposed the contradictions in this character's reasoning. Euthyphro accused his father of "impiety," but when asked to "define" or explain this "concept," Euthyphro (egged on by the gadfly's questions) ends up offering conflicting meanings. The lesson is that it might be useful to know what one is doing prior to taking action. Contradictions had not been noticed in oral discourse, which lacked the abstract register and scannable memory equipment that allowed one area of experience or statement to be compared with another. As we know from the fate of Socrates, executed by the State of Athens for corrupting the young, this new practice of argumentation disturbed the status quo.

The Thing

The reason for going into this Classical context in detail is to establish the nature of what we need to invent for electracy (I am explaining how I do my research in the discipline of media studies). What has to be invented is not "only" a new kind of category and classification native to the image, but an institutional practice for

learning and applying this category. Aristotle founded his own school, the Lyceum, and extended and codified philosophy into the beginnings of the definitive practice of the literate apparatus: science. Perhaps we have forgotten that Aristotle invented the "thing."

> "In two of his early works—in the *Categories* especially, but also in the *Topics*—Aristotle presents a revolutionary metaphysical picture. This picture has had a peculiar fate. Its revolutionary theses are so far from being recognized as such that they have often been taken to be statements of common sense, or expressions of an everyday, pretheoretical ontology. The most stirring and far reaching of those theses is the claim that included among what there is, among the entities, there are *things*. Aristotle, famously, goes on to maintain that these things are ontologically fundamental. All the other entities are by being appropriately connected to the things, for example, either as their features (their qualities, sizes, relations-to-each-other, locations, and so on), or as their genera and species, that is, the kinds under which the things fall. These claims and their interpretation have received considerable discussion. Yet the fundamental one has gone virtually unnoticed. To formulate it most starkly: before the *Categories* and *Topics*, there were no things" (Mann, 2000: 3–4).

When he delineated "things" Aristotle was inventing a world view (metaphysics). "Ontology [the science of being] was born when someone realized that any view of this sort implies a distinction between individual things, on the one hand, and their properties, on the other. Ontology was born when someone realized that there are not only different kinds of individual thing but also different kinds of entity. Plato's theory of forms deals with just these sorts of questions, and we think of it, therefore, as one of the first ontological inquiries" (Grossman, 3). Aristotle continued this project by establishing that which is constitutive of an entity, its essence (what is real about it and that makes it what it is). The task was to determine what something essentially is, as distinct from what it merely happens to be: to distinguish its form from its matter. Aristotle criticized the Presocratics for treating entities as if they were mere heaps of stuff. "Both a heap and a thing are one—for each is unified such as to be one heap, or one thing—the kind of unity characteristic of things is much stronger than that of heaps. . . . Things are genuine unities, whose cause of being one is intrinsic to them, while heaps are merely accidental unities, whose cause of being one is wholly extrinsic to them" (33–34).

Aristotle (continuing Plato's work with the "topic" extracted from epic drama) extended his insights into place (*topos*) from physics to logic, with the invention of the *dialectical topic*. The topic, based on Plato's dialogues, is a mnemonic system for classifying and deploying arguments.

> "A topic is a 'head' under which are grouped arguments, or lines of arguments; in a *topos* ('place,' *locus*, 'region') the speaker has a stock of arguments to which he may turn for a particular need. If he knows the *topoi* (regions, places, lines of argument) he will know where to find what he wants for a special case. The general topics, or *common*places, are regions containing arguments that are common to all branches of knowledge; these are the topics of *more and less*, of *magnifying and minifying*, of *past and future*, and of *possible and impossible*—the four commonplaces in the strict sense. . . . The topics or places may be indifferently thought of as in the science that is concerned, or in the mind of the speaker" (Cooper, 154–155).

