ABSTRACT

Title of Dissertation: ELECTRACY IN PRAXIS: PEDAGOGICAL RELAYS FOR AN UNDERGRADUATE WRITING CURRICULUM

Thomas M. Geary, Doctor of Philosophy, 2016

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The paradigm shift from traditional print literacy to the postmodern fragmentation, nonlinearity, and multimodality of writing for the Internet is realized in Gregory L. Ulmer's electracy theory. Ulmer's open invitation to continually invent the theory has resulted in the proliferation of relays, or weak models, by electracy advocates for understanding and applying the theory. Most relays, however, remain theoretical rather than practical for the writing classroom, and electracy instruction remains rare, potentially hindering the theory's development. In this dissertation, I address the gap in electracy praxis by adapting, developing, and remixing relays for a functional electracy curriculum with first-year writing students in the Virginia Community College System as the target audience.

I review existing electracy relays, pedagogical applications, and assessment practices – Ulmer's and those of electracy advocates – before introducing my own relays, which take the form of modules. My proposed relay modules are designed for

adaptability with the goals of introducing digital natives to the logic of new media and guiding instructors to possible implementations of electracy. Each module contains a justification, core competencies and learning outcomes, optional readings, an assignment with supplemental exercises, and assessment criteria. My Playlist, Transduction, and (Sim)ulation relays follow sound backward curricular design principles and emphasize core hallmarks of electracy as juxtaposed alongside literacy. This dissertation encourages the instruction of new media in Ulmer's postmodern apparatus in which student invention via the articulation of fragments from various semiotic modes stems from and results in new methodologies for and understandings of digital communication.

ELECTRACY IN PRAXIS: PEDAGOGICAL RELAYS FOR AN UNDERGRADUATE WRITING CURRICULUM

by

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Dedication

For Mom, Dad, and Meredith.

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In the spirit of fragmented, postmodern identity, this inherently collaborative dissertation is the result of many voices and influences converging at various points in my academic career. I want to acknowledge those contributions and express my sincerest appreciation and thanks to everyone who assisted in the development and realization of this project.

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My experience as an academic coordinator for the Academic Writing Program shaped my views on writing pedagogy and exposed me to Ulmer's electracy theory.

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Introduction

"We need a practice of writing adequate to the Internet/Web, and it will not look very much like what is recommended in most composition textbooks"

Gregory Ulmer, "Foreword" to Jeff Rice's *The Rhetoric of Cool*

In the spring of 2009, two fellow University of Maryland PhD student teaching assistants and I were tasked by the English Department to collaboratively design a curriculum, construct syllabi, and pilot an intermediate-level undergraduate course titled Writing in a Wireless World. The course – initially English 278Z but later changed to English 293 – addresses the ascendency of digital and multimodal literacy in modern communication by asking students to read and discuss texts on new technologies and accompanying genre conventions, visual rhetoric, identity formation, agency and subjectivity, and gamification, and to compose design-texts, wikis, videos, blogs, Web pages, and/or rhetorical analyses. Our goal was to raise awareness of and inquire into how Information Age hallmarks (i.e., social media, wikis, video and image editing software, multimodal Web environments, virtual worlds, smart phones) are affecting our understanding of communication. Adam Lloyd, Lisa Zimmerelli, and I wanted to prepare Maryland's digital natives for not only sound rhetorical decision-making and analysis in digital spaces, but also increased skill in inquiry, assessment, design, and especially composition for the multimodal Web 2.0 as the ever-evolving job market demands new competencies in electronic literacy.

The department's reasoning for developing a nascent course on communication in digital spaces – one that paralleled the existing Literature in a Wired World course designed by Matthew Kirschenbaum – was similarly clear; Writing in a Wireless World was answering National Council for Teachers of English (NCTE) past president Kathleen Blake Yancey's "Writing in the 21st Century" call to support and innovate new models of writing for the digital zeitgeist that situate digital and networked literacies alongside, rather than below, print literacy (Yancey 6). Yancey's desire to articulate new multimodal composition models with accompanying curricula and teaching strategies echoes the NCTE's earlier position statement from 2008 that "a literate person possess a wide range of abilities and competencies" with technologies since "all modes of communication are codependent" ("The NCTE Definition"). Another collaborative NCTE statement contends that the rhetorical impact of multimodality – inevitable in digital spaces and screens – is unique in that it can "enhance or transform the meaning of the work beyond illustration or decoration" ("Multimodal Literacies"). The new models of digital and multimodal writing proposed by Yancey would help today's "digital natives," a popular term coined by education scholar Marc Prensky, understand how to utilize digital media for educational purposes rather than as "something they 'do stuff with'" (Erstad 114). Our course would demonstrate to digital natives how multimodality and design are central to the new models of writing in electronic spaces.

The emphasis on codependency of communicative modes in Writing in a Wireless World is not new, nor was it in 2009 when many traditional programs had

already blended new media pedagogy into the English classroom. Writing programs in colleges and universities had developed, refined, and promoted online and hybrid instruction, multimodal assignments, and interactive programs and software. As early as the 1970's, Writing Across the Curriculum (WAC) initiatives had formed to help students succeed in the Information Age by exposing them to e-mail, newsgroups, word processors, MOOs, and MUDs, and instructors had experimented with design and Web pedagogy (Reiss et al. xviii). Teaching with technology had and continues to receive ample funding, resources, and energy from enthusiastic composition and rhetoric educators and scholars, who have inundated conferences, journals, blogs, listservs, essays, and books with conversations about online education and digital literacy. High schools, colleges, and universities have eagerly embraced the future by spending millions of dollars to purchase computers and computer labs, iPads, HDTVs, software, and equipment and finding support staff necessary to develop a sound infrastructure. Professional development for responsibly integrating computers in the writing classroom has remained a focal point at many institutions. With blogs, wikis, social media, Web sites, streaming video, and digital stories growing in popularity, converting the tools and networks into pedagogy that can "enhance or transform" standard print literacy and emphasize the digital has been a focal point for many compositionists. Our objective of meeting Yancey's call was far from unique, and our answer, in retrospect, was similarly unremarkable.

Most of our initial considerations in designing the course involved looking to various textbooks and other colleges to decide which topics and technological impacts to cover, which texts and theorists to incorporate, and which of the many

tools and modes to feature and responsibly integrate. We quickly compiled what we considered the essential topics, who we considered the essential theorists, and what we considered the best definitions of "writing in a wireless world." We wanted to capture the significance of new media scholarship and its definitions (Lev Manovich, Kathleen Welch), digital composition and design-texts (Yancey, Johndan Johnson-Eilola, Andrea Lunsford, Anne Francis Wysocki, Cynthia Selfe, and Geoffrey Sirc), digital rhetoricians (Barbara Warnick), visual rhetoricians (Gunther Kress, Theo Van Leeuwen, and Lester Faigley), and modern rhetorical theories of Kenneth Burke, Chaim Perelman, and Lucie Olbrects-Tyteca as terministic screens for our course. It was a lot to integrate into Writing in a Wireless World; Yancey's – and NCTE's – call for digital, networked, and multimodal literacies is broad, and we wanted an overview of the various directions scholars have pursued. Touching upon the brilliant works of those scholars and theorists would give our course legitimacy and offer digital native students entry into the Burkean parlor room conversation on digital composition and rhetoric, so we constructed syllabi and reading lists with excerpts of each author. The remaining challenge was finding the most successful existing pedagogical applications that fit our course purpose, goals, and sequence and mixing it with our own assignments and emphases on classical, modern, and digital rhetorics.

As our course preparation and review of existing pedagogy intensified, it became increasingly apparent to us that most undergraduate electronic writing remained firmly entrenched in current-traditional practices of print literacy rather than the digital and networked practices of Yancey's imagined 21st century shift; thus, the technological tools were used but not transforming the pedagogy or usage of digital

media. Undergraduate students were using blogs in the same manner they would write class journals. Web sites were created to emphasize print literacy sections (i.e., an About Me paragraph) but not design principles or interactivity. Images and videos were used for rhetorical analysis based on the same heuristics popular prior to the digital age; visuals were not being *created*. Marshall McLuhan famously stated, "The age of writing has passed. We must invent a new metaphor, restructure our thoughts and feelings" (17). Yet we remain entrenched in literate practice as digital natives remain "unreflective of the broader implications of [digital] media on our culture" (Erstad 99). In other words, the digital tools have been simply furthering the same goals and practices of traditional print literacy. In 1991, Gail Hawisher and Selfe argued in "The Rhetoric of Technology" that computers do not automatically create an ideal learning situation, but the proper integration of technology in the classroom is what matters (Hawisher and Selfe). Far too many classes had overlooked these words of wisdom with "uncritical enthusiasm" of the digital tools, failing to consider how and whether responsible usage would truly impact the writing classroom or if it would result in something beyond the "age of writing" (Hawisher and Selfe). Even the effective integrations that we found felt like they were not taking advantage of the affordances of new media – defined by Manovich as a convergence of computing and media technologies – and lacking in pedagogical experimentation (Manovich 19). Why does video composition need to be rooted in print literacy (i.e., scripts and accompanying essays) and how do we take into account the popularity of video clips, 140-character tweets, images as fragments rather than cohesive wholes? How are

multimodal blogs, wikis, Web sites, and social media changing communication altogether rather than serving as "illustration or decoration"?

Digital affordances ostensibly allow for unique opportunities for interactivity and participatory culture, new models of argumentation, agency within interpellating structures, and identity construction, yet we remain bound to the printed word, creating a schism between those who are digitally competent and the standard Web user. In "Ease and Electracy," Bradley Dilger bemoans the growing divide in digital fluency between experts and standard users due to a lack of proper education: "While students might be asked to build hypertexts or make simple new media objects, classroom use more often encourages consumption through web-based research or viewing and analysis, further enforcing the novice/expert division" (121). Production of new media texts is neglected in the typical English course even as social media and the Web 2.0 continues to flourish and become the standard spaces of communication for digital natives. The Writing, Information, and Digital Experience (WIDE) research center at Michigan State University posited in 2005 that the problem lies in our continued emphasis on current-traditional models of literacy in the composition classroom: "Conventional, print rhetoric theory is not adequate for computer-based writing — what we are calling "digital writing" (Hart-Davidson, et al.). WIDE's "digital writing" seemingly had been widely theorized by the scholars we favored and occasionally in praxis for graduate students, but in the undergraduate classroom, there was not much of a revolution. The pedagogy was not reaching the lofty, transformative expectations predicted by the scholars we read. "Digital writing" theoretically is a transmutation resulting from the context, conditions, and affordances

of 21st century communication, but perhaps the predicted impacts were too ideal. Or perhaps faculty were still rooting their digital instruction in "conventional, print rhetoric theory" rather than embracing a larger paradigm shift.

What we found as a central concern in designing our course curriculum is a first stasis issue of definition: what, exactly, is "writing in a wireless world?" The latter half of the phrase seems to emphasize the increased role of nonhuman forces like laptops, WiFi networks, and mobile phones in a posthumanist world. Certainly, those advances in technology have resulted in changes to communication as wide-ranging as the emergence of text messaging acronyms, emojis, and short video clips to the instantaneity of organized protests by community and worldwide social movements. Thus, our foci on agency, identity, gaming, visual rhetoric, social media, and Web 2.0 tools were appropriate for the course. We also agreed at the time that the course should remain grounded in literacy – as the title of the course suggests ("writing") and a safe choice – and that "text" would refer to all multimodal objects, including not only the written word but also videos and Web sites. We adopted Wysocki's broad definition of "text" from "The Multiple Media of Texts: How Onscreen and Paper Texts Incorporate Words, Images, and Other Media," which establishes a framework of assumptions about the visual components of texts, such as the persuasiveness of elements like typeface, animation, and the size of the screen. New media elements such as video, sound, and transitions then belonged in textual (rhetorical) analysis, one of the major assignments in Writing in a Wireless World. Students would also develop a blog and Twitter account to follow trends within a "digital" scholarly issue over the course of the semester, and they would create one

multimodal assignment such as a video or Web site. “Writing in a wireless world” would not necessitate a paradigm shift after all; the syllabus we constructed would promote “digital writing” and inquiry into our lasting concerns about a digital revolution. Our course felt innovative and transformative compared to the other course offerings, and we proudly submitted our proposal to the English department.

Yet, I sensed as the course progressed that it was far from an experimental “new model” requested by Yancey. After all, “digital writing” necessitates “dramatic translation and repurposing” of our theories on writing, as WIDE proposes (Hart-Davidson, et al.). Writing in a Wireless World replicated many of the comfortable strategies we had used in English 101 and seen in other undergraduate writing courses, and it didn’t challenge digital natives to immerse themselves in new media in innovative ways; we remained rooted in “conventional, print rhetoric theory” rather than in evolving new media. Scholars like Selfe and Mike Rose position new media studies *within* literacy, and this rhetorical move seemingly has been adopted by most compositionists and rhetoricians. Literacy, however, is not adequate. In “Blinded by the Letter: Why Are We Using Literacy as a Metaphor for Everything Else?” Wysocki and Johnson-Eilola complicate the usage of the term “literacy” for technology and computer production and consumption. Literacy is not simply a set of ideologically neutral skills but rather one that is highly loaded (“Blinded” 355). Thus, the term literacy – used for over 200 types of literacies, including digital literacy – is problematic when tied to many types of competence that may have other values. Wysocki and Johnson-Eilola propose post-literacy alternatives, such as Gilles Deleuze and Felix Guattari’s rhizome and Stuart Hall and Jennifer Slack’s

articulation (367). Deleuze and Guattari's rhizome is a philosophical concept that maps knowledge as a network of multiplicity and momentary connections with no beginning or end rather than a clear narrative structure with defined beginnings and endings. If knowledge is viewed as rhizomatic (map) rather than hierarchical (tree), then literacy no longer fits the digital age. The similar sociological concept of articulation, which promotes connections of strands of information as constructing temporary meaning, is reviewed in depth later in this chapter. These postmodern alternatives to literacy for new media communication touted by respected new media composition scholars opened the possibility of another ideology with which to structure Writing in a Wireless World or an equivalent undergraduate course; the alternative would meet the experimental "new" model while avoiding the dense ideological complexities of literacy. The new model of writing might, in fact, be less about writing and more about experimentation, invention, and creativity with new media. The paradigm shift in the humanities predicted by N. Katherine Hayles and caused by technogenesis – the notion that humans and computers have evolved together – is one from literacy to a post-literate apparatus (1).

If teaching writing is "to argue for a version of reality, and the best way of knowing and communicating it," as composition theorist James Berlin contends, then the implications of teaching digital writing and new media production without a strong sense of direction could undermine the entire purpose of the course (Berlin). The "version of reality" reflected in the curricular design and course philosophy was based on the problematic and highly loaded literacy, which perpetuated the current-traditional, "conventional, print rhetoric theory" admonished as insufficient by

WIDE. Future iterations of Writing in a Wireless World or other nascent courses in my future pedagogical endeavors would instead promote electronic literacy via radical pedagogical experimentation and postmodern notions of composition rather than current-traditional practice. In *Writing New Media*, Johnson-Eilola contends, "We are comfortable with unreliable narrative. … We understand reading and writing subjects as ongoing, contingent constructions, never completely stable or whole. In short, we're at ease with postmodernism" (199). Johnson-Eilola's endorsement of communication as articulation among contingencies in a fragmented world is a "dramatic translation and repurposing" that WIDE advocates for digital writing, and a call to postmodern ideology in the writing classroom has gained traction in recent years, from Victor Vitanza's connectionism via aleatory procedures to Sidney Dobrin's postcomposition theory. The "unreliable narrative" and non-linearity of the collaborative Web due to the intertextuality of hypertext was accepted early in the mid-90's, the early days of the modern Internet (Eyman). The most influential and comprehensive experimental new media movement to emerge with these postmodern ideals extending beyond literacy, however, is undoubtedly Gregory L. Ulmer's electracy, which addresses not only a version of reality for new media production and consumption, but also the contingency of digital natives as writing subjects in an era of entertainment.

Electracy as a Third Apparatus

Introduced in *Teletheory* (1989) and fleshed out in later scholarship, electracy is a new scholarly poetics, an alternative third communicative apparatus to orality and literacy that serves as a "digital prosthesis" and opens up communicative possibilities

in electronic spaces (Ulmer, *Internet* 145). If orality is competency with speech and literacy is competency with print, electracy can be described as competency with all things digital and new media, especially those felt via experience. It is not synonymous with digital or computer literacy as the word itself is a portmanteau of "electricity" and "trace," (a Derridian term) not "literacy." Electracy goes beyond WIDE's "digital writing" in that it focuses on new methodologies and values consistent with our digital zeitgeist, capturing facility in communicating – and especially creating and finding collective solutions to community and world issues – via social media, virtual worlds, coding, and multimodal design. One of Ulmer's strongest advocates, Sarah Arroyo, argues that "[e]lectracy can be compared to digital literacy but encompasses much more: a worldview for civic engagement, community building, and participation" (*Participatory* 1). The emphasis on identity formation via reflexive participation and community building in digital spaces via postmodern notions of authorship and open textuality is one of the many features of electracy that establishes it as a separate apparatus – "refer[ring] not only to the technologies of print or computing but also the ideologies and institutional practices assigned to or produced by those technologies" – to literacy (Gye, "On the Way" 2).

Ulmer, an English professor at the University of Florida who specializes in the humanities and new media, has developed an extensive framework for the apparatus full of puncepts – a portmanteau of puns and concepts – such as the EmerAgency, a virtual consulting agency for "egents," those who grasp electrate thought and assist others in participating in decision-making online. The EmerAgency replaces the traditional instructor-student dynamic in pedagogy, allowing for collaborative

learning and consulting in the electrate logic of invention rather than sage-on-the-stage lectures. In addition to fostering collaboration and subjectivity, Ulmer values the importance of aesthetics, image logic, production over consumption, feeling and memory, subject formation, brevity, and the multiplicity of meaning, all of which he feels are virtues in online spaces and digital communication and all of which would result in a very different notion of "digital writing" in the classroom. These essential principles of electracy emerge in Ulmer's oeuvre as well as works of Ulmer's contemporaries.

Electracy, continually in a state of being invented in theory and in praxis by Ulmer, a collective of Ulmer's colleagues, former students, and advocates self-identified as the Florida School, and those in the imagined EmerAgency, seemed like a perfect fit for a course like Writing in a Wireless World. Though electracy breaks from composition and digital literacy, Ulmer emphasizes that the two work alongside one another: "Electracy is not against literacy but is the means to assist our society in adding a new dimension to our language capacities. ... Our discipline also has primary responsibility for inventing the practices of reasoning and communicating in ways native to new media" (Ulmer in Rice xi). I considered this new dimension of communication as an organizing principle for future iterations of the course as it reflected a "version of reality" that I felt was in line with what it meant to write in a wireless world and best prepared students for understanding the postmodern conditions of electronic communication.

Ultimately, it was not implemented as I never had another chance to teach the nascent course before leaving my teaching assistant position at Maryland for a full-

time instructor position at a Virginia community college. Due to the difficulty of the content relative to the student population and what I felt was the lack of sound, easily incorporated pedagogical application, I shelved my plans to design a course around Ulmer's electrate apparatus. Ulmer is strongly influenced by deconstruction and posthumanist theories. Thus, writings and ideologies of theorists like Jacques Derrida, Roland Barthes, Deleuze, and Guattari are often interspersed in his texts on electracy, resulting in dense reading and occasionally difficult concepts appropriate for the graduate level but too challenging for students taking a 100 or 200-level course. Six years later, I remain determined to adapt electracy for the undergraduate (post-)composition classroom(s), particularly for first-year writers. Though countless implementations of digital literacy – from digital storytelling and multimodal Web site assignments to entire courses – exist at the undergraduate level, electracy is still rarely adopted for classroom use, particularly at the undergraduate level, despite an increase in electracy praxis in recent years. To teach Ulmer's new media theory, I would need to craft a course out of the few successful classroom applications as well as innovate my own assignments.

The opening epigraph, written by Ulmer in his "Foreword" to Jeff Rice's *Rhetoric of Cool*, serves as a reminder that the majority of composition courses – and their accompanying textbooks – do not offer a "practice of writing adequate to the Internet/Web." Fortunately, this seems to be changing. Ulmer's influence has spread to electracy advocates like Rice, Arroyo, and Lisa Gye, and further relays – Ulmer's metaphorical term for stylistic models (i.e., haikus, jazz music) that open new possibilities and help innovate electracy – have been developed for hip hop pedagogy,

a rhetoric of cool, participatory composition, and video tubing. Relays, introduced by Ulmer in *Electronic Monuments*, are "weak models" that grant affordances for electrate thought. Ulmer states, "[I]t is not a template for our own work, but it orients us in the right way, demonstrating some of the possibilities of the form and style that may be adapted to the needs of our [electracy] project" (*Electronic Monuments* 66). Relays capture the core principles of electrate thought: brevity (haikus), juxtaposition and appropriation (hip hop pedagogy), and image logic (videocy), for example. They are not standards for correctness or templates of how to become electrate, but rather applications that utilize electracy for communication in an era of digital natives. Relays offer metaphors to develop chora, the electrate mode of organization and equivalent of topoi in classical rhetoric.

To fully realize electracy in praxis – particularly in the modern English undergraduate (post-)composition course – the development of practical, in-depth relays is a paramount first step. Ulmer offers his own relay assignments in *Electronic Monuments* and the highly influential *Internet Invention*: the MEmorial and Mystory, respectively. These electrate genres are fully developed theoretically and ready for classroom use. The MEmorial serves as a digital form of problem solving and intelligently participating in public policy via identification with an issue. Students choose a problem that sparks an emotional reaction and makes an impression in one's memories – Barthes's punctum – and then assemble a collage of electronic fragments to understand one's own relationship to the issue. The Mystory similarly requires that students compile fragments as a conduit for introspection, but the Mystory takes the form of a Web site with four distinct discourses (the Popcycle) explored: family,

career, entertainment, and community. Links between the discourses provide themes and an electrate understanding of oneself, fostering a sense of agency and collective selfhood not prevalent in traditional literate instruction. These two genres demonstrate the type of work Ulmer associates with the electrate apparatus, but they might obfuscate as much as clarify for those looking to adapt electracy in pedagogy. Kevin Brooks, who has taught the assignment in a graduate seminar, describes the challenge of Ulmer's "theoretical complexity and potentially un-engaged nature" and questions whether the Mystory is simply "self-indulgent new media expressivism" (Brooks).

This complexity can be a deterrent to teaching the assignments of a nascent theory, but Ulmer's many examples, lessons, and exercises offer merely a starting point for the realization of the apparatus; he insists on electracy being an open invitation, continually being invented. The additions made by Ulmer's advocates in the Florida School proliferate the postmodern notions of communication espoused in electrate theory. Rather than add to Ulmer's MEmorial or Mystory, Rice's *Rhetoric of Cool* reaches the electrate writer/designer who composes with new media via choral writing (composing with all meanings), appropriation, nonlinearity, and imagery in the form of digital remixes and antidefinition writing. Rice offers simple in-class examples (his "Handbook") such as wikis for collaborative knowledge and PhotoShop for generating images. Students improve their digital fluency composing and analyzing in electronic spaces while developing electrate thought. In his dissertation, "Multimodal Composition and Electracy: Pedagogical Relays," Pearce Durst joins the chorus of electracy inventors with his own blues music relays, which

capture the essence of the blues – particularly improvisation and a stress on mood and feeling over coherence and rationality – for electrate pedagogy. Comparing blues guitar scales to building a Web site, Durst illustrates how blues theory can be a metaphoric guide for students understanding electracy. It builds a mood, which Ulmer repeatedly contends is significant to electrate thought. Relay development, Durst writes, is essential to the success of the third apparatus: "The rhetorical transformation from literacy to electracy hinges on an understanding of relays" (4). Thus, implementing only Web design principles or forms of digital literacy are not enough for digital natives; the electrate apparatus requires ample electrate relays.

These relays help to advance electrate pedagogy but also pose for instructors questions regarding practical implementation of electrate theory. Marina Hass inquiries about how to teach electracy on *The Greek Riots*:

> If we want to teach students how to utilize the new apparatus, how should we approach digital technology in a pedagogical manner? Should we teach them how to use the tools in order to write? Should we also teach them how to produce the "alphabet" (e.g., how to write in HTML, how to create and post videos, how to Photoshop images)? What LEVEL of electracy are we aiming for when it comes to pedagogy?" (Hass)

The questions raised about electracy pedagogy range from content to theory, from design to assessment, from tools to level of expertise. Though Ulmer offers many brief exercises in *Internet Invention* and Rice responds with his own in *The Rhetoric of Cool*, the bigger picture – the objectives, assessment, and class structure – remains

murky. There are not many answers available as electracy continues to be invented. Intensive instruction in digital pedagogy is not required for electracy, according to Ulmer, but Hass's questions regarding the "alphabet" of electracy and the level of electracy required become essential as the apparatus becomes legitimate. Electrate relays are flourishing, yet the accompanying pedagogy is only beginning to take shape.

In this dissertation, I seek to adapt, remix, and develop relays for a functional electracy curriculum in the undergraduate English composition classroom. In following through with what I had not accomplished in designing Writing in a Wireless World, I utilize Ulmer's post-critical hallmarks to put electracy in praxis by formulating learning objectives and outcomes for an electrate classroom; relays will take the form of modules for adaptability in a wide range of courses, from fully immersive electrate courses to traditional composition courses integrating new media. Each relay module – whether adapted from a fellow electracy advocate, remixed from a prior application, or developed uniquely – will contain a theoretical justification for its inclusion in electracy instruction as well as exercises, materials, assignments, heuretics (Ulmer's logic of invention), and forms of assessment. In the spirit of pedagogically focused texts *Writing New Media* and *The Rhetoric of Cool*, this dissertation emphasizes the interconnectedness of theory and practice by guiding first-year faculty to potential, theoretically sound applications that answer Hass's inquiries and anticipate those of electracy instructors. My goal is *not* to design a proscriptive set of guidelines for a class, which would be against the spirit of Ulmer's open call for electracy invention, but rather to meet the learning needs of natives to

new media at the undergraduate level in modules that can be adapted as necessary, remixed, and further invented by fellow electracy advocates. The relays are not designed to supplant literate instruction but rather accompany it and offer avenues into electrate pedagogy.

Setting: The Virginia Community College System (VCCS)

My electracy relay modules are designed for all undergraduate English and Humanities teaching faculty, but they are created with further implementation within the Virginia Community College System (VCCS) specifically in mind. My experience as an Associate Professor of English at Tidewater Community College in Virginia Beach and my understanding of the student population play a major role in this decision. The VCCS, a statewide group of 23 colleges developed in 1966 and ranging from inner city (Alexandria, Richmond, Norfolk) to rural countryside, is an ideal network for introducing electrate pedagogy for undergraduate composition students. If relays are effectively built as metaphoric guides to communication within the apparatus – with a clear philosophy and goals, sound theory and assessment – and they have the appropriate infrastructure for statewide faculty adoption, they should improve digital fluency for students at the community college level in courses transferrable to four-year institutions. The goals of the VCCS to remain innovative and promote student success in a 21st century job market align with my own to introduce electracy pedagogy.

Electracy and experimental new media are not currently taught in the VCCS – indicative of a larger issue in composition studies – but the system's leading innovations in educational technology demonstrate an ability to properly implement

relay modules for teaching faculty. Many teaching faculty in the VCCS are comfortable with some degree of teaching digital literacy, whether through e-portfolios, blogs, wikis, or social media, as evidenced by ample presentations at the annual statewide conference New Horizons and the biennial English peer group conference, publications in the statewide community college journal *Inquiry*, and initiatives to incorporate open education resources (OERs) and online courses. Yet my presentation on electracy pedagogy at New Horizons in April 2015 has been the only one of its kind, perhaps due to a lack of awareness of the theory. The VCCS offers no electracy, digital rhetoric, digital fluency, postcomposition, or new media composition courses. The Master Course List includes only ENG 123 (Writing for the World Wide Web), a course offered at only a few colleges that highlights the design of "basic Web pages" via design software and templates but remains in current-traditional composition pedagogy ("outline, compose, organize, and edit" content to appear on a text-based site) and not experimental humanities like Ulmer's electracy, which promotes creative exploration via articulation and remixes, or immersive multimodal experience (i.e., Flash, video, HTML5). Core learning competencies like written communication remain foregrounded with little to no attention to new media design-texts. There is virtually no flexibility for electrate experimentation in ENG 123, a problem that the Dobrin argues is indicative of composition studies as a whole:

> Composition studies likes to boast a cross-disciplinary/inter-disciplinary agenda, but this is a boast of false proportions. Composition studies is perhaps one of the most conservative fields in its willingness to explore its contingent borders. … Theories that have

> opened new frontiers for composition studies have been virtually shut down, appeased in assimilations that grind radical thinking and unprecedented thinking into impotent versions that safely fit within composition studies' established posts. (Dobrin 20)

The VCCS has not "shut down" electracy pedagogy or actively opposed innovations in pedagogy, but my choice to avoid "radical thinking" in Writing in a Wireless World – along with the dearth of courses experimenting with the apparatus – shows that Dobrin's contention of conservatism in composition studies is not far from the truth. Fear of exploration within composition leads to continued use of "literacy" to describe new media that Ulmer argues enters a new apparatus, preventing our students from creative experimentation in multimodal, digital spaces.

Electracy instruction is a "new frontier" that has been and will be met with resistance, but the development of experimental pedagogy promoting digital fluency may be welcomed in the VCCS, which has emphasized in strategic plans Achieve 2015 and Complete 2021 the importance of educating 21st century students for an evolving job market via "cutting-edge" training ("Our Strategic Plan"). Student success in new academic programs that respond to emerging needs in the workforce has remained a goal for the VCCS in both strategic plans, and the exploration of emerging learning technologies is promoted as a central task. These goals and pathways, of course, are not unique to the VCCS as all higher education institutions seek to modernize, remain credentialed, and sustain enrollment and completion of degrees. What separates the VCCS – and sets it up as an ideal model for electrate relays that can then be extended to other states and four-year institutions – is the

success of its faculty in developing and furthering its use of educational technologies across the state. One example is the Zx23 Project, a statewide program for increasing the affordability of a college education by scaling Z-Degrees – "zero textbook cost" college degree programs that utilize only open educational resources (OERs) – to all 23 colleges. Originating at my institution of employment, Tidewater Community College (TCC), the Z-Degree requires substantial faculty training in the identification and proper usage of OERs and a highly effective infrastructure for sharing resources via modules in learning management systems. Successful development and implementation of the degree at TCC by my fellow faculty resulted in a statewide grant and the creation of several cohorts to spread the program across the state.

This success story demonstrates a willingness from the VCCS to promote an appropriate infrastructure for training and development of modules for educational technology that helps meet the goals of its strategic plan. Electracy relays can follow in the footsteps of the Zx23 Project training and dissemination within the VCCS, and what might be considered "radical thinking" by many in composition studies can become an adoption of "cutting-edge" new media pedagogy for digital natives. As Ulmer writes, "English Departments [are] missing their calling. … [O]ur citizens need not just to consume media, but become 'literate' in media" ("Teaching"). This dissertation seeks to promote Ulmer's electracy via well-developed relay modules within the VCCS. A successful proposal and implementation could then lead to more widespread discussion and adoption of electrate pedagogy in first-year composition and new media courses at two-and-four year institutions, resulting in digital natives

trained to become prosumers (producers as well as consumers) rather than simply passive recipients of digital communication.

Overview of the Chapters

Chapter 1 presents a review of literature on the shift from a current-traditional literate world to postmodern notions of composition, new media, and visual rhetoric in electracy. Current trends in college composition and digital pedagogy will be reviewed to demonstrate the need for electrate thought, and a comprehensive examination of electracy will show how it belongs as an accepted theory in postsecondary, digital education.

Chapter 2 examines how Ulmer's heuretics (use of theory to invent practices), conduction (image logic), and chora (an alternate place of invention to topoi) answer the call for a functional praxis of "digital writing" in a post-literate world and why undergraduate courses – particularly in the VCCS – are needed. With no consensus on the most effective form of college education for new media and multimodal digital spaces, postmodern electrate theory facilitates "citizens to be fully empowered as native producers of digital texts" in the public and private realms (Ulmer, Internet Invention, preface xii). This chapter argues for the implementation of an electracy curriculum via relay modules in first-year composition to bridge the transition from literacy to electracy. In response to Ulmer's open invitation to invent electracy, various Florida School advocates have developed expansive relays; these models will be examined with a focus on pedagogical implications. A thorough review of the few available and completed courses on electracy will illustrate its room for growth and demonstrate its need within the VCCS. This chapter will review the VCCS master

course list, detail its student population, and elaborate on the design and implementation of electracy modules.

Chapter 3 develops a series of three scaffolding modules that culminate in a first-year college course on electracy while remaining applicable as functional resources for composition and new media courses alike. The non-proscriptive modules, each focused on a separate relay or set of relays, contain appropriate readings and theoretical justifications, objectives and learning outcomes, and exercises and assignments. Ideally, the modules could be adapted, implemented, and revised by any instructor. These modules offer a workable praxis building on the electrate advancements of the Florida School and passing the baton to future adopters.

The first module, the Playlist, translates the traditional first-year composition definition essay into a choral playlist – one that features all meanings and fragments – highlighting the electrate principles antidefinition, plurality, fragmentation (Barry Mauer's clipography), and brevity and capturing the aesthetic of haikus and hip hop. The Playlist captures a mood or set of moods, much like Rice's funkcomp or Durst's blues music, and privileges no voice more than another. Arroyo's participatory composition via tubing features the playlist as users compile collections. Like a wiki, a playlist allows for many voices uniting in one place for a moment of articulation, and though usually associated with music, the Playlist can take multimodal forms. The Playlist also embraces ambiguity: "Traditional academic writing stresses unity of style and the avoidance of ambiguity. By contrast, many media artists, including pop musicians, value polyvocality and open-endedness in their work" (Mauer, "Nietzsche" 249).

The second module, the Transduction, replaces a set of first-year composition assignments: the narrative and the digital story, a student's first immersion in design principles. This module builds on Ulmer's interface metaphor of dialogue, a conversation with a prior work, and Kress and Van Leeuwen's transduction, a translation of material from one semiotic domain into another. The Transduction promotes conduction (image logic) as the student determines how text transforms into video, music transforms into visual representation, or how an image becomes text and inquires into what affordances and limitations each mode offers the prosumer (producer and consumer). The Transduction fits Rice's "rhetoric of cool" and emphasizes electrate appropriation, sampling, videocy (video intelligence), mashup culture, and juxtaposition. In "Getting Schooled: Introduction to the Florida School," Rice and Marcel O'Gorman argue, "Digital technology dictates the remix as a new media method of knowledge production" (13). The digital tools available grant anyone the ability to author remakes of content, and the multimodal, transductive act becomes the essential form in postcomposition, posing questions regarding intellectual property and research methodologies in the age of electracy.

The third module, the Sim(ulation), serves as the electrate stand-in for the standard research project in first-year composition, the assignment that tests students' abilities to synthesize all of the skills, discourse conventions, and research abilities learned over the course of a semester. Ulmer's popcycle, theorized in *Teletheory* and further developed in *Internet Invention* as discourses of Career, Family, Entertainment, and Community, plays an essential role in one's image of wide scope in the Mystory assignment. Like a research argument, the Mystory requires in-depth

research and synthesis of material, yet it is separate from the "literate formats of courses, exams, lectures, semesters" in that a student focuses on identity and subjectivity formation through feeling memories in each discourse (Ulmer, *Internet* 5). The Sim(ulation) module guides the development of one's avatar in the Baudrillardian simulacra of social media profiles or virtual worlds as digital agency and choral identity are developed.

Chapter 4 analyzes the praxis of electracy modules in terms of assessment. Key questions for college instructors looking to implement electracy inevitably will emerge: How is one to assess a playlist, a remix consisting of various clips, or a mystory (Sim)ulation? How is a major institutional concern such as plagiarism resolved in these types of electrate creations? What rubrics are used to assess multimodality or design? This chapter seeks to offer strategic solutions to these problems by analyzing how others in the Florida School have tackled the concerns and reviewing successful implementations of visual rhetoric in the composition classroom. Though no standards exist regarding grading electrate works, scholars like Marc C. Santos, Byron Hawk, and Arroyo openly display their courses for the (digital) world to view and build upon. Their prior attempts at electrate education offer a starting place for assessing works like mystories, MEmorials, and video remixes. Visual rhetoric and design pose a different problem in the lack of a common language and many approaches to discussing visuals. Lester Olson contends there is no "substantive treatise" and a pluralism of grammar is encouraged, so this chapter reviews the key approaches by Kress and Van Leeuwen and other visual rhetoricians in developing rubrics for multimodal language. Questions regarding plagiarism are

salient for all electracy adopters. Gye notes, “Our response to this challenge as educators will be largely determined by whether we see these changes as destructive (impacting negatively on the literate apparatus and its associated skills, values, and ideologies) or as an opportunity to participate in the invention of the electrate apparatus (heuretics)” (“On the Way” 10). Thinking electrate requires a different approach to intellectual property and perhaps a re-definition of plagiarism as dishonest self-analysis or careful assignment design.

Chapter 5 presents conclusions regarding the future of (post-)composition and electracy instruction via relays within the VCCS and at the undergraduate level.

Chapter 1: Review of the Literature

For over 40 years, composition studies has sought to effectively integrate computers into the writing classroom via writing across the curriculum (WAC) initiatives that address human-computer interactions, multimedia and new media, and the World Wide Web. With each advancement in the Information Age – from personal computers and smart phones to Web 2.0 interactivity via social media and virtual reality – has come new pedagogical applications of computers and writing and proposals for ideal approaches to new media and visual rhetoric. Yet very few have adapted to our postmodern condition of writing as articulation, and nearly all have remained entrenched in literate practice (e.g., digital literacy). Ulmer's electracy fills the postcomposition gap in the digital era, and the development of relays by those in the EmerAgency and Florida Research Ensemble (FRE) help the transition from literacy to electracy. Our best solution for emphasizing the fragmented and contingent nature of writing and learning is to responsibly yet critically utilize electrate vocabulary, patterns, and methods, yet the lack of pedagogical applications shows that further relay development and electrate curricular design are essential. The purpose of this review is to address the need for electracy pedagogy by following the trajectory from various theories of digital literacy that seek to implement new media and visual rhetoric in the writing classroom to the postcritical turn that fits the conditions of the postmodern world.

This literature review is loosely organized by the four categories of stasis theory. Though the ancient heuristic first appears in Aristotelian rhetoric as conjecture, definition, quality, and procedure, the version of stasis theory adopted

here is a modern application revived by Jeanne Fahnestock and Marie Secor and promoted at the University of Maryland: definition and existence, cause and effect, value, and action and jurisdiction. Each section will build upon each other to highlight how electracy fills the gap of new media education. Stasis theory seemingly is a questionable choice of organizational structure for a dissertation endorsing the shift to electracy as it is a "counterpart to choragraphy" that should not be used in the electracy classroom for discovering arguments, Arroyo argues (*Participatory* 25). Its familiarity, however, helps to highlight the lack of an appropriate theory for multimodal, digital communication and the dearth of electracy pedagogy, especially at the undergraduate level. Arroyo adds that stasis theory "remains relevant for inventional purposes in most of the prevailing epistemologies of writing in use today" (52). Stasis theory effectively functions as a literate relay for this literature review.

This literature review follows parallel paradigm shifts in digital composition and postmodern theory to demonstrate the necessity of Ulmer's electracy. Several seemingly disparate strands will converge to expose a lacuna in modern composition theory and pedagogy addressed by the postmodern third apparatus. Each strand will be clearly identified by a sub-heading until the literature review culminates in a review of electrate theory. After examining early theories, definitions, and implementations of computers in the composition classroom, I will review the potential effects upon the worldviews and brain development of our digital native students. Contemporary definitions of new media reflect the transformative qualities of computers and illustrate how with digital communication on computers, mobile devices, and TV screens comes an increased focus on visual rhetoric and

multimodality. This literature review surveys the landscape of visual communication, from grammars of visual rhetoric to classroom pedagogy to demonstrate the need for a third apparatus to orality and literacy. Next, I will trace the convergence of various theoretical strands – articulation, postcomposition, and postmodernism – leading to the post-critical turn toward electracy. Throughout his oeuvre, Ulmer develops his avant-garde apparatus via neologisms and relays; the development of electracy will be traced in Ulmer's work and those of his advocates to argue for its inclusion in postsecondary education, particularly at the first-year level.

Strand #1: Digital Composition and Worldviews

The study of the effects and inclusion of computers in the writing classroom is far from nascent. Since the advent of the personal computer and the rise of the Internet, composition instructors have sought ideal methods for increasing productivity and collaboration, developing agency, and emphasizing visuals. Early Writing Across the Curriculum (WAC) initiatives in the 1970s were designed to help citizens succeed in the oncoming digital age, according to Donna Reiss, Dickie Selfe, and Art Young, editors of the 1998 text *Electronic Communication Across the Curriculum*. Reiss, Selfe, and Young define computer literacy as "facility with computers to aid thinking, communicating, remembering, organizing, number crunching, predicting, and problem solving" for complex communication projects rather than the ability to use computer languages or operate machinery (xvii). This definition reflects early research on computers as "aids" to the writing process and memory storage. Many early campus-wide leaders in computer literacy were writing

instructors as WAC programs were often placed in writing centers (xxiv). Making writing centers WAC hubs helped spur the growth of electronic literacy initiatives.