The Invention of "Definition"

Aristotle's *Topics* is a handbook that teaches students how to argue in a structured debate (Slomkowski, 3). The competition begins with a problem, even an aporia (dilemma, impasse), something about which there is puzzlement and disagreement. A fundamental aspect of the practice is "definition," the procedure of producing "predicables" for the topoi—what may or may not be said of a thing, concerning its proper attributes. The definition, that is, establishes essence. There are four kinds of predicates admitted: definition, property, genus, or accident. An accident is that which may or may not belong to a thing (a given horse may be awake or asleep, brown or white, large or small, without altering its essence, its true nature). "To define a substance means to establish, among various accidental attributes, the essential ones, particularly that one which causes the substance to be as it is" (Eco, 1984: 57).

Example: "Culture" "Definition" is one of the fundamental practices of literate composition, so familiar to us now that we forgot that it had to be invented in order for alphabetic writing to become functional. We will focus on it not because it is the only aspect of writing that is changing, but because it makes clear the dynamics of change underway. An initial understanding of verbal composition in electracy may be grasped *by contrast* with the established device of definition. A definition of the first concept—"justice"—may be found now in any dictionary, along with many thousands of other concepts and their definitions. Of course Plato assumed he was treating not merely "meanings" of words, but eternal essences. It is useful to review at this point some of the features of "definition," before turning to its electrate equivalent (alternative). Let's look at one dictionary definition—of the word "culture"—and its background to establish in more detail the nature of this practice.

> "**Culture**—n. 1. the quality in a person or society that arises from an interest in and acquaintance with what is generally regarded as excellence in arts, letters, manners, scholarly pursuits, etc. 2. a particular form or stage of civilization: *Greek culture*. 3. *Sociol.* the sum total of ways of living built up by a group of human beings and transmitted from one generation to another. 4. *Biol.* a. the cultivation of microorganisms, as bacteria, or of tissues, for scientific study, medicinal use, etc. b. the product of growth resulting from such cultivation. 5. the act or practice of cultivating the soil: tillage. t. the raising of plants or animals, esp. with a view to their improvement. 7. the product or growth resulting from such cultivation. 8. development or improvement of the

mind by education or training.—v.t. 9. to subject to culture; cultivate. 10. *Biol.* a. to develop (microorganisms, tissues, etc.) in an artificial medium. b. to introduce (living material) into a culture medium. [ME: tilling, place tilled]." (*The Random House College Dictionary,* 1972).

Raymond Williams gives an essay definition of "culture" in his vocabulary commentary, *Keywords,* in a way that highlights the metaphorical process at work in the formation and growth of terminology.

"**Culture** in all its early uses was a noun of process: the tending of something, basically crops or animals. The subsidiary *coulter*—ploughshare, had traveled by a different linguistic route, from *culter, colter, coulter* and as late as the (early) seventeenth century **culture** (Webster, DUCHESS OF MALFI, III, ii: 'hot-burning cultures'). This provided a further basis for the important next stage of meaning, by metaphor. From (early) sixteenth century the tending of natural growth was extended to a process of human development, and this, alongside the original meaning in husbandry, was the main sense until the (late) eighteenth and (early) nineteenth centuries. Thus More: 'to the culture and profit of their minds. . . . At various points in this development two crucial changes occurred: first, a degree of habituation to the metaphor, which made the sense of human tending direct; second, an extension of particular processes to a general process, which the word could abstractly carry. It is of course from the latter development that the independent noun culture began its complicated modern history" (Williams, 1976).

We are at the core of how discipline works. Robert Hodge and Gunther Kress provide further historical background on culture in particular, and on the historical invention of word meanings in general, when they show the conflicting influence on the term of Matthew Arnold's *Culture and Anarchy* (1869), and Edward Tylor's *Primitive Culture* (1871).

"Arnold and Tylor represent two alternative sets of transformation associated with the word 'culture', enunciated from two different speaking positions in the society. Arnold takes the transformational potential of the Latin *cultura,* its core transformation of peasant or material worker into intellectual work(ers) of various kinds, which he associates in nineteenth-century English society with educators, intellectuals and clergy, including also—and this is a distinct contribution—poets and other artists. But for Arnold, the transformational route is firmly opposed to the work that defines working classes, even though Arnold professes to want to offer 'culture' to the masses.