In the same edited text, Mary E. Hocks and Daniele Bascelli discuss the rapid growth of multimodality and Web publishing instruction in networked professional writing courses in the 1990's (40). With the increase in attention to multimodal aspects of writing and Web design, faculty training and support infrastructure become key initiatives at many colleges (41). Digital writing in Web spaces is viewed as a daunting task for many students, but they become less intimidated and more comfortable in Web design and PowerPoint development as each semester progresses (50). Academic multimedia projects, though rudimentary in quality and complexity compared to today's standards, gather similar components: one student in Stuart Selber and Bill Karis's class builds a well-designed deliverable on sea ice consisting of still graphics, audio, and video clips (106). The development of digital multimedia is not without complications, however. Selber and Karis note the difficulty of building electronic portfolios of professional work and relay a story of a faculty member whose online environment served only as a repository for his traditional lecture notes (111). Though computers are praised by compositionists for assisting in easy storage and dissemination of data, the repository anecdote suggests that Selber and Karis feel computers play a much more transformative role in writing and communicating. Storage of lecture notes is beneficial for the students, but it is not valued as highly by the authors – or by today's standards – as a multimodal project intended to be interactive for the audience. Selber and Karis similarly place significant weight on the importance of usability testing and predict increased

involvement of users in the development of human-computer interfaces (HCI) (108). With the Web 2.0 allowing for unrivaled interactivity in social media and Web interfaces, their prediction shows a careful consideration and enthusiasm for the future of digital communications.

Earlier in the decade, Gail Hawisher and Cynthia Selfe had expressed a similar sentiment about restrained enthusiasm toward technology as it applies to transforming the writing classroom. They contend writing instructors regularly integrate computers into their classrooms "without the necessary scrutiny and careful planning" to ensure there is a meaningful usage (55). The "uncritical enthusiasm" of electronic literacy – what Michael Thomas refers to as "technoevangelism," those who set technology standards with unbridled mass support – replaces what should be a healthy skepticism toward the potential negative effects, such as reduced interaction between teachers and students (60). Since computers do not automatically result in "ideal learning situations," the goal for writing instructors and composition scholars should be to further analyze the impact of computers on writing and effective integrations in the classroom (60). Skepticism toward computers on communication and learning is much rarer than an arms wide open approach, but Hawisher and Selfe are not alone in their hesitation. In "Five Rules for Virtuality," Steve Woolgar builds upon a neologism coined by Otto Imken: cyperbole. Woolgar, who changes the spelling to cyberbole, adds that the term "denotes the exaggerated depiction (hyperbole) of the capacities of cyber-technologies" (9). Woolgar critiques the Third World Symposium of Information Technologies 2001 statement that the Internet is a revolution sparking a new civilization as cyberbole, demonstrating that the impact of

computers might be grossly overstated. If Woolgar is correct, then rather than build "ideal learning situations," computers in the composition classroom might simply be another useful tool.

Thirteen years after her criticism, Selfe comes to embrace the power of electronic literacy in "Students Who Teach Us." She contends that compositionists must seek from our students how to develop digital literacy. New media, defined as largely visual, interactive texts formed in digital environments that "resist containment by alphabetic systems," is powerful enough to shape identities and exercise power (43). Here, Selfe asserts – by way of a case study of her student – that our notions of composition are undergoing radical change and literacies have finite "life spans" (49). Thus, new digital, multimodal literacies may crop up and require our attention. With the power of digital literacy advocated by many, a critical stance toward proper and effective integration of technologies in classes becomes paramount.

As the profound impact of computers on literacy is gradually discovered, composition instructors posit that our role in the classroom is transformative as we serve as gatekeepers to students entering discourse communities and thus gaining subjectivity as scholars. If digital spaces require that students acquire multimodal, Web design skills and a competence in navigating and operating computing devices like Selber and Karis's student, then electronic communication is a discourse community that warrants our attention. A brief review of arguments by composition scholars on how we shape students' worldviews and subjectivity – and how students as digital natives respond to digital media – will illustrate the magnitude of the impact

electronic communication has upon our field and why our underlying theories deserve careful scrutiny beyond technoevangelism.

Patricia Bizzell argues, "[O]ur teaching task is not only to convey information but also to transform students' whole world view" (387). The integration of technology is more than just another tool to achieve writing goals; students' worldviews can be shaped by how they perceive communication in electronic spaces. Bizzell's position that students write within multiple discourse communities, and that their writing is only effective when they understand the discourse communities they are interpellated into, is echoed in Ulmer's mystory assignment (388). Ulmer similarly advocates clear, straightforward assignments. David Bartholomae suggests that to control a specialized discourse – or at least gain confidence in it – writing students first appropriate the discourse (624). Bartholomae studies 500 essays detailing moments of creativity and observes many commonplaces invoked by the writers (638). To avoid the resulting clichés, students can collaborate on scholarly projects or respond with experiences (646). This would ensure students properly enter discourse communities, including multimodal digital spaces, with subjectivity.

Many composition scholars reiterate Bizzell and Bartholomae's views that institutional, academic language interpellates students and instructors inevitably shape students' perspectives. Writing, according to Rose, is not simply a skill – as it has been characterized since behaviorism of the 1930's established writing as correctness – but a way of influencing cognition (555). Our American cult of efficiency has forced students with fragmented knowledge and difficulty adapting to the specialized, institutional language into the problematic remedial category because

writing is still regarded as a skill. When viewed not as a skill but as a form of shaping cognition, as Rose contends, writing instruction takes on a much different form. Kathleen McCormick adds that making college-level composition student-centered, collaborative research with many opportunities for revision will demystify academic writing. McCormick argues for a highly structured approach with clear assignments, goals, and feedback; when we make our pedagogy "visible" to students, they can enter the academic discourse community (204).

In the same year that Bizzell publishes her essay in *PRE/TEXT*, James Berlin maintains in *College English* that "to teach writing is to argue for a version of reality" (256). Berlin famously divides pedagogical approaches to writing into four categories, each making salient specific elements of knowledge acquisition and dissemination. Berlin dismisses the less popular invention-heavy Neo-Aristotelian views that reality can be known via sensory impressions (257). Likewise, he exposes the problematic Positivist (Current-Traditional) views that truth lies in induction – rather than syllogism – and the scientific method rather than dialectic (259). Berlin tracks the reaction to current-traditional pedagogy in the creative Expressivists, who in following the lead of Transcendental poetry and Plato believe in truth as discoverable only from within and not communicable (261). Expressivists hold private rather than shared visions of truth and thus writing is "a 'personal' activity, as an expression of one's unique voice" (262). The use of metaphor and analogy is emphasized in Expressivist texts (263). Though Berlin rejects the Expressivist worldview for a Burkean, New Rhetorician view of rhetoric as epistemic and truth as dialectical, it is worth noting that poststructural ideology adopted by Vitanza and

Ulmer is influenced more by Expressivism than New Rhetoricism. Berlin's worldviews argument establishes a New Rhetorician, collaborative pedagogy that largely informs modern digital rhetoric and can be traced in many scholarly arguments on computers and writing, yet the emerging electrate apparatus elects to emphasize individual truths and the use of metaphor and analogy to reach those understandings.

Strand #2: Digital Natives and Technogenesis

This influential notion shared by Bizzell, Bartholomae, Berlin, and others that our role as composition instructors is to shape students' outlooks and assist them in entering discourse communities is far from unique. Recent scholarship in digital composition, education, and sociology reflects an acceptance of the epistemic view of writing and the importance of collaboration while theorizing an evolution in the brains of the younger generation. In "Collaboration, Literacy, Authorship," Joe Moxley and Ryan Meehan highlight the disparity between theoretical advocacy of collaboration to socially construct knowledge in digital spaces and the continued emphasis on individual effort in comprehensive examination like the SAT and GRE. Far too many instructors in academia remain in a sage-on-the-stage model of knowledge distribution whereas social Web sites like Wikipedia and Newsvine build knowledge socially in chatrooms and forums (Moxley and Meehan). Our students are already using those tools, so the next step is training instructors how to facilitate the use of social media to allow students to communicate with audiences outside of the classroom. The problem with this approach, however, is that a generational – and digital fluency – gap may exist between many instructors and their students.

In his popular and controversial article "Listen to the Natives," education scholar Prensky compares the skill level gap between generations with language acquisition, contending that a split between digital natives and digital immigrants exists. Digital natives, according to Prensky, are more likely to be fluent in computers, video games, and the Internet because they have become an extension of their brains, whereas digital immigrants retain an "accent" from learning computer usage later in life. Instructors, most likely to fall in the digital immigrant category, must find ways to meet students halfway and engage them in electronic spaces because, as Prensky writes, "Outside school, they are fully engaged by their 21st century digital lives" ("Listen"). Prensky recommends "radical solutions," such as gameplay, which is not necessarily the use of video games but its principles of leveling up and having choices and goals along the way, and collaboration in learning groups to foster an appropriate learning environment for digital natives. Prensky effectively argues that the academic discourse community must appropriate from the culture of digital natives to ease the transition rather than having students assimilate to a less familiar discourse of digital immigrants.

Prensky's revelatory analogy sparked much debate regarding its legitimacy and applicability. Michael Thomas's 2011 edited collection *Deconstructing Digital Natives: Young People, Technology, and the New Literacies* captures much of this rhetorical parlor room debate, suggesting that though Prensky's metaphor may be hyperbolic – or cyberbolic – there is much to be learned from the habits of digital natives and there might be a deeper transformation for digital natives than previously anticipated. In "Technology, Education, and the Discourse of the Digital Native,"

Thomas stresses that despite the controversy over the phrase "digital natives," this youthful group – those who were born after 1980 and value emotional openness to others, independence, innovation, investigation, and immediacy – has the ability to supplant traditional models of pedagogy with a more interactive, multimodal experience (5-6). This new form of instruction would offer digital natives the best opportunity at success in the electronic zeitgeist; however, they would need to become producers – or prosumers – rather than just haphazard consumers of content. Thomas writes of the glaring contradictions for digital natives, "Many undergraduates have only a basic familiarity with the commonly used information and communication technology (ICT) functions, and many fewer are concerned with creating multimedia content rather than merely searching for it, usually in unsophisticated ways" (6-7). The inability to generate original content or even remixed, appropriated digital media is a concern that resonates with John Palfrey and Urs Gasser. They add that digital natives are generally unaware of the first steps to building their own material. Palfrey and Gasser observe students lack new media savvy.

> In our research, we came to the project with a normative assumption: we hoped to find everybody creating remix videos on hot political issues on Saturday afternoon, but this turns out not to be true. There are many young people without the technical knowledge of how to create such media, and there are plenty of couch potatoes out there. (194)

Even when digital natives create digital content, such as personal Web sites, YouTube videos, or photographic collages, they are mystified about their digital rights as it concerns copyrighted material for remixes, videos, and Web design. This alarming lack of production ability exposes why the digital native metaphor may be imperfect (and why it is addressed by a rhetoric of invention in Ulmer's electracy).

Palfrey and Gasser's normative assumption is shared by other education scholars who analyze research skills and proficiency levels. Gregor E. Kennedy and Terry S. Judd find in their study on the use of learning resources that digital natives are efficient in information acquisition but prefer expediency over reliability in Web searches (124). A vast majority of college students (89%) use Google or a search engine to begin the process of a research project and most rarely go beyond Google (127). The lack of sophistication results from "frustration and impatience" (124). Kennedy and Judd describe their results as disappointing since digital natives are avid adopters of new technologies (121). Ola Erstad echoes their sentiments noting that digital natives utilize digital tools but not for learning activities (114). Instead, they generally lack digital competence, which Erstad describes as wide-ranging from basic skills and Web searching to creating and communicating (107). In a 2009 International Telecommunication Union Monitor Study in Norway, six proficiency levels are used for assessment, from level 1 (basic tasks) to level 6 (creation) (111).

A common theme that emerges in *Deconstructing Digital Natives* is the importance of creating digital, multimodal content for digital natives to fulfill their promise. The creators of remixes, videos, audio, Web design, and graphics reach a level of attunement with digital media that demonstrates competence and agency

within the electronic discourse community. Even younger children immersed in digital spaces as participators and builders of multimodal content become more sophisticated in their Web communications. Theresa Rogers and Kari-Lynn Winters analyze how middle and high school students successfully built and sustained a do-it-yourself Web "zine," *Another Slice*, to address homelessness and youth culture. Students displayed improved ability in spatial reasoning, satire, and visual rhetoric, lowering the barrier to literate production in digital spaces (103). *Another Slice*, a multimodal endeavor, offers an alternative pedagogy to engage digital natives and stimulate interest in participatory Web culture. What remains unforeseen is whether zine production could motivate digital natives to exhibit patience and a thorough approach to research that goes beyond basic Google searches.

Regardless of the disappointment in digital natives not living up to lofty expectations, Prensky's analogy remains provocative. His later addenda to "Listen to the Natives" note the complexity in determining digital fluency and clarify the "native" and "immigrant" tags as metaphorical yet demonstrate that his original position was far from cyberbolic. Prensky contends that despite an "innate capacity" digital natives are not automatically competent in all things digital; rather, "intuition, good judgment, problem-solving abilities, and a clear moral compass" guide digital natives to prudent use of technology to enhance communication (Prensky, "Digital Wisdom" 18). Digital natives are constantly in a state of becoming "homo sapiens digital," a new designation Prensky coins to indicate one who is both digitally wise and accepting of cognitive digital enhancements as a fact of our future existence (20). Triggered by our daily interactions with computers and mobile devices, restructuring

of the brain occurs slowly over time and results in a bridge between digital natives and immigrants (18). Further augmentations caused by emerging technologies like gene therapy, neural implants, and mind uploading are mostly theoretical in the early 21st century, yet Prensky acknowledges that our rate of technological progress assures the digital enhancements to our brains are inevitable. Existing technologies like Google Glass demonstrate the potential for human enhancement to near-cyborg levels, prompting a much larger paradigm shift in the humanities than previously imagined.

Renowned postmodern literary critic Hayles expands upon the notion of human enhancement via technology by convincingly pronouncing a state of technogenesis, the "idea that humans and technics have evolved together," in her 2012 text *How We Think* (10). As computing technology has rapidly progressed from black-and-white text-based interfaces like MS-DOS to many iterations of Windows and Apple operating systems, from dial-up Internet on 28K modems to fiber optics cables and wireless signals, from massive CPUs to powerful handheld mobile devices, our cognition has likewise been shaped by our constant interactions with our surrounding technology to the point that we have become reliant. Hayles expresses panic when detached from the digital world: "[W]hen my computer goes down or my Internet connection fails, I feel as if my hands have been amputated" (2). Emphasizing the potential bodily effects of our interactions with our electronic devices, Hayles firmly entrenches our human agency within the digital sphere. Technology as prosthesis, originally proposed by Marshall McLuhan, indicates we all are interpellated as digital natives. "We think through, with, and alongside media,"

Hayles affirms (1). Our human evolution should therefore result in an overhaul to pedagogy in the humanities and across the curriculum to guide our students to achieve the status "homo sapiens digital." Hayles writes, "[R]ethinking our priorities and assumptions" about media upheavals spurred on by advances in digital technologies and the resulting impact on the teaching of communication is essential (10). The modern classroom, for example, "is no longer sufficient for the needs of web pedagogy," such as collaborative problem-based humanistic inquiry across fields of study utilizing high-end equipment (5). Even Web spaces would undergo transformations to allow for networking and hyperreading. The overhaul might also take the form of a Comparative Media Studies course in which digital native scholars would "come together to explore synergies between print and digital media" by participating in virtual worlds and simulations, designing multimodal text for the Web, and building interactive games (7). This course – or something resembling it – could open up collaborative opportunities between expert amateurs and prominent scholars to develop databases on shared interests (36). Executable code literacy would be promoted because "to produce high-quality work, scholars certainly need to know how to talk to those who are programmers" (42).

Hayles's definition of digital literacy transcends print composition to include hyperreading, new media, and visuals. With fewer students reading print than ever before and many instead reading "incessantly in digital media," according to Hayles, we are fast approaching a schism from the literate apparatus, a "break from the transparency of print" (56, 8). Hayles asserts that our mindsets are shaped by print, but new media presents a new paradigm altogether. "The Age of Print is passing,"

Hayles states (2). The new digital era, perhaps what Jean Baudrillard calls digitality or what Ulmer coins as electracy, involves new media-based practices that better suit our evolving brain architectures. One such practice is hyperreading of digital media. Screen-based hyperreading, introduced in 1999 by James Sosnoski, includes quickly browsing for content that grabs the reader's attention, scanning through tweets or multiple juxtaposed windows and tabs, following hyperlinks across the Web, and scrolling through material without closely paying attention for long. Hyperreading leads to many distractions, a lack of careful analysis, and an increase on one's cognitive load, "thereby reduc[ing] the amount of new material it can hold" (Hayles 64). Hyperlinking information results in a degraded form of reading that, according to Hayles, is affecting our print-based reading as well (62). Hayles argues, "[I]t is time to rethink what reading is and how it works in the rich mixtures of words and images, sounds and animations, graphics and letters" (79). "New neural pathways" are developing out of our digital reading habits (64). These pathways are equally constructed by and conducive to new media and visuals.

The cursory reading of hyperreading is in part due to information overload and screen-reading habits, but the inherently multimodal nature of texts only complicates matters. Many texts, Web sites, and new media creations include a "full range of visual images, graphics, animations, and other digital effects" that serve not as "cosmetic enhancements" but as integral to – or often, entirely – the content (40). When effectively employed, visual components of texts can have "emotional force as well as conceptual coherence" (40). Multimodality is the new norm in digital spaces, yet digital natives are infrequently asked to create visuals or any type of assignments

that utilize multiple modes. Hayles bemoans the dearth of courses and instructors who "encourage the transfer of print reading abilities to digital and vice versa" (57). Regardless of whether a Comparative Media Studies course or a new apparatus altogether is necessary to develop "homo sapiens digital," print-based literacy is simply inadequate for the digital era. Our evolving brains require innovative pedagogies that incorporate new media, which is constantly in a state of experimentation and development, and careful attention to studies of visual rhetoric and multimodality. New media studies offers digital natives increased wisdom of functionality as well as interpellating forces such as networks. Visual rhetoric and multimodality present digital natives with various grammars and design principles. The next two strands of this literature review survey significant contributions to the studies of new media and visual rhetoric to highlight the move away from the print apparatus.

Strand #3: New Media and Networks

New media studies can be traced back to Marshall McLuhan's work in the 1960's with the impact of televisions and cinema on popular culture and academia. Since the rise of the Internet in the 1990's, when the computer became a "filter for all culture," the field flourished with wide-ranging topics of study from human-computer interaction and Web design to computer science (Manovich 64). Preeminent theorist Lev Manovich is often viewed as the leading modern figure in the field. His 2001 text *The Language of New Media* presents a systematic and lucid overview of the history and future of new media. Manovich defines new media as a profound revolution on par with the printing press and photography consisting of "graphics, moving images,

sounds, shapes, spaces, and texts that have become computable" (19-20). The revolution of new media impacts not only the content, which is most often synonymous with new media, but all stages of its communication, from design and production to storage and dissemination (19). New media, according to Manovich, operates in the logic of individuality; whereas old media was mass produced and similar for all who consumed it, new media is personalized for each user (41). Manovich writes, "Every visitor to a Web site automatically gets her own custom version of the site created on the fly from a database" (42). The individual nature results in more avant-garde creations in cinema, photography, music, and text due to functions that allow for appropriation (i.e., cut and paste, juxtaposition) (306-307). Manovich avoids the term "digital" because of the ambiguity involved with what makes it new media and similarly rejects the term "interactive" since it is a tautology (55). The five principles that set apart new media are that it is programmable and numerical, modular (maintaining distinct identities of parts when combined with other objects), capable of automation, variable rather than identical in copies, and capable of transcoding to different formats. New media content passes through interfaces – both literal as in the screen and metaphorical (e.g., Web pages, games) – and networks, and our awareness of those aspects of new media is vital to digital wisdom. Manovich notes "the interfaces themselves," such as the Windows or iOS operating systems, "become instruments that allow us to construct and manipulate the appearance of what might be called 'reality'" (59).

In *New Media: The Key Concepts*, Nicholas Ganes and David Beer expand on six concepts central to cross-disciplinary new media analysis: interactivity,

information, interface, network, archive, and simulation. Ganes and Beer repeat Manovich's definition of new media as numerical and manipulable but embrace interactivity as a central tenet because of the rise of user-generated content on the Web (87). Interactive Web 2.0 information – code within technological media, according to Donna Haraway – is always delivered via interfaces and networks. Interfaces function as translational devices that "enable the flow of information between human bodies and different media machines" and transform code into multimodal deliverables (55). Ganes and Beer consider the interface a meaning-making "space of negotiation" that needs to be explored by agents utilizing new media (68). Without careful scrutiny of the translational interface, one risks a loss of agency and control of new media information. New technologies like RFID (radio frequency identification) can transmit one's personal data wirelessly. This interface is "ambient and unseen, leaving us unaware that our bodies and possessions might be feeding data about our movements and habits to back-end databases" (64). These types of interfaces are "becoming increasingly pervasive or ubiquitous in everyday life," meaning that "homo sapiens digital" must demonstrate prudent awareness of interfaces to achieve digital wisdom (52). Even more pervasive is the much larger network infrastructure that interpellates all users of new media, shaping their identities and communicative potential. Networks offer connectivity for computing devices and allow for information exchange via LAN (local area networks) or WAN (wide area networks) (16). One's online relations are a part of "a much wider set of socially networked relations" and therefore "online networks are never divorced from the social networks that make up the mundane realities of everyday life" (25).

John Jones elaborates in "Network* Writing" that the complexities of writing and communicating in networked environments due to network forces, programming, and switching are often improperly assessed. For example, a Google search result will privilege specific Web pages that are programmed carefully within the network with keywords and pagerank exploits. This has major implications for delivery of information to one's audience. Jones writes, "The perfect argument that is buried on the 100th page of a Google search has less chance of being effective than one on the first page. Because of this reality, writers must not only appeal to or attempt to persuade their target audience, but they also must persuade the network itself of the worth of their appeal." To counteract this problem, network* writing rhetorical practices aim to effectively communicate within the given constraints. Network* writing addresses interpellating factors and ideological agents in a complex environment. These ever-changing factors warrant our attention because they redefine text and change our understanding in and of communication (Rice, "Symposium"). Despite our hesitance to join e-mail, software, or Web networks, Rice argues that we must enter and utilize fine attention to detail, or network* writing. One form of network* writing could be constructing or maintaining an archive, the fifth term Ganes and Beer use in defining new media. An archive enables storage and "accelerated communication of unprecedented amounts of data" (71). One example noted by the authors is the social media platform MySpace, which allows for accessibility by any Web user, not just those who are deemed experts or "homo sapiens digital." Archives in the Web 2.0 are open and collaborative, thus power issues become mostly irrelevant. Yet underlying processes of code in a Web browser

or computer – a form of simulation – restrict users and prevents interactivity for many users. Simulation, a concept popularized by Baudrillard in the early 1990's, is often understood in terms of virtual worlds and games but similarly plays a major role in software and its "impression of openness" (109). This illusion may be necessary for usability in human-computer interactions, but awareness of underlying procedures becomes paramount to fully understand new media.

It is no mistake that Yancey's "Writing in the 21st Century" call for groundbreaking models of composition emphasizes "*networked* literacies" (emphasis added). For a rhetor to effectively communicate in new media, she needs to develop judicious reasoning and awareness of multimodal content (information) that can be delivered to and manipulated by an audience (interactivity), operating within a code (simulation), a screen (interface), and a much larger set of cultural forces (network), and searchable within a database (archive). These principles of new media may sound familiar to rhetoricians as they resemble the rhetorical situation (writer, audience, subject, context, genre, purpose), yet until recently there was considerably less literature in composition studies regarding the integration of new media, the impact upon agency, and the values in design choices. Perhaps the most influential text to address the transformation of 21st century communication was *Writing New Media* by Cynthia Selfe, Wysocki, Johnson-Eilola, and Sirc. Published in 2004, *Writing New Media* mixes theory and praxis in the form of detailed assignments and exercises for digital and multimodal composition. The text is designed to serve as the bedrock of a curriculum for immersive new media pedagogy in the era of digital native millennials. It offers substantive definitions of key terms associated with new media,

allows openings for digital agency, questions materiality, and promotes interactivity. The assignments in *Writing New Media* helped serve as models for Writing in a Wireless World, and the realization of Wysocki, Johnson-Eilola, Selfe, and Sirc's theories of new media into innovative classroom practice strongly convinced my classmates and me that simply integrating the technology (i.e., blogs, wikis, Web pages, podcasts) does not "enhance or transform" learning beyond print literacy.

In "Opening New Media to Writing: Openings and Justifications," Wysocki argues that new media texts need not be digital, as long as the composer understands the materiality, such as the networks for distribution (15). New media is defined by Wysocki as texts that "have been made by composers who are aware of the range of materialities of texts and who then highlight the materiality" (15). Rather than replace writing practices with a new form of communication in the digital realm, Wysocki seeks to open new media to writing (5). Awareness of materialities, social forms, positioning, and the range of choices afforded by new media builds authorial agency, which otherwise can be subsumed by the networks, interfaces, and other invisible forces at play in new media. Wysocki's exercises appeal to awareness of materialities: an online scavenger hunt seeks interactivities, a brief writing activity emphasizes the use of crayons rather than keyboards, pens, or pencils, and students construct visual maps of readings to highlight relations of ideas.

In "Toward New Media Texts," Selfe similarly states that composition studies can improve from an increased awareness of new media. Selfe's emphasis, however, is not invisible forces and materialities, but visual literacy, "the ability to read, understand, value, and learn from visual materials … especially as these are

combined to create a text" (69). Selfe contends that visuals, which have long been a part of composition studies, are usually considered "second-class texts" (71). Prioritizing text over the visual in the writing classroom is a disservice to digital native students whose potential to communicate effectively in new media requires the ability to create and analyze photographs, films, images, and Web pages. Writing instructors are hesitant to make this shift, according to Selfe. Though most composition instructors lack formal training in creating, assessing, and teaching art, visuals, and multimodal creations, becoming co-learners alongside students serves as a first step toward inclusion (71). Selfe recommends changing our designations for writer and audience to "composer/designer" and "reader/viewer" to highlight the visual nature of all texts, including alphabetic (69). The activities affixed to Selfe's *Writing New Media* chapter include a visual argument, photography exhibition, and a text re-designed into a Web page. Selfe presents useful assessment vocabulary from Kress and Van Leeuwen's *Reading Images: The Grammar of Visual Design* (impact, coherence, salience, and organization), reflective questions regarding the emotional impact of visuals, and sample evaluations of student work. Her intense focus on visuals in the writing classroom as essential to new media competency reflects a much wider renewed scholarly interest in visual rhetoric since the onset of the digital age.

Strand #4: Visual Rhetoric and Multimodality

An unsurprising theme that emerges from *Writing New Media* and many composition texts and scholarly articles on integrating new media in the writing classroom is the need for an acute attention to images, design, and other visuals – all

highly important in electrate thought. Selfe's assertion that visuals have been neglected as "second-class texts" captures the sentiment of many compositionists in recent scholarship yet acknowledges a history of privileging the verbal over the visual for reasons as wide-ranging as a lack of preparation for instructors (Selfe, "Toward" 71) and the lack of a "substantive treatise" for visual rhetoric or a common grammar (Olson) to a fear of visuals replacing words (Hill) and "visual discourse as a 'racial, social, and sexual other'" (qtd in Stroupe 608). Cultural attitudes toward visuals are ostensibly shifting as forms like cinema and photography are ingratiated into writing courses and blurred as genres due to YouTube, social media, and remixes. This shift has led to calls for a pluralistic grammar (and theory) of visual rhetoric and design and increased classroom applications in digital pedagogy. With all compositions – textual, verbal, visual, multimodal, and design – inherently visual, visual studies becomes an essential field of study. This section of the literature review demonstrates the value of visuals and multimodality and how they may emerge as part of a third new media apparatus rather than as a mode subsumed by the written word.

Perhaps the most thorough, albeit brief, review of the history of visual rhetoric is Lester Olson's "Intellectual and Conceptual Resources for Visual Rhetoric," which compiles landmark moments and patterns in the field of visuals in communication since 1950. Olson, a speech communication scholar, discovers multiple disciplines and genres have taken an interest in the visual – particularly after 1970 – resulting in many terms for similar studies of visuals. Olson guides readers through the various iterations of visual rhetoric(s) in the field of communication, from early Burkean "rhetoric of symbolic action" and non-verbal rhetoric to iconography and visual

argumentation. The impact of technology on the study of visuals has been undeniable as speeches and other argumentation are easily recorded and distributed to audiences (2). Despite these advances, however, there is scarce interdisciplinarity between programs and departments to develop a "substantive treatise" or grammar of visual rhetoric (14). Instead, a pluralism of definition exists in a blossoming field.

Though Olson implies that a pluralism of terms and grammars for visual rhetoric is ideal as it meets Burke's both-and approach, several prominent scholars have argued for a solitary theory and/or grammar of visual rhetoric. David Birdsell and Leo Groarke, for example, construct "Toward a Theory of Visual Argument" as a counterargument to David Fleming's contention that pictures cannot be arguments (Birdsell and Groarke 1). Visuals, they respond, rely on a "complex set of relationships" for meaning-making, but when designed and interpreted correctly, they can "extend the traditional verbal enthymeme" (5-6). Indeterminacy of visuals can result from multiple interpretations or unclear premises and conclusions, but context and visual cues guide a viewer to a proper interpretation. A "theory" of visual argument thus comes into shape as one determines an image's internal elements and context and establishes consistent interpretation over time (9). In "Theory of Visual Rhetoric," Sonja Foss similarly responds to criticism that visuals do not belong in rhetorical study. Foss tracks the history of – or lack thereof – visuals in rhetoric until Burke's symbolicity was embraced in the field (141). With this acceptance, rhetoric scholars became interested in how images affect lay audiences and articulate human experience. Foss lists three characteristics necessary for visuals to become "communicative artifact[s]:" symbolism, human intervention, and communicative in

purpose (144). Visual objects that do not meet those criteria will not generate a rhetorical response but only an aesthetic one, which Foss indicates captures only experience. Though Birdsell, Groarke, and Foss lay the groundwork for theories of visuals, others focus entirely on the grammar and language describing visuals and their effects.

Perhaps the most well-known scholar of visual rhetoric to attempt a comprehensive grammar is Kress. In *Reading Images: The Grammar of Visual Design*, Kress and co-author Van Leeuwen systematically review semiotic elements that create visual statements and construct meaning. The rapid advances of desktop publishing, they argue, have popularized image manipulation and thus made visual design "less of a specialist activity" (Kress and Van Leeuwen 14). There are "profound semiotic consequences" to the Internet being "crammed full of images" with anyone being capable of specialization (220). Because of this increased accessibility and the importance of visual expression in our digital culture, Kress and Van Leeuwen seek a substantive grammar while acknowledging key limitations, such as a variation in meaning for each culture and the minor role of the visual in the education of our youth. Visual structures of representation are categorized as narrative or conceptual, and they construct meaning through information value and element placement, salience of elements, and framing of an image (177). If a digital native is to assess a narrative visual representation – featuring actors and events rather than timeless generalizations in conceptual works – he or she might start with any of the three, considering the frame size and perspective as interrelated to the meaning-making modality markers and placement. Kress and Van Leeuwen list modality

markers as color saturation, color differentiation, color modulation, contextualization, representation, depth, illumination, and brightness (160). Color is later treated separately as its own semiotic mode (i.e., speech, image, writing, music), making most image assessment multimodal in nature (i.e., image plus color as two modes) (231). Though Barthes argues that images are polysemous – "a floating chain of signifieds" – and thus dependent on verbal text, Kress and Van Leeuwen contend image compositions make meaning independently (qtd in Kress and Van Leeuwen 18). Multimodal creations – especially those mixing visual and verbal – are widely popular in magazines, electronic media, and advertising, and thus these texts deserve the full attention of educators. Kress and Van Leeuwen write, "[T]he skill of producing multimodal texts of this kind, however central its role in contemporary society, is not taught in schools" (16-17). Multimodal invention, despite not being practiced in our schools within the confines literacy, is essential to the image logic of electracy. Kress and Van Leeuwen's modality markers and visual structures of representation are reviewed in Chapter 4 as I argue for a multiplicity of visual grammars essential for new media assessment.

Kress later collaborates with Jeff Bezemer in "Writing in Multimodal Texts: A Social Semiotic Account of Designs for Learning" to expand on a vocabulary for the design of multimodal compositions. Bezemer and Kress compare textbooks from the 1935, 1980s, and 2000s with a Web site to demonstrate the profound shift from verbal composition to image-heavy multimodal composition (Bezemer and Kress 169). To set up their analysis of the text, Bezemer and Kress review key vocabulary, including signs, modes, medium (both material and social), frames, site of display,

and design. They also highlight the act of transduction, a translation of semiotic material from one mode to another (175). Transduction plays a significant role in electrate remix assignments, including my own Transduction relay, because of the affordances and limitations granted by each mode. A protractor illustration from several different textbooks, for example, shows more specificity than a Web site's illustration, yet the digital protractor captures actions and motion, something not available in the printed texts (181-2). These affordances of the interactive image – perhaps a Flash file – are not possible in a static illustration, so translating an object from one mode to another results in gains and losses. Four principles reviewed as important within any recontextualization of modes or media include selection (what is recontextualized), arrangement (how it is represented), foregrounding (salience), and social repositioning. Bezemer and Kress explain the changes that occur in acts of transduction and begin to articulate the *why* and the *how* of multimodal composition and assessment; other visual rhetoric scholars attempt to expand on those questions.

In *Reading the Visual: An Introduction to Teaching Multimodal Literacy*, Frank Serafini advocates for the inclusion of multimodality education and develops a pedagogical framework for teaching multimodality. Serafini, who utilizes the term "ensemble" to refer to multimodal creations to avoid the hegemony of print literacy with the term "text," asserts that the shift from a culture dominated by the verbal to the visual has not been reflected in our classrooms and the verbal has remained "privileged" (Serafini 4). Few instructors are comfortable, he argues, with teaching visuals and ensembles due to a lack of training. Serafini adds, "Without a theoretical or pedagogical framework and associated metalanguage or vocabulary for

comprehending and analyzing multimodal ensembles, educators will struggle to prepare students to design and interpret these complex texts" (17). Serafini cites prominent visual rhetoric scholars like W.J.T. Mitchell and Kress to provide various definitions of visual literacy and offer background on the shift from verbal to visual emphasis in texts. Serafini reviews criteria for interpreting and assessing multimodal works, including Marcus W. Feldman's seven principles of compositional interpretation: completeness, persuasiveness, personal relevance, durability, intellectual force, insight, and originality. Utilizing these and other criteria, Serafini builds a curriculum that promotes "[i]mmersing students in a wide variety of texts and images aligned with a particular unit of study" (93). After exposure to a variety of multimodal ensembles and exploration of the terminology and creation tools, students enter the engagement phase of production and analysis (92). Serafini offers readers several units with a focus, a recommended cornerstone text, learning objectives, lessons and learning experiences, a text set of supplemental resources, and an analysis guide of questions for students. This curriculum not only immerses instructors interested in integrating multimodal ensembles into their courses into possible forms of pedagogy, but it offers a useful model for my own curricular development within electracy. Serafini's language of assessing multimodal ensembles reappears in Chapter 4 as useful for assessment of electrate composition.

Many others contribute to multimodal scholarship and pedagogy, though most ground their work in literacy. *Picturing Texts* by Faigley, Diana George, Anna Palchik, and Cynthia Selfe, for example, offers extensive vocabulary for describing visuals, including many traditional rhetorical commonplaces (e.g., compare and

contrast, description, metaphor, classification, and narration). The text also contains many examples for analysis, making it an ideal text for writing courses. However, its focus is on "literacies," as the visual becomes a part of the text, precisely what Serafini was avoiding in *Reading the Visual*. Mike Levy and Rowan Michael promote the use of multimodal assignments for digital natives because it enhances their learning process (Levy and Michael 84). Their study concludes that multimodal production requires ample time and planning, yet the projects assessed are PowerPoint-driven literate productions. Brett Darrington and Tonia Dousay similarly find that multimodal works are more motivating than traditional paper-based writing because of the relevance of multimodality in students' lives, the novelty of media (music videos are given as an example), and authentic, real-world audiences. Darrington and Dousay consider traditional writing "completely foreign to most students" since their daily intake and production is multimodal in nature, yet they conclude that multimodality should be taught alongside writing (31).

Craig Stroupe, on the other hand, proposes a Visualizing English course, which "might allow English studies more generally to resist the critical and writerly impulse to subsume images under the dominant literacy of verbal culture" (Stroupe 609). Stroupe's call to teach the visual separately within the discipline is informed by the marginalized, "'lite' Englishes on the margins" like technical communication and film (609). The visual, rather than serving as a less privileged mode, is only gaining more importance because of computers, TVs, and mass media, and thus we are in the midst of a major paradigm shift. Stroupe considers the "evolutionary narrative from orality to written literacy to what Baudrillard calls 'digitality'" "too linear" but

acknowledges Ulmer's electronic thinking – a precursor in name to electracy – as a potential successor to literacy, which like orality will survive through intermingling (617). This apparatus shift to electracy due to the impact of technology and the visual is further realized by ideological shifts in the late 21st century, from perceptions of a static self to fragmented identities, from truths, linearity, and Authorship (with the capital "a") to articulations, non-linearity, and writerly texts with unknown authorship. Rather than continue placing the visual and multimodal ensemble in literate practice, the question becomes whether an emerging third apparatus is warranted.

Strand #5: The Ideological Turn

The profound impact of computers, new media, and visual rhetoric on writing has sparked contentious debate regarding the future of composition studies. Inquiries abound regarding how writing pedagogy transforms and evolves, subsumes visuals and new media as part of the literate practice of "designing" texts, or branches off an emerging third apparatus of communication as Stroupe hypothesizes. Parallel to the digital composition conundrum, a series of ideological worldviews emerge in the late 20th century and early 21st century that may inform the future of digitality. These seemingly disparate ideologies of articulation, postcomposition, and post-criticism share commonalities that reflect a necessary postmodern turn toward Ulmer's electracy. Though each addresses different circumstances and contexts, none advocating directly for electracy, aspects of these theoretical stances converge to address the lacunae materializing from the various strands addressed in this literature review. It would be haphazard to imply that these theories are one in the same,

influenced by one another, or directly connected; rather, they each offer unique understandings of how to view electracy pedagogy as essential for the writing, new media, and humanities classrooms. Though Ulmer endorses some of the works – namely Vitanza's aleatory procedures – these theories are not necessarily precursors to electracy but are to be viewed as relays to understand the postmodern turn toward a new apparatus.

In the latter decades of the 20th century, technological advances and theories emerging in reaction to mass media and popular culture forever change the nature of art and entertainment. In *The Move Beyond Form: Creative Undoing in Literature & The Arts Since 1960*, humanities scholar Mary Joe Hughes traces those changes as postmodern works abandon the notion of "self-contained objects in favor of one that stimulates or evokes movement, changes, and/or completion by others over time" in a "temporal web of significance" (Hughes 37). What was previously fixed and stable (e.g., meaning, authorship) is fragmented and without closure. Hughes encapsulates the postmodern turn in our understanding of (w)holeness in entities in the change of digital composition: "Think of text on a computer screen. Unlike print on a book or a page, electronic text is endlessly malleable, open ended, and subject to continual alteration. Then think of that open-ended text on the Internet, or via email, proliferating, exchanged, reclaimed, democratized, appropriated" (25). What was previously not considered art – perhaps because it is reclaimed, remixed, improvised, or appropriated – is now art. News and entertainment now blur together, Hughes argues, as we witness real-life events like the Bill Clinton and Monica Lewinsky sex scandal follow movies like *Wag the Dog* (24). Postmodernity similarly embraces the

remake, which Hughes argues moves beyond form to "one motion" and a "limitless movement" in which fragments are continually re-utilized and no works are self-contained (185). All of these qualities of postmodernism are reflected in electracy; the move to a new apparatus requires a postmodern train of thought that values remixes, appropriation, and improvisation.

The move away from literacy and traditional composition is simultaneously spurred on a pair of "post" designations, including Dobrin's push for a reconsideration of the field as postcomposition. Dobrin argues that a focus on writing should be bigger than the students; we – composition scholars – currently focus less on writing and its theory and more on "how writers write" and issues of subjectivity (Dobrin 11). Disruption of composition studies is necessary because it marginalizes theory and inflates claims of the importance of classroom-based research (8). Postcomposition would question this exclusivity and challenge the "deep rooted conservatism" in writing studies, opting instead for a primary focus on writing and theory (19). Dobrin contends that emerging theories and alternate apparatuses have long been ignored as the field seeks to maintain the status quo. He writes, "Theories that have opened new frontiers for composition studies have been virtually shut down, appeased in assimilations that grind radical thinking and unprecedented thinking into impotent versions that safely fit within composition studies' established posts" (20). Dobrin's claims of "assimilations" and "impotent versions" are a major concern for integrations of electracy. As composition studies continues to obscure its "contingent borders" and not allow for nascent ideologies in postmodern

communication, literacy's privileged place in academia will remain as theoretical spaces for new apparatuses are never realized.

Postcomposition, with its move away from identity and subjectivity and its criticism of praxis in research, may seemingly be at odds with electracy, yet Dobrin's proposal shares much more in common with Ulmer's avant-garde approach than the hegemonic literacy. Ulmer's electrate apparatus explores the "contingent borders" not only of theory but also pedagogy. His post(e)-pedagogy approach for new media first appears in *Applied Grammatology* in 1987. Post(e)-pedagogy, also stylized postpedagogy, is not transmission of information from master to his or her subject "but a set-up of possibilities" for the subjects to construct knowledge, according to Yugoslavian art theorist Misko Suvakovic. Some of the key features of postpedagogy that demonstrate it as "unprecedented thinking" are its notions on the transmission of knowledge and the decentering of the teacher, lectures as open, performative art works or workshops, and delivery of the lecture situated in media and open to interaction with listeners (Suvakovic).