"Tylor's definition, on the contrary, extends the scope of the original transformation and uses it to establish a chain of equivalences. For him, culture is both material work of all kinds and also intellectual work. The transformational link, instead of being broken as in Arnold, is opened up. Since it is applied to 'primitive' cultures, it includes activities of pre-agricultural peoples, and insists on their fundamental continuity with the various forms of life of modern man. This transformation as a meaning is specifically declared as a basic premise in his style of anthropology: 'There seems to be no human thought so primitive as to have lost its bearing on our own thought, nor so ancient as to have broken its connection with our own life'" (Hodge and Kress, 1988: 190–91).

Exercise: Term Extensions

Using the history of the term "culture" as a model, select a different craft (other than agriculture) and develop its figurative possibilities as a new extension of the meaning of "culture".

- The purpose of this exercise is to gain some experience with the fundamental method of the EmerAgency, which is reasoning by image: figurative inference. The structure of this experiment is to open a new understanding of the "culture" of your career field by figuring it in terms of some craft or applied, practical, physical practice, or process. If human development of learning can be like agriculture, what else might it be like? Or, if human development in general may be tended in the manner of a crop or herd, what about your particular specialized area of work? What sort of craft makes a good metaphor for developing knowledge in your career field?
- In later chapters we will apply this exercise to the practice of "consulting." We need a new term to characterize the EmerAgency approach to public policy formation and problem solving. We will define this deconstructive consulting by the metaphorical extension of a craft practice (a specific kind of music) to name our practice.

Example: Joseph Beuys, from Text to Felt We have forgotten that "text"—the common name for written compositions—derives from "textile," and includes in its etymologies the craft of weaving, just as human "culture" includes the crafts of husbandry. In this example "felt" replaces "textile" as a fabric craft to be developed as a vehicle for the tenor of imaged compositions.

- Joseph Beuys demonstrated how to do theory as sculpture, or rather, as craft, working with felt and fat, researching their reality or "Gestalt": "Actually two elements, fat and felt, are closely related. Both have a homogeneous character in that they have no inner structure. Felt is a material pressed together, an amorphous material, with an uneven structure. The same is true of the nature of fat, and that interested me" (Beuys, cited in Ulmer, 1985: 244). In examining such materials as figures or relays for a theory of social organization ("social sculpture"), Beuys was working out in practice what a philosopher such as Gilles Deleuze attempts as a thought experiment, using the properties of felt as a way to think about certain abstract questions. Fat and felt became auratic in Beuys' context (post-war Germany) because of the association of these materials with the concentration camps and the holocaust.
- Deleuze and Guattari express the difference between a State apparatus and a "war machine" (contrasting notions of social order, and also of science) as the

difference between woven fabrics and felt. "Felt is a supple solid product that proceeds altogether differently, as an anti-fabric. It implies no separation of threads, no intertwining, only an entanglement of fibers obtained by fulling (for example, by rolling the block of fibers back and forth). What becomes entangled are the microscales of the fibers. An aggregate of intrication of this kind is in no way homogeneous: it is nevertheless smooth, and contrasts point by point with the space of fabric" (Deleuze & Guattari, 1987: 475).

There may be a disagreement at the level of interpretation (is felt homogeneous or not?) but heuretically the procedure is the same: questioning craft materials for insight into theoretical questions, with both men seeking in nomadic culture (read through its products) a relay for a supplement to the Western frame of mind. For the exercise, an egent would review Beuys' sculpture, and read something by Deleuze and Guattari on nomadic thought, while working during the same period of time on learning how to make felt.

How to Make Felt

"Remember that the wool fiber has scales, like small barbed hooks, which open up at first contact with hot soapy water, then close again during the continued rubbing process. These small hooks attach to one another when they close, and once the felting process is completed, they are firmly anchored. It is this action that produces the compact material called felt. This is why the wool layers have to be put crosswise on top of each other. This also is the reason you must rotate your hands in the same direction when rubbing the wool" (Evers, 1987: 25).