The interactive, collaborative, decentered transmission of knowledge is a common thread in poststructuralism and studies of digital, multimodal ensembles. A renowned Ulmer contemporary and advocate, Vitanza emphasizes this fragmented delivery as an "aleatory" (random) procedure. Vitanza's "From Heuristic to Aleatory Procedures; or, Toward 'Writing the Accident'" argues that rhetorical invention, especially stasis theory, is "being changed and, if not imploded, then dispersed" by Ulmer's heuretics and a focus on chance and accidents ("From Heuristic" 188). The impact of computers is undeniable, and Vitanza notes how they may facilitate

randomness (189). Aleatory procedures oppose tradition in the field, and as Dobrin argues, this "radical thinking" is "shut down." Vitanza adds that Ulmer's CATTt (contrast, analogy, theory, target, tale) antimethodology, which allows for aleatory practice, is "diametrically opposed to the academic protocol of writing (linear, hierarchical, cause/effect writing)" (195). Electracy and post(e)-pedagogy may open new forms of writing that allow for collaborative interactions between participants. Though ostensibly radical compared to the norm, Vitanza's aleatory procedure is a consequence of opening textual construction to all involved in an act of communication.

Barbara Warnick's "Looking to the Future: Electronic Texts and the Deepening Interface" labels hypertext as "writerly texts." Channeling Hayles and Barthes, Warnick describes writerly texts as "incomplete, plural, indeterminate" in nature (Warnick 328). Writerly texts, which often contain visuals, seek meaning-making from readers and hence could remain polysemous and random in their interpretations. Writerly texts are questionable in authorship since collaborations of many voices create a web of possible meanings rather than a singular message. Nearly 10 years earlier as the Internet was in its transition to a global communicative force, Doug Eyman argues for a vision of hypertext as collaborative, socially constructed meaning from diverse voices engaged in Bahktinian dialogue. Increased connectivity and access to networked classrooms facilitates dialogue and the emergence of interactive hypertexts, which are non-linear and open to many directions dependent on the reader – not quite aleatory, but certainly based on a degree of chance. Appropriation of content on the World Wide Web contributes to its

intertextuality, as evidenced in a collage assignment Eyman includes with his hypertext essay. The common threads in Vitanza's aleatory procedures, Warnick's writerly texts, and Eyman's vision of hypertext may be contributed to coincidence, shared scholarly influences, or perhaps just my own articulation of their disparate theories.

This literature review is designed as a series of "strands" converging with Ulmer's electracy apparatus and justifying its existence; this act of articulation follows Hall's cultural studies theory. A unity out of fragments, articulation is not straightforward or lasting but complex and temporal. Hall writes, "It is a linkage which is not necessary, determined, absolute and essential for all time" (Hall, *Stuart Hall* 115). The term articulation – in the British sense – is a connection between a truck and its load; the connection can be broken at any time (Hall, "On Postmodernism" 141). Hall adds, "An articulation is thus the form of the connection that *can* make a unity of two different elements, under certain conditions" (141). Articulation is a useful theory for describing the meaning-making thread common in postmodern and social epistemic views of communication. A writerly text like a wiki, for example, has undetermined authorship and many voices but we still have a unified text; articulation provides a framework for how writerly texts exist in brief linkages. Nathaniel Rivers et al. add that articulation "is used to address issues of authorship and … the mechanical practices of new media writing, [and] the pedagogical practices and assumptions at work in teaching new media writing[.] … The concept of articulation foregrounds connections rather than flattening them out" (Rivers et al). The connections built in a moment of articulation guide our electrate understanding of

associative image logic in choral thought. Electracy appropriates from Hall's theory of articulation.

Applications of articulation in electrate thought permeate new media studies. In *Writing New Media*, Johnson-Eilola and Sirc situate their essays within this framework. Johnson-Eilola, the more explicit of the two in his embrace of articulation as a theory for new media, titles his essay "The Database and the Essay: Composition as Articulation." Johnson-Eilola argues that we continue to teach writing as "linear streams" rather than as "developed intertextually from bits and pieces already out there" (Johnson-Eilola 200). Writing as articulation, a postmodern notion Johnson-Eilola admits, emphasizes contingent constructions that vary by time and context. This view of composition results in new understandings of intellectual property, an issue that will be explicated in Chapters 3 and 4 for my electrate Transduction relay and the assessment of works produced as remixes. Databases, much like blogs, are not unified in voice but "fluid and shifting," much like our identities (215). Johnson-Eilola echoes Eyman's view of hypertext as nonlinear and collaborative; software like ProTools promotes layers and loops rather than a singular narrative. Johnson-Eilola describes "a new sort of writing – composing processes … supporting work as experimentation, arrangement, filtering, movement, rehearsal, and reversal" (224).

Sirc similarly questions in "Box Logic" what occurs if compositionists move away from the linear form but his answer, informed by Marcel Duchamp, is a box. Students "collect" for their box, becoming curators, "suffusing the materiality of daily life with an aesthetic" (Sirc 117). This act of articulation moves even further away from the traditional academic essay or literate-based new media project toward a new

apparatus open to aesthetics and associative logic. Like Ulmer, Sirc highlights the importance of "mood" as the box collectors capture a vision or emotion from the fragments (121). Sirc notes the child-like wonder involved in this curation, quoting an article Richard Selfe collaboratively wrote with graduate students, "Don't suck the playful, exploratory spirit out of the digital media!" (qtd in Sirc 121). The "exploratory spirit" of the box collector evokes Berlin's expressivism and subscribes to Ulmer's playful approach to new media. Sirc, who describes himself as "convinced" by Ulmer's approach to new media, supplements his essay with exercises that fit in the electrate apparatus: serving as a DJ and juxtaposing image and text. Though it seems limiting and reductive, the box symbolically captures the essence of articulation; it collects various fragments and strands in a momentary image. The non-linear box contains a mood but has no real authorship; the curator only gathers fragments from many authors to create a temporary connection. The postmodern box is a visual that encapsulates the transition from the essay to the screen, from the narrative to the hypertext, from literacy to electracy.

Electracy Theory and Relays

"A barometer of force and cultural change, Ulmer has taken the very notion of creativity into the 21st century."

Darren Tofts and Gye, "Introduction" to *Illogic of Sense*

Though McLuhan's memorable 1969 pronouncement, "The age of writing has passed," suggests that the postmodern turn means an end to writing as the dominant form of communication and Johnson-Eilola argues that "[W]e're at ease with

postmodernism," little has changed in the composition classroom. Writing remains pervasive, and theories of articulation, writerly texts, postcomposition, and post-criticism are integrated in the classroom only by the avant-garde. Perhaps the fear of postmodernism parallels that of visuals in the writing classroom, or perhaps the lack of well-constructed, highly regarded praxis for a postmodern apparatus has led to complacency (as was the case for Writing in a Wireless World). In his works, Ulmer has bemoaned that scholars "have been slow to recognize the need for and to participate in the invention of electrate institutions" instead conforming "electrate technologies to the aims of literacy" (Santos et al). The nascent theory of electracy meets all of the common postmodern features – fragments articulated, indeterminate "writerly" texts, an embrace of chance and randomness – reviewed in the previous strand of this literature review. Electracy similarly fits Berlin's desired worldview for composition, according to Santos et al.:

> Ulmer's postpedagogical approach leverages personal experience against the social and material discourses in order to address the problems targeted by Berlin: how can teaching best improve the lives of our students and the problems of our society? By helping students to ask ideological questions and providing them a space to work out and share their answers. (Santos et al)

Teaching students to form thoughtful inquiries, however, requires a clear pedagogy. The much needed development of relays and courses firmly establishes the presence of electracy in academia as a suitable worldview. Additional relays and a functional, comprehensive pedagogy – from design to assessment – addresses the lacuna created

in the field of composition by the postmodern turn and the growing impact of computers, new media, and visuals. This section of the literature review offers a synopsis of electracy, from its inception in Ulmer's *Teletheory* to its influence on the Florida School and EmerAgency. After reviewing Ulmer's development of electracy, I will analyze how other scholars have advanced the apparatus, demonstrating the urgent need for an intensive pedagogy.

Electracy first appears (as "electronic cognition") in *Teletheory* as Ulmer seeks a rebuttal to Neil Postman's negative view of television as a legitimate area of study. The new cognitive model that Ulmer proposes utilizes videocy (video intelligence), conduction (image logic), patterning (focus on relations), and the mystory with a focus on affect and emotion in the designer/reader/viewer. This electronic cognition is possible because of advances in electronic technology, not including the soon-to-blossom World Wide Web (Ulmer, *Teletheory* 25). Rather than dismiss the logic inherent in new media forms, Ulmer embraces it as a fitting form of invention for our postmodern world. This logic of invention – euretics (later changed to heuretics in Ulmer's oeuvre) – utilizes patterning of fragments from different areas or discourses of one's image of wide scope to build the mystory genre, "always specific to its composer, constituting a kind of personal periodic table of cognitive elements" (vii). In the final section of *Teletheory*, Ulmer offers a relay of the assemblage mystory with his "Derrida at Little Bighorn" and throughout the text utilizes neologisms, puncepts, metaphors, and brief relays – all common tropes in his works – to attempt to encapsulate electronic cognition. The mystory – described by O'Gorman as "a discursive network (popcycle) of pop culture, critical theory, history,

and autobiography" – in particular is explicated ("From Mystorian" 61). This expressivist genre appears frequently in Ulmer's work as the key methodology for understanding one's fragmented identity, an activity maligned by Berlin and compositionists who embrace a New Rhetorician theory of pedagogy. Santos writes, "Given its emphasis on exploring the individual, and its interest in affect and emotion, the mystory celebrates some of the core elements of expressivism that Berlin vilified" (Santos et al). The voice of the author in a mystory, according to Ulmer, "derives from Freud's self-analysis" rather than the traditional, distanced analysis of academia (86). Feeling and discovery replace the literate emphasis on argumentation via syllogism. Ulmer, however, is clear that expressivist electronic cognition and videocy will not supplant or bring an end to literacy. He writes, "People will not stop using print any more than they stopped talking when they became literate. But they will use it differently – will speak and write differently within the frame of electronics" (Ulmer, *Teletheory* 2).

Five years later in *Heuretics*, Ulmer continues to call upon the works of postmodern vanguard artists and poststructuralist critics to develop the electronic apparatus in light of the explosion in popularity of the World Wide Web. Ulmer describes his logic of invention as "an 'experimental' humanities [that] appropriates the history of the avant-garde as a liberal arts mode of research and experimentation" and teaches alternate applications of theory (Ulmer, *Heuretics* xii). The avant-garde choragraphy, for example, accepts a set of definitions of a term – "a diverse body of information" – rather than one clear choice as has been popularized in dictionaries and the common perception of "definitions" (184). Analogy and chance inevitably

lead to repetition and as patterns emerge, an electrate invention emerges (8). Ulmer further distinguishes an "electronic style" of reasoning from traditional Western thinking – "the classic models of rationality" – by emphasizing memory, the unconscious, and intuition via choral writing (37). Thus, the science-based model of inquiry and evidence-based argumentation dominant in literacy is disregarded and expressivist experimentation is favored. Ulmer notes, "Electronic learning is more like discovery than proof" (56). It is not until almost a decade later in 2003's seminal text *Internet Invention: From Literacy to Electracy*, however, that Ulmer puts a name to the "electronic style" that he had been fostering in earlier works: electracy.

In the preface to *Internet Invention*, Ulmer immediately defines electracy in the context of pedagogy. Without a clear methodology for teaching new media, Ulmer has adopted electracy for courses ranging from freshmen to graduate students (Ulmer, *Internet* xii). Throughout the text, he realizes the theory of an emerging apparatus within instruction, anticipating the blending of theory and praxis seen in *Writing New Media* and *Reading the Visual*; each chapter contains a series of brief exercises and "office hours" to supplement the thorough widesite assignment designed via the mystory methodology. These electracy applications guide potential advocates through the popcycle, the "ensemble of discourses into which members of a society are interpellated" (24). These institutions include family ("fundamental to one's identity"), community/history (the "logic of the [popcycle] curriculum is cultural literacy"), and entertainment ("hails one into commodity capitalism as a consumer") (25). Career/discourse is considered a fourth institution in some of Ulmer's work but is not explicitly listed in *Internet Invention*. Egents, those who

discover their image of wide scope to enter the EmerAgency, Ulmer's fictional consulting agency that explores community issues through electracy, attempt to piece together fragments via memories and research to manifest patterns. These revelations in the image of wide scope Web site – strands in a moment of articulation – converge to develop a mystory "felt." Ulmer replaces text, which derives from textile, with the entanglement-themed felt for image-based works because the term better captures the emotional quality of electrate composition (35). Using the image logic of conduction in the generative heuretics, egents rely upon relays such as haikus, Elvis, and Xanadu to understand electrate felt composition via "moods" (such as brevity of Web writing in haikus) and uncover emotional pricks, or what Barthes calls punctum. Ulmer writes, "[T]he power of the photograph to stimulate involuntary personal memory is the point of departure for an electrate institutional practice" (44). The punctum sting leads an egent to an epiphany about his or her identity, which is revealed in a "fragmentary, encrypted, indirect manner," located within interpellation (155). These emotional pricks may be hidden in one's unconscious, memories not considered for many years. For example, Ulmer offers a brief exercise to put into epiphany form a memory from personal experience utilizing sensory description to encounter that memory (63). The mystory maps one's "natural standpoint" from these memories and is attuned to emotion and mood the same way literacy is focused on the analytic (68).

Internet Invention is centered on three hypotheses: paradigmatic problems structure disciplines, so our consumers must become producers; the wired culture of digital natives is "creativogenic;" and the Internet is an ideal place of workshopping images of wide scope via electrate tools of reasoning (5-6). Ulmer continues the use

of one of those tools, choragraphy, which he describes as his "proposal for a hyper-rhetoric in which chora rather than topos is the kind of space used as a metaphor for the places of invention (for the storage and retrieval of information in electracy)" (101). Image chora allow for multiple definitions of a term, highlighting the fragmentary nature of electracy. These fragments play a similar role to a paragraph in literate practice, according to Ulmer (113). He adds, "Assemblage produces coherence neither through argument nor narrative … but through image" (113). Though generation of electrate image-based composition may seem challenging to those unfamiliar with his vocabulary or postmodern notions of articulation and writerly texts, Ulmer eases the transition to his expansive mystory project with over a dozen brief exercises. Ulmer emphasizes that the activities are "stated in simple terms," often one or two sentences, and "may be supplemented and elaborated upon as needed," much like all of electracy because of its open call for further invention (9). One of the exercises in the entertainment institution is to recall a movie or TV show narrative that one remembers from his or her youth and then re-watch it to see how accurately it was remembered. This practice stresses the structure of narrative and the importance of memory exploration in electracy. The exercise similarly suggests that images and video require intense scrutiny in the same way the verbal does. Ulmer writes, "Pictures, like words, must be actively read" (132). Once the vision quest for an image of wide scope is completed in the mystory, an egent has transformed from anelectrate to electrate. Ulmer ends *Internet Invention* with a preview of his next major assignment: the MEmorial.

In 2005's *Electronic Monuments* and 2012's *Avatar Emergency*, Ulmer further develops electracy in its exploration of the digital self and subjectivity, the emotional impact of loss, and the influence of networks. *Electronic Monuments* is centered on a hybrid assignment – the MEmorial, with the "ME" prominent to highlight a personal connection to a digital monument – that according to Ulmer "is intended to be to the networked classroom what the argumentative issue paper is to the literate classroom" (Ulmer, *Electronic* xiv). The MEmorial recognizes the power and growth of the Internet as "the prosthetic unconscious of a virtual America becoming global" and thus the Internet becomes a public sphere monument to our national identity (115). The assignment then becomes an "identity experience," personally and collectively, for egents as they memorialize what is lost in a disaster (115). Monuments and mourning "define a community" and thus an electrate immersion into a disaster – not necessarily 9/11 but any event that has led to mourning in a community – serves as the centerpiece for the assignment and the text (xxxiii). A MEmorial takes the form of a "collage of assemblage, a series of associated fragments, connected by the repetition of certain signifiers and themes," almost identical to the formation of a mystory via articulation (118-119). The MEmorial begins as a proposal but then is split into a peripheral and a testimonial as the egent's identity is shaped.

Avatar Emergency deepens the electrate sense of self. Ulmer's sense of avatar closely resembles Donna Haraway's posthuman cyborg, not a singular self but analog and digital fragments uniting momentarily (Santos et al). Avatar, according to Ulmer, "is to electracy what 'self' is to literacy, or 'spirit' to orality" (Ulmer, *Avatar* x).

Thus, the mystorical realization of self should be labelled as the development of avatar. Rapid advances in technology – from Internet speeds and interactivity to accessibility via mobile devices – complicate the generation of an avatar from diverse voices. Ulmer writes, "[T]he speed of our digital world has created a dimensional pollution, compressing everything into 'now'" (xiv). The goal of the egent is to utilize the theoretical pedagogy to prudently discover one's identity formation within the interpellating institutions and interfaces via flash reason and attention to aesthetics; the literate self does not disappear but is brought "into relationship with a new dimension of reality" (113-114). Ulmer relies again on analogy and memory in *Avatar Emergency* but does not incorporate exercises or assignments like he had in *Internet Invention*.

Some of the further developments of electracy take the form of scholarly articles, edited collections and book chapters, dissertations, and unpublished conference papers. This next section of the literature review will survey the additions, experimentations, affirmations, and relays in the electrate apparatus by scholars across the world. Their developments and innovations assuage fears of a lack of further development in electrate thought and illustrate its future in postsecondary education. Further applications in the form of pedagogy and applicable relays are later reviewed in Chapter 2.

An early Ulmer advocate, Hawk conducts in 1997 his own comprehensive mystory Web site project. Consisting of over 35 individual fragment Web pages, Byron's Bystory – a pun on his name – compiles early memories from growing up in Texas with an anti-authority, punk rock attitude to an interest in basketball, from a

study of his surname as symbolic to his nature to his interdisciplinary studies and interest in the study of pop culture. Hawk mixes thorough analysis of the mystoriography practice with memories and research for a project that he worries might bore his readers. “But that’s OK,” Hawk writes, “No one else is really going to be reading this. Ulmer’s mystory was never intended as a readerly genre. It’s meant to situate the writer’s specificity with a field of study. It’s meant for invention.” Hawk’s honesty about his readership (or lack thereof) may reflect a criticism of electracy as a generative “creative art” befitting elective courses and not a productive skill necessary for success in the work force, but the mystory serves only as one assignment for an apparatus continually being invented and revised. Further relays – particularly Arroyo’s participatory composition, Mauer’s lost data, and O’Gorman’s use of the mystory – demonstrate the importance of electrate thought in new media production. Hawk’s interest in electracy expands to his posthumanist text *A Counter History of Composition: Toward Methodologies of Complexity*, which similarly to electracy supplants heuristics for an alternate method and highlights the importance of experience as a springboard to finding patterns.

Other electracy advocates who have shared their experiences with the mystory assignment – both reflections and projects – include Luis Orozco and Gye. Orozco enjoys and appreciates the inventiveness and idiosyncratic, free-flowing associative nature of the mystory, especially compared to traditional academic arguments. What makes the mystoriographer unique from the traditional scholar, according to Orozco, is the “multiple enlightenments” and constant state of “becoming” as one realizes the logic of electracy (Orozco). In the search for “truths” and “selfhood,” one uncovers

that there is no static knowledge or unchanging self but only connections from articulations made between discourses in the image of wide scope. Orozco embraces the methodology of the mystory as it encourages him to think critically and search for patterns "as opposed to [literate] student passivity and the regurgitation of ideas" (Orozco). Orozco's ideological revelations illustrate the importance of the mystory project for composition students in a postmodern world.

Gye designs her own project "Halflives: A Mystory" to think through and perform electracy. Described as an "empowering" experience, Gye's mystory convinces her that though obstacles – fiscal concerns and time limits – exist to implement electracy and mystoriography in our classrooms, "it is time that must be found. The evolution of a new apparatus of electracy will proceed with or without our input" ("Halflives"). Gye offers extensive detail on all four discourses of her popcycle and the struggle to find a "middle voice" in writing intuitively. She declares, "[I experienced] moments of true pleasure when I stumbled upon unexpected links and directions" ("Halflives"). In later works, Gye continues to endorse mystoriography as essential to helping digital natives understand their subjectivities yet concedes that the mystory assignment could hamper the growth of electracy because "[t]he kind of writing that mystoriographical research produces looks suspiciously like art" ("On the Way" 5). To further promote the generative qualities of electracy as well as the importance of visuals and multimodality, Gye endorses remixes. The ease of developing a remix with our latest technology, as well as the familiarity of the practice in social media (e.g., YouTube, Vimeo, and Vine), illustrates that the remix is an easier entry into electrate pedagogy. Students are likely

to succeed in their remixes despite hesitations about the use of unfamiliar software. Gye notes, "[A]s arts and humanities students, they are often challenged by the use of technology but are often surprised by how readily they adapt to the challenge" (9). The remix teaches electrate principles of juxtaposition, appropriation, and imagery and functions as an ideal stepping stone assignment for instructors hesitant to immerse their students in the new apparatus. These experiences demonstrate the necessity of and potential for growth in electracy pedagogy, particularly in the mystory genre; other scholarship in the field builds upon Ulmer's theory and anticipates the expansion of electracy via relays.

Several collections of works inspired by or augmenting electracy theory have come to fruition in the past decade including a volume of the peer-edited cultural studies online journal *Rhizomes*, an AltX e-book edited by Tofts and Gye titled *Illogic of Sense: The Gregory L. Ulmer Remix*, and Rice and O'Gorman's published collection *New Media / New Methods: The Academic Turn from Literacy to Electracy*. The works in these texts range from explications of Ulmer's keywords and summaries of the Florida School's influence to unique relays (e.g., hip hop, ease, artistic inquiry) for advancing the theory and creative endeavors that resemble poetry more than academic writing. These scholarly conversations demonstrate that though the electrate apparatus is far from popularization in composition studies, a rhetorical parlor room conversation is underway and unique applications are emerging. *Rhizomes* contributor John Craig Freeman, for example, develops Imaging Place, a non-linear, location-based art project utilizing the virtual world *Second Life*. Freeman describes his project as "a user navigated, interactive computer program that

combines panoramic photography, digital video, and three-dimensional technologies to investigate and document situations where the forces of globalization are impacting the lives of individuals in local communities" ("Imaging Place"). Using choral composition, composing with all meanings, to tie together multiple issues in a region with its atmosphere, Freeman offers users an opportunity to experience an immersive documentary composed in electrate rather than literate thought.

In "Lost Data 2," Mauer turns to a different assignment in the apparatus to inform his study: the MEmorial. Mauer argues for a permanent addition to the National Archives in Washington D.C.: a virtual faerie ring of mushrooms to represent the decaying matter and the lost data each day on computers and the Internet. His initiative, the Mourning of Lost Data (MOLD) Foundation, promotes the significance of monuments in our culture to mourn what is lost in a "special kind of archive that makes possible the transformation of loss into sacrifice" ("Lost Data, 2"). Like the MEmorial, the MOLD project can "transform personal identities, social values, and major institutions," yet there is not much involvement because of fear of confronting death and loss ("Lost Data, 2"). Mauer contends that mourning is necessary in our lives, and thus projects like MOLD and the MEmorial belong in our classrooms. He writes, "Mourning transforms social and neural networks, allowing new meanings to flow in us and among us" ("Lost Data, 2"). In the same issue of *Rhizomes*, W.F. Garrett-Petts and Rachel Nash tackle artist statements and the disciplinary assumptions about research on the fine arts by non-artists. Garrett-Petts and Nash survey 4,000 North American visual artists and discover a "creative destabilization" of those assumptions when scholars from other fields are asked to

discuss visuals and artistic motives. Because of Ulmer's attention to visual arts, the act of conduction – "encouraging researchers to 'conduct' themselves by grounding their theories in that middle ground between disparate fields of knowledge and practice" – becomes a means of "reanimating" academic approaches to the arts (Garrett-Petts and Nash). Thus conduction becomes integral to interdisciplinary advances in visual studies as we begin to break the hegemony of print culture.

In *Illogic of Sense*, Ulmer's practice of pulling together disparate strands to advance his theory takes shape as scholars share immersive narratives and poetic language mixed with traditional theoretical research. Linda Marie Walker's "Surface to Surface, Ashes to Ashes (Reporting U)," for example, explores interfaces. Walker rhapsodizes, "The skin is our interface (the living tension between "an" inside and "the" outside); it is not considered a "surface" but a state, an organ, an envelope, a plane, a volume, a filter, a casing, a carnality" (Walker 30). Walker's relay demonstrates the creative potential within electracy to break from the traditional, stilted academic writing style that carries over from the literacy apparatus. Approaching the verbal as multimodal can result in an increased emphasis on aesthetics; writing in electracy then is not simply an exercise in appropriating the discourse of academia but rather a much more expressivist endeavor.

O'Gorman collaborates with Rice to edit a collection of essays titled *New Media / New Methods: The Academic Turn from Literacy to Electracy*. These essays develop keys to the language of the electrate apparatus, advance pedagogy with clipography and hypericonomy, and add relays built on the concept ease and the outrageous funk music. These essays indicate the growth of electracy as an adopted

theory and preview further developments in electracy pedagogy. In their essay "Getting Schooled: Introduction to the Florida School," Rice and O'Gorman review the key concepts of the self-named Florida School, which formed out of pattern recognition in the new method of criticism (7). The commonplace terms are listed alphabetically to "embrace the fragment as a rhetorical gesture found in poststructuralism and in new media work" and each contains a brief recommendation for incorporating the concept into instruction (7). Rice and O'Gorman review some of Ulmer's familiar language (i.e., chora, fragment, legacy, mapping, remix) while adding electrate terminology that appears less frequently in his work (i.e., ABC, hypericon, transparency, schizophrenia, writing). Their choral definitions elucidate otherwise challenging concepts, perhaps offering new electracy adopters a glossary of sorts. For example, the ABC entry describes the organization of content as lacking a hierarchy in favor of "fragmented observations" so that an egent learns to "think associatively in place of syllogistically" (8). Rather than rely on analogy like Ulmer, Rice and O'Gorman state directly the reasoning for each concept within electrate thought. For the remix entry, they address the reader in imperative form as if she were being schooled in the Florida School methodologies: "Stop thinking of media in terms of permanent and stable production. … Place yourself outside of the authorial concept and allow yourself to become a media-being, one who is a remix as well as remixes" (14). The instruction component of each item varies from clear direction (e.g., use puns and neologisms to understand legacy) to jarring (e.g., use maps instead of drawings and photos to understand schizophrenia), yet each guides the reader to further understanding of the methods essential to electrate thought.

Further relays, electracy adoptions, and pedagogical experimentation reviewed in depth in Chapter 2 highlight both the excitement and creativity of Ulmer's advocates to advance the apparatus and the scarcity of curricular implementations, particularly for undergraduates. The changing needs in higher education – particularly in composition studies – signal more than just a trend toward new media and multimodal creation in the age of computers; the postmodern turn toward articulation and associative logic necessitates adoption of a new apparatus of communication. Development of an electrate curriculum – from relay objectives and assignments to assessment criteria – will modernize the composition classroom, benefit digital natives as they become "homo sapiens digital," and further Ulmer's predicted transition from literacy to electracy.

Chapter 2: Background and Justification

The National Council of Teachers of English's "NCTE Framework for 21st Century Curriculum and Assessment," updated in February 2013, establishes standards and guidelines appropriate for the pedagogy of literacies rapidly evolving due to modern cultural and technological forces. The guidelines are intended to inform English composition and literature instructors in reconsideration of course objectives, course redesign, and new course creation. Among its recommended framework elements are a proficiency in design, fluency in digital tools, skill in the composition of multimedia, and an ability to "manage, analyze, and synthesize multiple streams of simultaneously presented information" ("NCTE Framework"). Students who acquire these competencies can become "[a]ctive, successful participants in this 21st century global society," or what Prensky refers to as "homo sapiens digital" ("NCTE Framework"). Redesigning curricula and assessment criteria to meet the standards of the framework involves careful scrutiny and in-depth consideration of suitable objectives and content as well as an overarching ideology of modern communication. The NCTE's call to address the potential for student agency and citizenship in modern society via digital fluency and capacity to create multimedia is best answered by an altogether new apparatus of communication: electracy. Ulmer forefronts conduction (image logic) and facility with new media for students to think associatively and articulate strands of information – or experiences – in crafting avant-garde projects. In weaving together mystories, MEmorials, remixes, and other electrate multimodal works, digital native "egents" become aware of interpellating influences upon their subjectivity yet also gain increased agency and

creativity to think *through* new media rather than simply analyze it, to become the "active, successful [21st century] participants" that the NCTE encourages educators to foster. Ulmer argues that postmodern electrate theory facilitates "citizens to be fully empowered as native producers of digital texts" in public and private realms, thus obtaining the competencies standardized in the NCTE framework (Ulmer, *Internet Invention* xii).

In Chapter 1, I reviewed how electracy ties together several movements in and outside of composition studies: the integration of computers in the writing classroom, the recognition of a transformation in students' worldviews as they increasingly become digital natives, greater awareness of analyzing and creating visuals and multimodal ensembles, the influence of new media on writing and communication, and a move toward postmodernism and articulation as framing ideologies. Ulmer's emerging electracy theory is not simply computer or digital literacy, nor is it an enhancement to current literate practice. Rather, electracy is a much larger paradigm shift suited for communication native to the Internet; this new media apparatus reflects the changing needs of composition studies in the digital age (Ulmer in Rice xi). Arroyo argues that electracy is a cultural transformation that is and has been underway: "[E]lectracy is buzzing all around us; it is not something that we call up when we turn on our computers or mobile devices and shut down when we power them off" (*Participatory* 5). Electracy offers a different worldview than literacy, and becoming attuned to the "buzzing all around us" in the new scholarly poetics can result in a "fully empowered" digital generation who can take advantage of the

affordances of new media. The ideal undergraduate English composition curriculum by NCTE standards will blend writing and new media – literacy and electracy.

Teaching electracy alongside literacy will greatly benefit our digital native students as the skill set necessary for effective Internet communication, increasingly vital to the workforce and potentially fundamental to one's postsecondary education, evolves. Ulmer repeatedly contends that electracy will not supplant but rather supplement literacy to highlight the features of the apparatus and create well-rounded "egents." Literate skills such as research, argumentation, analysis, and essay composition remain highly valued and important in the 21st century just as orality remained essential during and after the transition to a literate world. Certainly literate practice informs much of what is required in completing a mystory or MEmorial. Electracy pedagogy juxtaposes new methods and assignments with those of literacy and promotes active and collaborative learning via creative discovery by students who are not reliant upon a "sage on the stage" instructor for knowledge transmission (Ulmer, *Internet*). The result is "homo sapiens digital" with proficiency in producing new media, video, Web sites, and multimodal ensembles through appropriation, remix, and choral thought with a multiplicity of meaning. Electrate skill in design, digital tools, multimedia composition, and articulation of information into what Ulmer calls felts is or will be necessary in most fields of study. Ulmer writes, "The future of academic writings [sic] depends on learning to articulate words with images, verbal with visual knowledge" (Ulmer, *Electracy* 15). The NCTE's desired curricular design strategies for the development of composition in electronic spaces reflects the changing needs in higher education as school and Internet become one in the same

(Arroyo, *Participatory* 7). As seen in Chapter 1, an influx of courses, textbooks, conference presentations, listservs, Web sites, and journal articles on digital composition, new media, digital rhetoric, and praxis of each illustrates widespread acceptance of NCTE's premise of writing's evolution toward new media and a scramble to adapt the composition classroom for the needs of our digital natives.

Further disciplinary confirmation – and simultaneous hesitation – of the profound impact of technology on writing is provided by The Council of Writing Program Administrators (WPA) in its July 2014 "WPA Outcomes Statement for First-Year Composition 3.0." The WPA Outcomes Statement identifies elements of design, video, and images "intended for screens" as part of the "complex writing processes" included in its definition of "composing" ("WPA Outcomes"). Writing, then, is as much about designing visuals and synthesizing fragments in various modes as it is competency in communicating the verbal. Though it downplays the recency of the impact of the digital and new media on writing for first-year students, the WPA acknowledges, "digital technologies are changing writers' relationships to their texts and audiences in evolving ways" ("WPA Outcomes"). The evolution of communication with technology is acknowledged, however the impact does not carry over to the WPA's key outcomes: rhetorical knowledge; critical thinking, reading, and composing; processes; and knowledge of conventions ("WPA Outcomes"). These anticipated outcomes when juxtaposed with the NCTE's guidelines and the deluge of scholarly work on digital writing and communication are remarkably conservative. The reluctance of the WPA to incorporate multimedia and design guidelines and the decision to stay grounded in current-traditional literate principles carries over to

praxis. Undergraduate writing courses – particularly at the first-year level – in postsecondary institutions have increasingly incorporated social media, wikis, and visual rhetoric but nearly all remain rooted in literacy, stressing traditional writing assignments rather than new media production and not allowing for Yancey's "Writing in the 21st Century" call for innovative digital and networked models of writing to come to fruition. First-year composition courses are stuck in the early stages of transitioning from literacy to a literate-electrate model that incorporates multimedia fluency. Perhaps we are not "at ease with postmodernism" as Johnson-Eilola argues (199).

This reluctance could be due to conservatism of the field or a lack of courses (and relays) incorporating electracy. In chapter 1, I reviewed Dobrin's contention that composition studies is among "the most conservative fields in its willingness to explore its contingent borders" (20). Dobrin adds in *Postcomposition* that the "contingent borders," where electracy resides, are marginalized for being too theoretical and thus are assimilated as "impotent versions that safely fit" in the established field (20). Certainly the WPA "Outcomes Statement" exemplifies a conservative approach as new media is neglected as a key principle and all multimodal, digital work "intended for screens" are considered part of "writing processes" rather than an emerging new apparatus of communication. An earlier version of the "Outcomes Statement" in 2008, as Kate Hanzalik notes, situates technology as a tool for writing rather than integral to the process of composition, further illustrating the subjugation of technology in composition studies by the WPA (Hanzalik).

In her text *Experimental Writing in Composition: Aesthetics and Pedagogies*, Patricia Suzanne Sullivan echoes Dobrin's sentiment and recognizes that experimental and avant-garde communication is often dismissed. Sullivan writes, "Historically, rhetorical education has preferred tradition over innovation, continuity over discontinuity, dominant discourses over emerging discourses" (3). It is undeniably easier to sustain tradition and continuity even in spite of widespread scholarly interest in digital composition and new media. Perhaps the conservative approach by organizations like the WPA toward radical solutions like electracy has resulted in the dearth of applications and courses. Few electrate courses exist, and most that are taught are not designed for undergraduate students. Later in this chapter, I show the potential for electracy praxis by reviewing the many electracy relays that have been created by the Florida School and other adopters but also highlight the lack of undergraduate electracy courses. Ulmer insists that electracy is an open call to invent and build upon, and my goal is to accept his invitation.

This chapter justifies the development of an electracy curriculum for the modern undergraduate writing classroom through relay modules designed for the Virginia Community College System. I utilize the six journalist's questions (5 W's and 1 H) heuristic as an organizing principle for the chapter to demonstrate the necessity of electracy in postsecondary education and set up chapters 3 (my three proposed modules) and 4 (assessment criteria). First, I answer *why* electracy needs to be taught alongside literacy for the current generation of digital natives. I will review how Ulmer's apparatus fosters the NCTE's 21st century competencies and why it should be considered as fundamental in a postsecondary education despite various

criticisms and concerns. Next, I will explain *who* the target audience is for electracy pedagogy as well as *where* and *when* it should be implemented. Though most current electracy courses are designed for graduate or advanced students, Ulmer contends that his theory suits the undergraduate classroom; I analyze how the VCCS student population – and infrastructure – is ideal for an experimental joint literacy-electracy course that can later be transferred to other institutions. To explain why a curriculum is necessary, I illustrate *what* applications in the form of relays and courses already exist. The final sections show *how* the electracy curriculum will be designed by examining research on curricular design and similar module development by Serafini and Wysocki, et al. The transferable, non-proscriptive modules will be outlined for key components essential to sound and responsible integration in an undergraduate writing curriculum. A theoretically sound process is essential to the success of a curriculum, and a template for relay modules will ensure electracy is carefully integrated (Gardiner).

Why Electracy Pedagogy?

The influence of computers and new media on modern society is undeniable. Most industries rely heavily on digital interfaces and the Internet for everyday business, finances, security, and communication. Social media like Facebook, Twitter, and YouTube have permeated the vast majority of households and our synchronous connectivity with others across the world has evolved from audio (phone calls) to video (FaceTime, Skype) and virtual worlds (*Second Life*, *The Sims*). Hayles contends that literate practice, specifically how we read, has changed as our brains have been re-programmed to browse quickly for items – verbal and visual – of

interest (62). The co-evolution of humans and technology – technogenesis – has resulted in an increasing dependence upon our mobile devices and laptops. Some scholars even argue that digital devices have become prosthetic extensions to our bodies (Thurlow xxv). Yet a potential pitfall for compositionists integrating technology in the classroom is to expect the digital tool – whether hardware like iPads or Web sites like blogs and wikis – to facilitate and enhance 21st century writing simply by its presence. This fallacious reasoning results in static, current-traditional instruction and a lack of desired results. Carolyn Handa writes, "[I]nnovation cannot come from simply adopting a new technology; rather, a new pedagogy must be developed" (169-170).

The "new pedagogy" necessary in the age of technogenesis has been welcomed and recommended by the NCTE and Yancey in her "Writing in the 21st Century" call for inventive new curricula. Most modern composition, however, remains traditional literate practice designed in the pre-Information Age. Students compose and analyze essays much as they have for hundreds of years; the technology simply assists in the process. In his keynote speech at the Information Architecture Summit in 2009, Michael Wesch proclaims that the proliferation of technological advances has accomplished much more than simplifying everyday activities. Wesch states, "[T]his is not just a technological revolution. This is a *cultural* revolution" (Wesch, emphasis added). Innovative praxis for new media needs an overarching theory that sufficiently addresses the "cultural revolution," and Ulmer's electracy is the most suitable. Its paradigm shift from literacy demonstrates that our way of thinking in the digital age is evolving.

With no consensus on the most effective new media pedagogy, Ulmer's electracy has gained traction as a post-literate alternative that allows for "new possibilities of thought manifested in electronic technology" (Ulmer, *Heuretics* 17). The nascent apparatus reflects our postmodern culture and embraces the associative, random logic and multimodal nature of new media. Electracy answers the NCTE calls for innovative pedagogy, WIDE's desire for digital writing, and Dobrin's push for postcomposition. Ulmer embraces the cultural revolution and identifies French critical theory as the impetus for the paradigm shift. In an interview with Alan Clinton, Ulmer notes how the avant-garde arts and Derridian philosophy share a common influence while composition "pedagogy has not followed this transformation" (Ulmer, "The Genealogy"). Electracy can be viewed as a poststructural theory that acknowledges the influences of the artistic and philosophical revolutions parallel to the rapid advances of technology. In *Heuretics*, Ulmer adds that "hypermedia 'literalizes' poststructuralist theories" (21). The result of this literalization is a form of communication that values associative logic over argumentation (Ulmer, *Heuretics* 18). In a review of *Heuretics*, Vitanza writes, "Ulmer's is not a conventional argumentative thinking and writing; his is a grammatological approach to thinking and writing, which emphasizes picto-ideogrammatic, aesthetic representations. Writing intuitively [sic]" (Vitanza, "Writing"). The emphasis on visuals and aesthetics suits the multimodal nature of new media and shifts the purpose of writing from instrumental to artistic; Ulmer's non-conventional approach results in the need for innovative pedagogies. Electracy theory, which is not synonymous with media literacy, is less about learning with new

media and more about learning through new media. In an interview with Sung-Do Kim, Ulmer notes, "The point is not to write books about media, but to perform learning and inquiry using media technology" (Ulmer, "The Grammatology" 141).

To achieve the innovative electracy pedagogy fitting for the technological and cultural revolution, the transition from literacy to electracy must be bridged. The transition, according to Ulmer and his advocates, has already been underway for decades; realizing electrate logic in the classroom, however, has not. But Ulmer does not seek an entirely new field of study. Rather than ultimately supplant literacy, electracy is designed for juxtaposition, much as history shows literacy grew alongside orality. Ulmer adds, "[I]t may not be possible, or even desirable, to shift completely to a postmodernized pedagogy. The textshop [electracy], rather, may serve as a supplement to current practice. Indeed, part of its effectiveness depends on its juxtaposition with conventional approaches" (Ulmer, *Electracy* 32). Ulmer's own courses reflect this ideology as he requires writing (i.e., e-mails, reflection, and many aspects of the mystory and MEmorial) alongside new media production. Pairing new media with writing in a collaborative setting benefits students who struggle to appropriate the discourse conventions of academic writing; electrate coursework requires students to "speak and write differently within the frame of electronics" (Ulmer, *Teletheory* 2).

A proposed pedagogical model by Ulmer that allows for a blend of literate and electrate practice and accommodates the cultural revolution to the digital age is post(e)-pedagogy. Ulmer describes post(e)-pedagogy as a "response to the electronic paradigm" that "deconstruct[s] the work/play, serious/frivolous opposition" (Ulmer,

Electracy 41-42). The (e) that Ulmer interpolates in postpedagogy, only sometimes used in electracy scholarship and thus seen as optional, represents a new form of pedagogy that is prepared for the digital age (Ulmer, *Electracy* 17). In a post(e)-pedagogical classroom, students are free to explore potentially illogical connections and "play" whether in video games or exploratory media. Arroyo adds that post(e)-pedagogy focuses on making connections between disparate fragments that might seem irrational for the literate classroom (*Participatory* 102). In Chapter 1, I reviewed how Suvakovic describes the break in post(e)-pedagogy from traditional notions of knowledge transmission from teacher to student as collaboration and decentralization of the teacher are highlighted. Suvakovic and other European experimental art theorists practice post(e)-pedagogy to foreground invention and creativity. Though postpedagogical instruction appropriates from Vitanza's aleatory methods, it "does not simply mean 'anything goes' in a sort of wild, anarchistic fashion" (Arroyo, *Participatory* 120). Students generate ideas through imagery (conduction) and consider choral thought (multiple meanings) rather than traditional solitary definitions. Because of the importance of choral thought and collaboration in the postpedagogical classroom, authorship and textuality are viewed as open and indeterminate. Linear texts are replaced by the nonlinear, associative nature of hypertext. Yet literate analysis, brainstorming, reflection, argumentation, and narrative are all utilized in postpedagogical classrooms to help guide the transition to electracy via juxtaposition or as familiar modes to supplement electrate instruction. Examples of successful postpedagogy appear later in this chapter.