The cohesion of felt literally by "hook and eye" connectors supplies the metaphor for the conductive associations that generated the poetry of Samuel Taylor Coleridge, according to John Livingston Lowes, that will prove central to choragraphy.

Xanadu as Felt

"Those lines from Bartram [describing a scene in Florida] are in the thick of the pages which Coleridge was ardently transcribing in his Note Book, and the picture which they painted made a profound impression on his mind. For he twice came back to it. It inspired the memorandum in the Note Book, for the 'wilderness plot, green and fountainous and unviolated by Man' is unmistakably the 'blessed unviolated spot of earth' on which Bartram lavished such a wealth of words. . . . Of one thing we may be certain: impressions of Bartram's enchanting little 'Isle of Palms' were among the sleeping images in Coleridge's unconscious memory at the time when 'Kubla Khan' emerged from it.

"But a thousand other impressions coexisted with them there. Did this particular cluster constitute what we have called an *atome crochu*? Had it, in other words, *hooks-and-eyes* which might draw it into the extraordinary complex which was taking form? If it were so equipped, its attraction within the circle was almost inevitable. For it lay, so to speak, just over the threshold of consciousness. Twice already its imagery had recurred to memory and clothed itself with words. And recurrence to memory soon becomes a habit. Conspicuous, now, among its details were 'grassy meadows,' a 'blissful garden,' 'fragrant groves,' and multitudes of trees. And at the moment of the dream, by way of Purchas, impressions of 'fertile Medowes,' conjoined with a 'goodly Garden' furnished with trees, were stirring actively in Coleridge's brain. Clearly then there were sufficient links between the images from Purchas which were sinking into the Well, and the images from Bartram which were already there. And they did coalesce. Here are the lovely lines of the fragment once again:

'And there were gardens bright with sinuous rills,
Where blossomed many an incense-bearing tree;
And here were forests ancient as the hills,
Enfolding sunny spots of greenery'" (Lowes, 1955: 333).

Comment

- Mystory is not a text, but a "felt": let us begin to use this word to name our productions, whose overtones suggest the emotional quality of image meaning.
- The method for generating "felt" from "text" may be applied to any term. The procedure is to isolate the metaphor (often a dead metaphor) that may be found in the root or the history of a word. Some important philosophers have used inventive etymology as a strategy for exploring new dimensions of thought or experience.

Paragraph (Composing Definitions) Most composition handbooks place the treatment of definition in the context of teaching the basic unit of essay form—the paragraph. "The building blocks of writing, paragraphs present discussions of single facets of a subject. In isolation, a paragraph describes or explains one idea, but when it is part of a series of paragraphs in a paper, it develops one aspect of a paper's larger idea" (Perrin, 1987: 58–59). "A paragraph of definition, somewhat like a dictionary definition, attempts to clarify the exact meaning of a word or concept that is important in understanding a paper. Such paragraphs should first place the subject in a class and then distinguish it from other items in the same class or describe its notable characteristics. Giving examples and using comparison and contrast are two common methods of explanation in these extended definitions" (79–80). Perrin characterizes dictionary definitions as denotations. He warns about the complexity that results when connotations enter the

process in an extended definition. "Connotations, the secondary and sometimes emotional meanings of words, create more difficulties, because the connotations of words create added impressions, ones not always planned on by writers" (287). Working generatively, our task is to find the electrate equivalent that does for the image what the paragraph and definition do for the concept (the thing). Inventing an electrate alternative to the definition (and paragraph) begins with a negative practice, generated by *contrast* with the established convention of writing.