Ulmer's postpedagogical work, despite widespread praise from advocates in the Florida School and postmodern theory scholars, is not immune to criticism. The radical, avant-garde nature of the associative logic in Ulmer's nascent theory prevents some from fully endorsing an implementation of his pedagogy, let alone understanding the theory. In an uninformed, scathing online article, Peter Wood, President of the National Association of Scholars and former provost of the King's College in New York City, considers electracy "yet another assault on the central place of reason and rational inquiry in the university" (Wood). Equating electracy with irrationalism, Wood adds, "It is the name that proponents of a new kind of anti-intellectualism have used to dress up slacker illiteracy and make it not just respectable but desirable" (Wood). In his attack on electrate thought, Wood takes issue with teachers as counselors rather than sage lecturers who are more informed and authoritative than their students and criticizes Ulmer's work as "incomprehensible meanderings" (Wood). Rather than engage Ulmer's work, however, Wood repeatedly acknowledges his source of information about electracy theory as its Wikipedia page and considers his personal use of a computer, a Google search, a Wikipedia article, and an image for the article as a display of electracy, a complete misunderstanding of the paradigm shift present in electronic cognition (Wood). Though Wood is likely not alone in his criticisms of electracy as irrational, his condemnation of the new apparatus seems highly ignorant and misguided due to a lack of knowledge about the theory. Electracy encompasses much more than facility with digital media, and Ulmer's work is far from anti-intellectual as he crafts rich theoretical arguments and regularly engages poststructuralists like Derrida, Deleuze, and Guattari. Reason is not

disregarded, and literacy is not replaced; instead, electracy channels one's ability to think associatively in a digital age as a skill that complements aptitude in literate research and inquiry.

Other criticisms of Ulmer's work, particularly with electracy pedagogy, are far less scathing but much more informed and reasonable. In a review of *Internet Invention*, Jenny Edbauer writes, "I fear that its [electracy's] squeals, stammers, and uncoordinated leaps will scare away many instructors." The "squeals, stammers, and uncoordinated leaps" Edbauer senses include having only one assignment (mystory) in the text and many dense analogies and relays. Despite anticipating problems from the "radically inventive" nature of electracy, Edbauer notes that the pedagogy could be functional in first-year composition courses. With a well-constructed and clearly coordinated curriculum as well as further relay development, electrate instruction could succeed in introducing digital natives to the new paradigm of associative logic. Edbauer, however, belongs with Ulmer in the minority of those who embrace the potential for electracy in first-year composition. A comment by Brian D. Hohmeier, a theological educator, on the Amazon.com page to purchase *Internet Invention* disagrees with Edbauer's sentiment. Hohmeier writes, "I find Ulmer's theories to be convoluted and overly ambitious. … [D]espite his insistence, this is not an undergraduate (and certainly not a first-year) text. … Such an idea seems preposterous." Hohmeier's position reflects a popular sentiment that Ulmer's work is perhaps too theoretically advanced for undergraduates; even Ulmer's advocates who have taught his work are clear that his work is "theoretically complex" (Brooks).

Santos et al. describe the difficulties faced in developing mystory projects as multifaceted. Electrate jargon, confusing assignment specifications, the depth and frequency of theoretical references, and the ambiguity of a transformative moment are cited as challenges (Santos et al). The aleatory nature of electrate logic certainly results in ambiguity and confusion as egents discover their punctum – an emotional sting that impacts one's memory – and other revelations by accident. In Chapter 1, I revealed the influence of Vitanza's aleatory methods on electracy; Ulmer embraces this postmodern approach as computers enable randomness and associative thinking (Vitanza, "From Heuristic" 189). Vitanza shows no surprise that compositionists reject aleatory logic: "Members of composition studies generally view [aleatory methods] as foreign, poststructuralist, or too ludic, and therefore having less value to a field that aspires to be a discipline" (186). The "foreign" nature of avant-garde, aleatory thought is similarly jarring, at least initially, for students of all levels. Brooks, who explored the MEmorials in a 2008 graduate course, found that *Electronic Monuments* was "met with resistance" because of the difficulty of the text and the project – without a clear fit in a curriculum – was not feasible in eight weeks or even a full semester. Brooks adds that Ulmer's *Internet Invention* mystory assignment, "to some, seems like self-indulgent new media expressivism" (Brooks). Santos and Brooks echo the sentiments of many electracy opponents who feel a new media paradigm shift is cyberbolic as literacy continues to function effectively in postsecondary education (Woolgar 9).

Despite some criticism and difficultly implementing the theory in the classroom, electracy remains a viable option for the postmodern composition and new

media classroom because his open invitation to continue inventing electracy allows for revisions, modifications, and (fittingly) appropriations and juxtapositions. Santos, Hohmeier, and others could potentially select alternate readings – or brief excerpts from Ulmer's texts – and opt to teach simplified electrate relays to convey the same concepts just as Brooks could modify the MEmorial assignment as Santos had so that it fits a six-to-eight week period. Both Santos and Brooks, in fact, find many successes in their initial electracy implementations that overshadow their criticisms. Santos et al. observe that listening and feeling, not heavily weighted in literacy, are fully realized in the electrate apparatus. Every participant who created a mystory Santos's the class, for example, experienced an "aha" (or "eureka") moment from the punctum sting (Santos et al). Kristen N. Gay shares that the introspective mystory "works to break us" in a way that standard writing assignments cannot, adding that the mystory is well worth the anguish felt. Santos et al. affirm that students may need a safe space because of the intensity of emotional responses to their findings; they write, "Not every student will dig as deep as Gay … but all will likely encounter something unheimlich [uncanny] that disequilibriates them" (Santos et al.). This emotionally powerful response is precisely what Ulmer aims for; students learn the ideological aims of electracy through immersion in a disorienting self-exploration. Reaching an "aha" moment of anguish in a felt – an appropriate pun for electrate texts – allows an egent to discover her identity and agency in a way not possible via literacy. Santos et al. conclude that the postpedagogical mystory is intensely challenging but encourage further exploration of the assignment by other scholars because of its liberating qualities.

Brooks's students – referred to as Virtual Gardeners – do not report the same epiphanies experienced by Santos's class, but their MEmorial projects were impactful nonetheless. Brooks observes in the reflections of his Virtual Gardeners an appreciation for the assignment because of its distinctive genre and venue, real world audience, and potential for activism. Erik Kornkven praises the MEmorial design: "If we as educators do wish to use activism in our classrooms we must allow that activism to germinate within the psyche of our students, and not be placed there based on an educators [sic] agenda" (Brooks). Brooks finds that despite initial resistance to Ulmer's dense text, his students realized its value once they trusted the process of electrate invention. Because of the potential for the assignment and the enthusiastic student response, Brooks acknowledges that he plans to "linger and explore the genre further," a clear endorsement for further experimentation with electracy pedagogy in the face of much criticism (Brooks).

Who Is the Target Audience?

Despite claims of frustration and disorientation from Santos's and Brooks's students and repeated worries about the "theoretically complex" nature of Ulmer's new apparatus, electracy pedagogy remains ideal for the undergraduate writing classroom. Undoubtedly, concerns about teaching electracy to undergraduates – particularly first-year and community college students – are valid. *Internet Invention* and Ulmer's other texts are "theoretically complex" for advanced students, let alone the typical first-year student. Grasping complex theoretical concepts can be time consuming in any class. But Ulmer's open call for inventing the apparatus demonstrates flexibility for electracy praxis and the depth of theory taught via relays.

Ulmer contends that electracy can be taught to first-year students, and his Writing Through Media course carefully mixes electrate instruction (e.g., the multimodal image of wide scope Web site) with literate practice (e.g., e-mail brainstorming). Other relays reviewed later in this chapter demonstrate the potential for growth; Michael Jarrett's "rapsthetic" and Rice's "funkcomp," for example, highlight the principles of electrate thought through analogies that might be more easily understood by the target audience of first-year students. In electracy, new media creation is designed to be playful, so new relays can be less theoretically dense (i.e., reading and discussing all of *Internet Invention*) and more intensely focused on activities such as generating images and multimodal remixes. Crispin Thurlow and Kristine Mroczek argue that digital natives are crafty, and working with multiple modes of communication in a playful manner almost naturally leads to imaginative new media works. They note, "Herein lies much of the potential in new media for invention and creativity; time and again, research shows how users overcome apparent semiotic limitations, reworking and combining – often playfully – the resources at their disposal" (xxvi). The "reworking and combining" recommended by Thurlow and Mroczek is a key feature of the postpedagogical classroom as students remix and reappropriate fragments to discover new connections.

Students at the community college level are encouraged by Dagmar Stuehrk Corrigan and Simone M. Gers to playfully curate multimedia works and incorporate personal experiences. In "Across the Cyber Divide: Connecting Freshman Composition Students to the 21st Century," Corrigan and Gers argue that first-year and community college students must act like anthropologists, piecing together

fragments of various semiotic modes, to fully become empowered in digital spaces (172). Adding in an expressivist approach as Ulmer advocates in electracy facilitates the entry of students to academic discourse communities and builds scholarly interest. Corrigan and Gers write, "[A]s expressivist writers in electronic environments, they are given agency as to how they choose to represent themselves. … Though new to academia, academic writing, and electronic environments, students are often willing and excited by the opportunity to recreate or create self" (170). Electrate assignments like the mystory and relays like the "rapsthetic" and "funkcomp" can be demystified to help students enter an electrate academic discourse community.

Electracy pedagogy should be carefully and responsibly integrated in first-year and community college writing curricula because the skills learned are gradually becoming fundamental to a digital native's education. To effectively communicate in the Information Age, a student needs to hone her ability to creatively and collaboratively develop multimodal new media; electracy offers an appropriate postmodern framework for rhizomatic composition in new media. As electracy takes form in praxis, competencies in various modes as well as digital agency is possible. Ulmer's new apparatus promotes experimentation in digital spaces with multiple modes of communication. Letizia Guglielmo contends that an approach as such that blends written, oral, and digital rather than replacing writing with new media best "serve[s] students well in other courses" since the goal of a core course like first-year composition is to improve communication skills (24). WIDE echoes Guglielmo's sentiment in arguing for "digital writing" as a fundamental skill since "[w]riting is radically changed by internetworked computer technology." Teaching writing in the

same traditional model is a disservice to digital natives whose brain architectures have evolved via technogenesis. The blended mix of modes in electrate new media pedagogy translates to a digital fluency necessary in the 21st century job market.

The 2015 New Media Consortium Horizon Report for higher education, written in collaboration with the EDUCAUSE Learning Initiative, anticipates that in the next five years, creativity with new media will become an essential skill. Citing a Kennesaw State University report, NMC notes, "Understanding how to use technologies is a key first step, but being able to leverage them for innovation is vital to fostering real transformation in higher education" (Johnson et al. 24). The NMC Horizon Report similarly prioritizes blended learning and digital literacy and highlights the significance of "making complex ideas digestible for students" (28). If our goal as compositionists is to "transform students' whole world views," as Bizzell contends, then a primary goal of the 21st century first-year writing classroom should be to make electracy "digestible" so that digital natives can innovate with new media within the new electronic paradigm (387). Electracy builds digital agency and via assignments like the electronic memorial creates citizens of the electronic world, thus its importance should not be overlooked.

In praxis, electracy might resemble a blend of early childhood and advanced graduate student pedagogy, adjustable to any level of digital natives. Because Ulmer's emerging apparatus borrows heavily from experimental, avant-garde arts for its devices, such as collage and montage, Ulmer playfully compares electrate use of digital media to grade school instruction in an interview with Talan Memmott: "The kindergarten curriculum and pedagogy probably needs to be transposed to the high

schools, or at least that would be a shorthand way to suggest how schooling could become electrate" (Ulmer, "Toward"). Adapting the collage and cut-and-paste procedures would require more than sticks of glue and construction paper; electronic media, however, is just as easily reappropriated and remixed. The free-flowing, collaborative kindergarten classroom shares other postpedagogical qualities such as fragmented texts, a visual emphasis, and experimentation with grammar, and translating these electracy hallmarks into the modern undergraduate writing classroom fits the electronic paradigm. Patricia Suzanne Sullivan sums up arguments for experimental writing as non-normative and agency-building. Sullivan writes, "[With] 'freer' aesthetic space created by experimental and alternative discourses, students may be allowed to express their unique individualities, articulate marginal or underrepresented social realities, and/or critique the limits of dominant sociopolitical discourses and institutions that perpetuate these discourses" (2). The "freer aesthetic space" opens up a new set of possibilities for egents yet also poses an inherent challenge.

Operating outside of normative forms of writing and literate practice means leaving a comfortable academic discourse community and tackling difficult theory like electracy. Ulmer strongly suggests that his texts should be challenging for students. He writes that avant-garde texts and surrealism "stimulate resistance" in a necessary manner, analogous to how psychoanalysis leads to transference (Ulmer, *Electracy* 92). The experience of resistance intellectually then is desired by Ulmer as a stronger understanding is reached over time. The playful, kindergarten-friendly nature and "freer aesthetic space" of electrate pedagogy simultaneously speaks to our

inner child and tests our reading comprehension and critical thinking abilities. This type of challenge is ideal for today's digital native student but also for electrate instructors as they are tasked with "making complex ideas digestible for students."

Where and When Would the Electracy Curriculum Be Implemented?

Designing an electracy curriculum for a first-year writing classroom requires attention to many factors, including but not limited to, the student population, the course availability and transferability, the college's mission, the technological infrastructure, and the instructors. All prior adaptations of electracy pedagogy occurred in four-year colleges or universities, often at the graduate level. Yet for electracy to flourish as a fundamental theory in our postmodern world, its presence in the community college is essential. Shaping electracy praxis for open enrollment community colleges means simplifying the theories and relays to a degree while maintaining the features of the apparatus. Taking all of these factors into consideration, the VCCS is an appropriate setting as a starting place for the development of my electrate relays.

Electracy is not currently taught in the VCCS by any instructors. No courses – or units in a class – on new media or electracy exist in the VCCS master course list. No course prefix for new media or anything resembling experimental writing exists; the closest match to a form of new media pedagogy is Writing for the World Wide Web, which based on the course description ("Teaches students how to outline, compose, organize, and edit written materials for publication on the World Wide Web") and assignments is decidedly literate practice that more closely resembles early WAC courses than a postmodern postpedagogy. Digital storytelling and Web

site assignments, wikis, and blogs are taught by some instructors, and visual rhetoric is an important aspect of College Composition II though it is situated within rhetorical analysis rather than generative conduction or hypertext. Further evidence of the dearth of electrate practice in Virginia's community colleges is a close review of presentations at the yearly VCCS New Horizons interdisciplinary conference in Roanoke, Virginia, the biennial English and Humanities peer group meetings, and *Inquiry*, the annual publication of scholarship among faculty and staff in the VCCS. Only one presentation on electracy – my own in April 2015 – exists among the three statewide opportunities for professional scholarship among VCCS faculty. Peer group members from across the state generally claim a lack of awareness of Ulmer's theory in personal conversations, and it can be reasonably assumed from the lack of community college courses on electracy in other states that this ignorance is common.

The VCCS student population is wide-ranging, with nearly half (over 53,000 full-time equivalent – FTE – students of 116,249 total as of 2014-2015) enrolled at either Northern Virginia Community College in the affluent suburbs of Washington, D.C. or inner city Tidewater Community College ("VCCS Annual"). Smaller populations like Eastern Shore Community College (489 FTEs), Virginia Highlands Community College (1,614 FTEs), and Mountain Empire Community College (1,745 FTEs) target mostly rural students ("VCCS Annual"). In all, the VCCS serves 250,000+ students each year as 60% of Virginia undergraduate students are enrolled in community colleges ("Impact"). The open enrollment of the VCCS differs greatly from institutions with a lower acceptance rate such as the University of Florida or the University of Texas, where electracy is embraced in pedagogy; the students in the

VCCS, despite their academic promise, enter the community colleges generally less prepared for advanced theory like electracy. They desire a challenge though, and electracy can be adopted for a first-year level. VCCS students are also not any less technologically inclined than University of Florida or University of Texas students; most VCCS students enroll in distance learning via online or hybrid courses delivered through the Blackboard learning management system. In 2008-2009, 38.5% of students in Virginia's community colleges were enrolled in distance learning; in 2014-15, the number rose to 54.6% ("VCCS Annual"). Despite the diversity of students, many of whom at Tidewater are currently serving or formerly have served for the military, most seem comfortable operating in digital educational spaces, further evidence of Prensky's assertion that today's generation is digitally native and likely adaptable to new media instruction. Electracy could be designed for the VCCS student population, and if successful, Ulmer's theory would be transferable to the undergraduate writing curriculum at all institutions.

The VCCS and individual college mission statements demonstrate that this setting is ideal for innovating new media pedagogy and experimenting with skills increasingly essential in today's society. The VCCS's mission statement is simple: "We give everyone the opportunity to learn and develop the right skills so lives and communities are strengthened" ("Educating"). The simplicity of the mission statement allows for adaptability and personalization in each college; Tidewater Community College's (TCC) mission statement emphasizes "meet[ing] the changing needs" of students and developing "cutting-edge" programs ("Mission"). These mission statements, much like the VCCS strategic plans Achieve 2015 and Complete

2021, vaguely embrace innovative pedagogy while stressing affordability, access, student success, and workforce relations, yet the embrace of the statewide open educational resource (OER) initiative OpenVA demonstrates that "the right skills" for the "changing needs" of students is a major concern. The OpenVA initiative, now the Open Virginia Advisory Committee for the State Council of Higher Education for Virginia, was initially designed as a Z Degree (zero cost to students) by faculty at TCC to improve affordability of textbooks by offering open educational resources at zero cost in place of costly texts. The VCCS has embraced the movement as part of its mission and continues to offer funding and resources to further OpenVA's aims. Electracy might not receive the same enthusiasm and support, but if it proves valuable as a "cutting-edge" pedagogy, the emerging apparatus might be welcomed and promoted.

Potential concerns regarding the logistics of implementing electracy pedagogy within the statewide community college system include technological infrastructure and access, instructor training via professional development, and transferability. In "Building a Writing Intensive Multimedia Curriculum," Mary E. Hocks and Daniele Bascelli stress how indispensable a proper support infrastructure is to the success of teaching multimedia technologies in the writing classroom (41). This infrastructure includes the proper hardware and software to support graphic-intensive Web and video editing as well as reliable Internet connectivity for devices, well-trained and easily accessible support staff, extensively trained and prepared faculty, and an ample budget and funding for all of the above. The VCCS infrastructure is likely capable of handling an electrate classroom as the majority of the courses offered across the

state's community colleges are online or hybrid; however, infrastructures are not always predictable. Danielle DeVoss et al. add that the infrastructure for a larger institution – or set of institutions – is largely invisible; computers, monitors, cables, network configurations, and operating systems each establish affordances but also limitations to what can be accomplished in the new media classroom. The invisibility of the infrastructure means that problems could arise at any point for a new media classroom at one of the 23 institutions; well-trained faculty, however, could offer flexibility in a postpedagogical classroom should the technology fail.

The design of my electrate relays is module form, as will be discussed later in this chapter. Developing electrate relay modules allows for adaptability by faculty to any degree; one module could be carefully integrated into a composition course rather than a separate course or full immersion in electracy. Not all activities will require intensive computer fluency. The VCCS courses will, at least initially, remain literate with electracy juxtaposed; this eases potential anxieties about teaching a new apparatus and ensures courses are still transferrable to four-year colleges and universities. Over time, electracy pedagogy can grow from three relay modules to a full course or set of courses piloted at one institution, but the proper path for integration of postmodern new media pedagogy is through baby steps. The relay modules offer one non-proscriptive way into post-literacy, and a thorough review of existing relays – and the accompanying lack of courses – illustrates how a modular approach might be ideal as electracy continues to develop.

What Already Exists: Relays and Courses

In Chapter 1, I noted Hass's inquiries about how instructors are to "approach digital technology in a pedagogical manner." The next section of this chapter attempts to illustrate the widespread scholarly interest in cultivating and advancing the apparatus by reviewing the ample relays that capture electrate logic. Then, I offer an answer to the question "Why an electracy curriculum?" by showing the lack of pedagogical application of those relays, particularly at the undergraduate level. The few first-year composition applications and successful courses will be explored as models for developing my own electracy curriculum.