Antidefinition

One of the more famous scenes in this early history of literacy—one that captures the provisional nature of individual inventions within the larger evolution of the apparatus, concerns an ancient alternative to the definition. Aristotle and his students were at work on a definition of "man," and had refined the essence to include the properties "featherless biped." The session was interrupted by the cynic sage Diogenes, who burst into the session holding aloft a plucked chicken, and declared, "Behold, your man!" Diogenes, known as the anti-Socrates, had a different approach to wisdom, different themata, than the one that became the norm. He *performed* his arguments, integrating his daily life and his philosophy. It is reported that he lived in a barrel, and practiced all private bodily functions in full public view. When criticized by a passerby for masturbating in the market place, Diogenes exclaimed that he wished he could satisfy hunger just by rubbing his stomach. Aristotle's pupil, Alexander the Great, admired Diogenes for the freedom with which the latter lived his life. "If I could not be Alexander," the future conqueror of the world declared, "I would be Diogenes." He made his way over to where the sage was sunning himself and asked if there were anything he might do for him. "Yes," was the reply. "Get out of my light." In recent years several important philosophers have returned to Diogenes as the exemplar of a new paradigm, indicating that performance may be to electracy what definition was to literacy. The Greek ancestor of electracy is not Aristotle but Diogenes. The point to emphasize, however, is that electracy is not simply a reversal that turns *topos* back into drama (a return to orality). As Walter Ong observed, postliteracy is *secondary* orality, a hybrid of oral and literate features.

Although the academic discipline of rhetoric, and English departments in general, have remained Aristotelian and ignored Diogenes, the arts and letters community (artists, poets, and philosophers) have been inventing the institutional practices that accord with the technologies of the emergent apparatus, or at least this is how grammatology understands the experiments of the vanguard artists of the nineteenth and twentieth centuries. Electracy was emerging simultaneously in separate dimensions of society, although the artists themselves often understood what they were doing as being opposed to the culture and products of scientific and technological civilization. Nonetheless, their many inventions (often hybrids and syncretisms formed by borrowings and adaptations of practices from oral or non-Western societies) opposed conceptual abstraction and sought direct access to a supposed immediate flow of experience. Our widesite is designed using devices invented by the vanguard arts.

Example: Georges Bataille A good example of an arts practice specifically devised as a challenge to literate concepts and their definition is the "Critical Dictionary," composed by the Documents group, headed by Georges Bataille in the 1930s. Bataille attempted to break the constraints of literate metaphysics or conceptual classification in this critique of that great achievement of the Enlightenment, the encyclopedic dictionary. "A dictionary's sole purpose is the imposition of form and homology, definition fixes objects in thought, extracts them from the world and pins them to a page. A dictionary is never critical, any element of subjectivity would allow in the formless, that heterological gob of spittle. Formless declassifies and is the negation of definition. . . . An image, a poetic invective, often takes the place of the term in a discourse, something alien to philosophy, and the photographs in the 'Dictionary' perform this same function in a more literal fashion" (Brotchie, 1995: 23). Bataille demonstrates invention by contrast or negation: starting from the principle of the "thing" and *topos* that define according to homogeneity or similarity, Bataille proposed to classify by heterogeneity (creating unstable groupings of incommensurable elements). If Plato invented the first concept, which he preferred to call a form (or an idea), then Bataille is an anti-Plato, proposing a "formless" metaphysics. Here are two entries by Bataille from the "Critical Dictionary."

Georges Bataille on Categorical Accidents

"**Factory Chimney**—When I review my own memories, it seems that for our generation, out of all the world's various objects glimpsed in early childhood, the most fear-inspiring architectural form was by no means the church, however monstrous, but rather large factory chimneys, true channels of communication between the ominously dull, threatening sky and the muddy, stinking earth surrounding the textile and dye factories.

"[. . .] I was not hallucinating when, as a terrified child, I discerned in those giant scarecrows, which both excited me to the point of anguish and made me run sometimes for my life, the presence of a fearful rage. That rage would, I sense, later become my own, giving meaning to everything spoiling within my own head and to all that which, in civilized states, looms up like carrion in a nightmare. I am, of course, not unaware that for most people the factory chimney is merely the sign of mankind's labour, and never the terrible projection of that nightmare which develops obscurely, like a cancer, within mankind. Obviously one does not, as a rule, continue to focus on that which is seen as the revelation of a state of violence for which one bears some responsibility. This childish or untutored way of seeing is replaced by a knowing vision which allows one to take a factory chimney for a stone construction forming a pipe for the evacuation of smoke high into the air—which is to say, for an abstraction. Now, the only possible reason for the present dictionary is precisely to demonstrate the error of that sort of definition.

"It should be stressed, for example, that a chimney is only very tentatively of a wholly mechanical order. Hardly has it risen towards the first

covering cloud, hardly has the smoke coiled round within its throat, than it has already become the oracle of all that is most violent in our present-day world, and this for the same reason, really, as each grimace of the pavement's mud or of the human face, as each part of an immense unrest whose order is that of a dream, or as the hairy, inexplicable muzzle of a dog. That is why, when placing it in a dictionary, it is more logical to call upon the little boy, the terrified witness of the birth of that image of the immense and sinister convulsions in which his whole life will unfold, rather than the technician, who is necessarily blind (Bataille, 1995: 51).

"**Formless**—A dictionary would begin as of the moment when it no longer provided the meanings of words but their tasks. In this way *formless* is not only an adjective having such and such a meaning, but a term serving to declassify, requiring in general that every thing should have a form. What it designates does not, in any sense whatever, possess rights, and everywhere gets crushed like a spider or an earthworm. For academics to be satisfied, it would be necessary, in effect, for the universe to take on a form. The whole of philosophy has no other aim; it is a question of fitting what exists into a frock-coat, a mathematical frock-coat. To affirm on the contrary that the universe resembles nothing at all and is only formless, amounts to saying that the universe is something akin to a spider or a gob of spittle" (Bataille, 1985: 31).

Comment

- Bataille is a major figure of electrate theory. "Factory Chimney" is a prototype for an experience of "extimacy" (the outside disaster or problem forms an image of an interior feeling) that is typical of modernist poetic reason, and that shows in a nutshell the method of consulting.
- We will return to "formless" at the end of the project as the name for a new dimension of value associated with electracy. Notice that the invention of an electrate practice of imaging begins with a contrast or opposition: the new practice comes into thought first as something that is not just different from, but opposite to, that which is the established practice. The passage from Plato to Bataille is stated as the opposition between Form and Formless.

Exercise: Counter-Dictionary

Using Bataille as a model, compose an antidefinition entry for his Critical Dictionary.

- The feature of the antidefinition of most interest to us is the way that Bataille establishes a relationship between himself and the "thing." The focus of the account is not the "essential" properties of the chimney ("a stone construction forming a pipe for the evacuation of smoke high into the air"), but the properties or attributes that transform the thing into an image or figure of an invisible, inner condition or state of mind of the child being hailed by the factory system as a way of life. Bataille extends the metaphorical operation at the heart of word formation and growth (the process in "culture" for example of transferring agricultural cultivation into human social husbandry) to include lyrical or poetic figuration, so that the factory chimney becomes an image of his own inner experience of living in an industrial civilization.
- As egents we learn how to bring to bear this kind of reasoning on public problem solving.

OFFICE

The Office sections represent an imagined office hours, a review of where we are at this point. The statements here resemble a Frequently Asked Questions list, attempting to anticipate some of the problems you may be having with the assignments and project.

1. The first quarter of the mystory was introduced: Career. I used to call this quarter "Discipline," but too many of you assumed this term meant "punishment," which is partly true, but the immediate sense here is "specialized knowledge." "Career" has the advantage of being more general, to include not just theoretical knowledge but any field of study in which you might major. Part of the point is to call attention to the fact that our project and my approach to it is legitimate and makes sense only or specifically in the context of specialized knowledge. A better grasp of the peculiar assumptions of my career field may be achieved when you are thinking about the peculiarities of your own major and related career plans. Electracy, grammatology, and the other features of our project are no more part of common sense than are the formalities of law, medicine, engineering, political science, psychology, business, and so on.
2. You should be making the first installment of the widesite, working with a problem, invention, or "star" of your career or major. This project is amenable to production on paper as well, using photocopy for the pictures and graphics. The basic logic of assemblage and collage directing digital cut and paste authoring may be applied in any medium. In my case, I foregrounded the invention of the "thing" and the practice of "definition," by Aristotle.
3. Many of the students in my classes have never made a website before, although most are familiar with the internet and have used email, chatrooms, and the like. Since my courses are not in art or design we do not worry very much, especially early on, about aesthetic quality of layout. We learn the basics of HTML tags, and I introduce most of the graphics tools we have on our system during the first few weeks. My assignments include requirements stated in terms of quantity and feature: the site must be approximately ten "pages" (ten HTML files), a mix of text and picture, and at least one animated gif. We use image searches on the web to find pictures, and these are brought into graphics programs for editing and modification. The idea is to introduce all the tools available right at the beginning, to use them all on the first assignment, to get a

feel for how they work. My evaluation addresses design issues but without lowering the grade at this point for problems, such as failure to account for loading time in the memory requirements of each file.

4. The lectures, examples, and citations simulate the readings and demonstrations presented in my course. Discussion in class and in email is conducted as brainstorming whose goal is to produce a "guide" or "handbook" of instructions induced from the assigned materials. The assumption is that there are many ways to accomplish our goal, but our experiment is taking a particular approach, bringing to bear contemporary theory and arts on our project. You should base your plans and designs on the instructions you are able to extract from the assigned materials, to test their claims and potential. It is an experiment, provisional, and open to question, once the trial is completed.
5. Our project is an experiment in heuretics (the logic of invention). The principle is that any hermeneutics (a way to interpret works) may be transformed into heuretics (a procedure for generating new work). The image of wide scope, for example, began as an interpretation of the lives of a large sample of productive or creative people. The wide image was discerned as a pattern repeated through the works of these makers. Our heuretic premise is that it should be possible to use the wide image principle as a way to make a new work (the widesite). Our minimum claim is that making a widesite provides a significant learning experience, within the humanistic commitment to self-knowledge. The maximum claim is that people who know their wide image may use it to make decisions and solve problems in their professional and personal lives. If you win the Nobel Prize someday, I want some of the credit.
6. The great Russian novelist Leo Tolstoy told the story of an army general who died and went to heaven. Showing the general around heaven, St. Peter inquired if he would like to meet the greatest military genius who ever lived. Of course the general eagerly agreed, and was soon introduced to a Russian peasant, a serf who died in the thirteenth century without ever participating in a single battle. St. Peter then clarified that the peasant would have been the greatest military genius, if he had been given the chance.

Chapter 2
Image

LECTURE

How the Image Becomes Categorical (Electracy)

The description of the invention of the founding practices of literacy in the first chapter provides an analogy for what is needed and where to look for it in electracy. The analogy shows that when the Greeks recorded the words of the epics (*The Illiad, The Odyssey*) in writing, they eventually noticed a pattern of words that had been overlooked in oral performance. Something similar is going on today in entertainment, the institution that so far is making the most of electrate technologies. In its first hundred years of existence, cinema devoted itself to the adaptation to film of the library of classic literature. In principle, the analogy predicts that some quality or feature of this literature that went unnoticed in its printed form would become discernible when recorded in photography. In fact several theorists have noticed a new dimension of order, a category of meaning, in photography in general, and the film still in particular, among them the French theorist, Roland Barthes.

Comment

- While you are still working on the Career quarter of the widesite, I develop the analogy that we are using to invent a writing practice for electracy. This chapter is devoted to describing how the image (both verbal and pictorial) becomes a method, taking up where the antidefinition left off, to become a positive ordering operation in its own right. You will apply this image method in designing the widesite.

Roland Barthes The grammatological analogy suggests that we may find the beginnings of our image alternative to the definition by observing closely the *photographs of things*. Barthes's discussion of photography was couched in terms of reading or looking at photos, but it may be extended as a relay for *taking* photographs as well. What Barthes discovered or observed emerging within photography is a new dimension of signification that he named with a neologism, *signifiance*, characterized as a meaning that is "obtuse"—a "third meaning," neither literal nor