Ulmer's open invitation to invent electracy has resulted in a number of relays – non-proscriptive models for electrate logic that vary from hip hop and clipography to "ease" and "cool" – in scholarly articles and texts, including Tofts's and Gye's *Illogic of Sense*. These relays demonstrate the passion of electracy adopters to further the apparatus. Jarrett, for example, writes in a familiar style about hip hop music as a relay for electracy because of the prevalent use of "fragments appropriated from already made records" (Jarrett 73). Hip hop, originating in the late 1970's, is a compositional method for electronic culture, not the literate or ancient oral cultures (74). The widespread ability to remix and appropriate allows for trademark sounds and compositions that reflect the hallmarks of postmodern ideology. Jarrett contends that rap, which shares a history with rhapsodic orality, breaks from the traditions of popular music and analogizes its rupture to that of electrate writing from traditional, academic literate writing.

> Much of the work in freshman writing courses is devoted to crafting clear sentences, cohesive transitions between sentences and paragraphs, and coherent arguments. Popular music is hardly different. Studio wizardry – from tape splicing to multi-tracking to compositing vocals – aids and abets the creation of seamless products. Rap deviates from this venerated tradition by validating rupture, the performance that seems stitched together (whose seams show). Its break with music is as decisive as the break Picasso made with painting when he exhibited his first collage in 1912. The sonic productions of DJs … are not about masking or suturing seams. They are about collage or montage. They embrace a cut 'n' paste, rhapsodic aesthetic: a rapsthetic. (74)

Jarrett's fitting analogy illustrates the "electronic thinking" that results in Ulmer's *Teletheory* and the early iterations of electracy, as well as the effects upon popular culture. The "rapsthetic" utilizes many of the principles of Ulmer's electracy: experimentation, associative logic, appropriation, and juxtaposition. Its break from traditional pop music editing and composition is a teachable moment to students of electracy; the mystory, MEmorial, and other exercises from Ulmer and others practice heuretics, choragraphy, and conduction rather than heuristics, topoi, and syllogism.

Other works in *Illogic of Sense* demonstrate classroom application of electracy. Jon McKenzie constructs a project titled StudioLab in his undergraduate Electronic Performance class to collaboratively mix student acting performances with technological guilds, those with computer expertise who can record, archive, and

broadcast the performances (McKenzie 23). Their resulting projects in StudioLab are experimental inquiries into the impact of digital tools and the electronic zeitgeist on acting and performativity. McKenzie uses electracy as one of several theories informing his project; the multi-paradigmatic approach follows from Ulmer's choral thinking and demonstrates how electracy can function in a variety of courses (O'Gorman, "From Mystorian" 25). O'Gorman questions his own use of the mystory project for his E-Crit students and inquires whether he has become a curmudgeon. O'Gorman writes, "Is mystory just 'navel gazing?' … [Students] get mired in their own subjectivity, and produce work that is no more innovative than the nostalgic, self-explanatory essays encouraged in freshman composition classes" (61). In "From Mystorian to Curmudgeon: Skulking Toward Finitude," O'Gorman reviews his own history creating mystories and struggling as a non-artist in Ulmer's graduate seminar to come to the re-realization of the importance of the project (64). By way of his own self-doubt, O'Gorman acknowledges holes in electrate writing: nonlinearity masks poor writing, an inundation of autobiographical information overwhelms the reader/instructor, and the psychoanalysis ends up without any particular direction. Yet he finds that despite the befuddlement of his graduating seniors, "this assignment stands out as the one that had the greatest impact on their formation as media critics and designers" (64). The implied conclusion to O'Gorman's essay – and the message to future electracy adopters – is that disorder and puzzlement will reign when teaching electracy, but the results are worth the cost of confusion for digital natives. Students who engage in choragraphy, mystoriography, and conductive logic are breaking from their safe norm but gaining skills necessary for 21st century electronic

thinking. They are transforming from digital natives to "homo sapiens digital," as Prensky would argue.

Electracy pedagogy is further examined by Mauer and O'Gorman in their respective contributions to *New Media / New Methods*. Mauer's "Nietzsche at the Apollo: An Experiment in Clipography" introduces an assignment that answers the question, "[W]hat genres are appropriate for conducting humanities research and writing in electronic media?" (Mauer, "Nietzsche" 244). The neologism "clipography" functions as a research-based methodology for assemblage that forgoes traditional literate conceptions of authorship, originality, and stylistic cohesion for electrate-friendly sampling and collage. Clipography captures the essence of new media composition. Rather than hold on to "long-held assumptions about what constitutes good academic writing," Mauer promotes intertextuality (247). He writes, "Traditional academic writing stresses unity of style and the avoidance of ambiguity. By contrast, many media artists, including pop musicians, value polyvocality and open-endedness in their work" (249). The same applies for the open-ended nature of hypertext and wikis; in both digital texts, linking and collaboration result in uncertain authorship and polyvocality. Mauer offers step-by-step instructions for composing a clipography within the mystory genre; these helpful directions can serve as an alternate assignment for electracy curriculum development.

O'Gorman's "hypericonomy," on the other hand, is not as fully explicated as a functional pedagogy; instead, he offers a definition for the neologism and advice to his students. Hypericonomy, combining Mitchell's hypericon with Michel Foucault's networked thinking, emphasizes conductive logic and subjective motivation

(O'Gorman, "Hypericonomy" 92). A central concern O'Gorman suggests others face in teaching this method – or any within new media – is the rapid advances in technology. With each new version of software, iteration of an operating system, or nascent social network comes unanticipated changes that may render one's knowledge of the prior version archaic. O'Gorman recommends teaching students the basic concepts and leaving the advanced understanding for their own understanding: "[T]each students how to be digital dilettantes. … Their ability to independently learn 'enough to get by' in a given situation will in many ways determine their success as designers" with a constantly evolving new media (94-95). This hands-off, immersion technique of instruction reflects an alternative in electracy pedagogy to close guidance; like learning a foreign language, understanding electracy – and keeping up with new media – requires a dilettante attitude.

New Media / New Methods builds upon Ulmer's many relays with two especially noteworthy contributions: ease and funkcomp. In "Ease and Electracy," Dilger contends that the acceptance of new media in composition has been stifled by perceptions of its difficulty. Despite many attempts by composition scholars to demonstrate the complexities of writing and institutional concerns, "ease still enjoys tremendous goodwill in composition and writing" (Dilger 115). Writing is designed to be easy and appears to be a transparent process. New media, on the other hand, is viewed as complex and daunting. Dilger adds, "[N]ew media appear highly technological, dissociated from the tradition of the humanities, an intrusive and misguided attempt to replace poets and artists with programmers and algorithms" (118). To combat this misperception, Dilger proposes a gradation model in which

students produce new media with ease, seeing "translucent" software that hides code partially (129). Translucence rather than transparency gives an impression of ease but still allows for egent agency in human-computer interactions. The notion of promoting ease for new media informs my own relays; if electracy pedagogy is to be designed for undergraduate writing students, a translucence of the theory and assignments will help avoid the problems Brooks and Santos faced with their students. A translucent approach in an electrate/literate course that builds upon Writing in a Wireless World would help digital natives transition into egents with more ease than a full immersion into electracy.

Rice's proposal for merging new media with composition is radically different, or "funky." Instead of promoting ease, Rice seeks "What The…" moments of outrageousness. His relay for achieving these deviations is funkcomp, which appropriates the qualities of funk music for composition. Rice argues, "What rationality and logic were to literacy's need for definition and classification, outrageousness is to electracy's usage of funk" (Rice, "Funkcomp" 283). A highlight of funk music is the mood created, and as reviewed in Chapter 1, Ulmer argues that mood is central to narrative in electracy. Thus, producing funky language and seeking the outrageous leads to an emotionally-charged composition that features the "thang" (mood) rather than the "thing" (topic sentence) (282). Students in an electrate classroom aim to achieve a general mood through articulation rather than utilize heuristics to generate a thesis. Rice's seemingly unorthodox approach to writing and new media *is* orthodox in electracy. This relay demonstrates how Ulmer's apparatus requires an open mind to the needs of electronic thinking; it simultaneously poses

questions regarding the implementation of an electracy curriculum: What activities or assignments does one use to achieve funky writing and new media production? Are the "readings" the funky music of George Clinton or Prince? How is funky production assessed? These questions persist throughout the literature of electracy relays, but advocates like Rice and Arroyo bring us closer to a solution with their *Rhetoric of Cool* exercises and participatory composition, respectively.

In Rice's *Rhetoric of Cool*, a much more extensive relay than funkcomp is fleshed out to illustrate how the digital writer who becomes electrate is not just "funky" but "cool." A theory of digital writing – not THE theory of digital writing, Rice emphasizes – to be "cool" is to compose using specific practices in a digital environment (Rice, *Rhetoric of Cool* 6). Rice's relay reflects many of the principles of electracy but hones in on six specific concepts that represent "cool" writing: chora, appropriation, juxtaposition, commutation, nonlinearity, and image. A digital native who is able to compose with new media, therefore, relies upon "various overlapping, non-sequential strands that one does not choose among but composes with simultaneously" (116). The student avoids relying on commonplaces (topoi) but instead uses this "simultaneous" choral writing, which Rice argues updates the topoi for new media, to promote a multiplicity of ideas and articulation as a rhetorical strategy (33). Appropriation of material – particularly that of pop culture – and juxtaposition of text and images to highlight spatiality result in unique remixes. Commutation, "the exchange of signifiers without concern for referentiality," and nonlinearity of narrative result in openness of meaning, a sort of "writerly text" that Warnick witnesses in digital spaces that further allows for articulation (93). Rice adds

that images are "cool" but their production is dangerously underutilized in composition: "Writing is still a print-directed concept. Students write about images, but not with images. Students 'see' images but don't use them for generating new experiences" (140).

The ability to generate remixed images via articulation – and thus become "cool" (and electrate) – is a skill that is rarely cultivated in postsecondary education as it remains rooted in literacy. Rice's funneled down list of six "cool" concepts – four fewer than he and O'Gorman had compiled for their electracy terminology glossary – presents potential instructors of electracy with a less daunting point of entry than Ulmer's work. Rice's *Rhetoric of Cool* also presents some brief exercises to realize the concepts in a classroom setting. Choral writing, for example, can be achieved by assigning students to choose a term relevant to an area of study, locate all the definitions and related terms from other disciplines as well as the media (or uses in other classes in the same semester), identify patterns using Ulmer's eureka principle, and question how their approach and findings change their initial area of study (44). This choral definition activity fleshes out Ulmer's similar yet basic choral exercise in *Internet Invention* and demonstrates much overlap exists in different approaches and relays to teaching electracy. Rice's rhetoric of "cool" presents a clear, well-structured approach conducive to teaching new media in Ulmer's new apparatus rather than doing disservice to students by grounding it in literacy.

Another well designed and highly regarded new media methodology firmly ingrained in electrate thought is Arroyo's participatory composition. Responding to the rapid growth in popularity of video-sharing social network YouTube and its

accompanying tens of millions of original and remixed uploaded content, Arroyo modernizes Ulmer's early notions of "videocy" (video intelligence) in *Teletheory* to emphasize the connectedness and ease of becoming "prosumers" – producers and consumers – in participatory culture. In *Participatory Composition: Video Culture, Writing, and Electracy*, Arroyo weaves together key electrate concepts with postmodern notions of authorship, subjectivity, and pedagogy to argue that online video culture exemplifies participatory composition. Arroyo writes, "The commands of our online world relentlessly prompt participation, encourage collaboration, and quite literally connect us in ways not possible even five years ago. This connectedness no doubt changes college writing courses in both form and content, thus creating a wide-open space for investigating new forms of writing and student participation" (Arroyo, *Participatory* 1). This "wide-open space" in postsecondary writing is arguably informed by electrate thought. Arroyo encourages student invention via choragraphy and remixes to avoid commonplaces but instead question authorship and identity while developing new, exciting possibilities such as mash-up videos.

With subjectivity as the "driving force behind composing" in electracy, a reconceptualization of the writing subject for participatory composition as one who is engaged in media critique via memes, remixes, reply videos, video status updates, and comment conversations results in seeing "our students not as apathetic and disengaged, but as exemplars of our digital, YouTube moment" (35, 37). In an earlier essay for *Enculturation*, Arroyo and Geoffrey Carter describe the act of digital participation and contribution of materials to forge connections as "tubing," with the

tubes the video and the tubers the participants in the process (Carter and Arroyo). Arroyo notes that communication and "tubing" in electronic spaces like YouTube is not necessarily easier than in literate practices, but the abundance of possible associative linkages results in ample opportunity for connectionism between digital natives (*Participatory* 114). These unities forming an assemblage need not take place only on YouTube, though it serves as the primary medium for digital video culture; to train our students for participatory composition, simultaneous development of theory and praxis is essential. Arroyo supports continued invention and re-invention of "established genres" such as the mystory and MEmorial as well as new genres fitting nascent technologies and emerging dynamic spaces (121).

Successful examples of Arroyo's students overcoming the shift from literacy to electracy are included in *Participatory Composition*, and Arroyo fosters further conversation on the development of electracy pedagogy by publicly sharing her courses: Inventing the Electrate Apparatus and the Choric Arcade. These comprehensive Web sites serve both as instructional hubs for Arroyo's classes and invaluable resources for sample projects, background on electracy, useful links to software, discussion forums, and archives of completed courses. The discussion forums display Arroyo's interaction with her students as they attempt to engage electrate thought and participatory composition on social media. Student projects similarly offer a useful resource to those instructors attempting to implement electracy in the classroom; viewing how students articulate fragments into video projects gives insight into possible outcomes of an electrate relay in a composition course. This unrivaled, open access to electracy pedagogy as well as the accessible,

relatable nature of participatory composition (and tubing) as a relay for those new to electracy makes Arroyo's theory and supplemental materials ideal for adoption.

In his dissertation "Multimodal Composition and Electracy: Pedagogical Relays," Durst explicitly considers the implications of the emerging apparatus relays for classroom pedagogy. Durst's goal is to guide "other rhetoric and composition instructors to understand and apply electracy in the writing classroom" (Durst 2). Few others direct their work specifically to composition instructors, making Durst's attention to pedagogical relays a significant advancement in the field and an inspiration for my own electrate curricular development. Each relay, a metaphor for thinking in the new apparatus, "orients us in the right way, demonstrating some of the possibilities of the form and style" of electracy, according to Ulmer (qtd in Durst 1). Durst's relays on blues music as a complement to multimodal composition and hacktivism to understand collective selfhood offer readers useful entry points for the electrate apparatus. Blues guitar, Durst argues, offers a set of skills that goes "beyond the technical;" it does not teach how to code in HTML or compose images, but it assists in attunement – channeling feelings and intuition as well as using the appropriate mood to "sculpt[ing] new meanings and new multimodal rhetorics when a situation defies it" (54-55). Attunement and mood, Ulmer stresses, are significant to the development of felts in electrate thought. Blues guitar also "presents 'choral' possibilities" because of the potential for several sounds to emerge simultaneously in harmony or cacophony (65). Thus, instruction in the blues cannot be marginalized in the new apparatus but instead could present students with an extensive analogy for how to channel emotions and think chorally. Durst does not ostensibly present a Web

site model of his Multimedia Authoring course or a full curriculum for electracy, but his relays further electrate thought as pedagogy and bring the new apparatus closer to realization in praxis.

Durst's theoretical contributions on teaching electracy without an accompanying course curriculum or example of a completed class is much more common than Arroyo's open access. In fact, Arroyo's comprehensive electracy courses are quite rare. Pedagogy for new media and electronic spaces has remained grounded in literacy; for every Inventing the Electrate Apparatus or Choric Arcade, there are countless courses like Writing in a Wireless World that focus on analysis of Web sites, videos, podcasts, wikis, blogs, and social media with only some emphasis on *creation* of new media content and none of the affordances of postmodern ideology in the electrate apparatus. Some "digital writing" courses incorporate digital remixes and digital storytelling assignments but approach them as literate constructions featuring linear narratives, proper scholarly citations, and structured argumentation rather than articulations of fragments with nonlinearity, appropriation of material without concern for plagiarism, and associative logic via conduction. Despite the widespread development of college writing courses and curricula for digital literacy, digital rhetoric, and new media – including variations like electronic literacy, hypermedia, digital writing, writing in digital spaces, writing for the Web, and video composition – very few experiments in teaching electracy exist, especially at the undergraduate or first-year level. A thorough Web search of college and university course catalogs – particularly in Virginia – and public course Web pages reveals only a handful of classroom applications similar to Arroyo's, several of which

have already been discussed (i.e., McKenzie, O'Gorman, Gye, Brooks, Santos). Next, I will survey other electracy courses that have been taught, both at the undergraduate and graduate level to illustrate the need for additional development of relays and curricula.

James J. Brown Jr.'s thorough Web archive of courses taught includes Inventing Electracy, taught in the spring 2009. Brown's immersive course is centered on Ulmer's mystory project with various exercises (e.g., choral term extensions, haiku design, illumination) supplementing the lengthy popcycle process. Students construct wide images via pbwiki software and utilize Twitter as a social media complement. The goal of the course, according to Brown, is to "begin the work of *inventing* electrate (rather than literate) practices … [W]e will create new theories" (emphasis not added). The course therefore answers Ulmer's call for further development of electracy. Brown archives many student mystory projects, many of which are still accessible for instructors seeking examples, and serves as a key resource for electracy curriculum development.

Justin Hodgson's Digital Monumentality course, taught in the spring of 2011, highlights Ulmer's MEmorial assignment and allows for several "studio days" over the course of several months to construct the digital monument. The studio sessions grant students time in class – likely in a computer lab – to work on the digital aspects of a MEmorial: Web design, articulation of digital fragments, and development of an aesthetic for the monument; a flipped classroom approach eases students into the "digital" aspects of an electrate assignment. Hodgson also serves as the General Editor of *The Journal for Undergraduate Multimedia Projects (JUMP)*, which

showcases one of his students' examples of a MEmorial. *JUMP* also features a student mystory project from Jan Rune Holmevik's Digital Literacy course in the spring of 2010. In a *JUMP* supplement to the project, Holmevik reflects on how his students found electracy challenging yet rewarding. He writes, "You cannot simply lecture on electracy and expect the students, graduates or undergraduates, to get it. They have to work with it and experience the conductive inference logic for themselves in order to begin to make sense of what it is and what it can do for our understanding of digital media expressions" (Holmevik). The popcycle requires extensive attention, and the mystory project almost certainly elicits frustration from students unfamiliar with the genre, but patiently guiding students to "experience the conductive inference logic for themselves" like Holmevik is advisable.

Nathaniel A. Rivers, Christopher Grabau, et al. detail an undergraduate course in science writing that is influenced by electracy and articulation and designed around new media storytelling. The class, which does not follow a traditional Ulmer assignment and is loosely connected to electracy, is divvyed up into project managers – much like the "bands" Ulmer promotes in his own courses – who develop a series of podcasts, videos, and analyses. The participants describe the course as "unrestricted and wildly free" though all students "seemed to truly care about producing a high-quality new media composition," again reflecting the impact of electrate pedagogy on digital natives (Rivers et al).

Other scholars, including Gary Hink and Richard Smyth, both former students of Ulmer, discuss teaching electracy to some degree in their courses. Neither includes access to a completed class, but Hink details in "Digital Rhetoric and Electracy

Pedagogy" his experience teaching digital natives to construct assemblages through ready-made materials in his self-described proto-electrate Writing Through Media course. Hink describes students' assemblage projects as blogs that mix weekly multimodal entries with notes on materials studied, a blend of literate and electrate practice (5). Students start with a traditional rhetorical analysis of a Web 2.0 communication platform and utilize the assemblage blog as a transition to digital authoring with video, multimedia, and remixed images (13). Hink notes increased student agency in digital spaces, improved conductive logic, and re-appropriation as successful outcomes of his course. He writes, "By composing projects with 'ready-made' materials and critically refashioning, their work more closely resembles the logic, strategies, and formal output of hypermedia network culture – creative, participatory, and collective" (4). Hink's course demonstrates that a juxtaposition of literate and electrate practice without the inclusion of an extensive mystory or MEmorial project is not only possible but perhaps ideal.

In my research, I found that electracy pedagogy at the first-year and community college levels is rare. Only Ulmer's own Writing Through Media course and Hanzalik's Electrate Dream Interpretation course are designed for first-year students. Ulmer's Writing Through Media is described in his online syllabus as "an introduction to Humanities internet computing." Students explore electracy by developing an image of wide scope with all four areas of the popcycle and problem solving via e-mails in bands – groups of students with a blend of learning styles, a lot like a garage band. Students read Ulmer's *Internet Invention* and Mike Conlon and Anthony Rue's *Networked Writing Environment*, demonstrating their understanding

of the readings in e-mails. Ulmer's bare-bones course schedule allows for flexibility in discussing and creating hypermedia and collaborating in coming to an understanding of electrate logic and the image of wide scope assignment. The presence of e-mail bands shows that Ulmer does not abandon literate practice in first-year composition. Like Ulmer, Hanzalik maintains a traditional approach for aspects of her Electrate Dream Interpretation course. Her digital natives work in the argument mode for a multimedia assignment "comparable to a 2,000-word traditional essay." Students play video games and watch a series of movies by Marie-Louise von Franz on the process of dream interpretation to reach positions on what games reveal about self and society. Hanzalik's approach differs greatly from other electrate applications, but her video game and dream relay embraces many electracy trademarks: re-appropriation, fragmentation, image logic, aesthetics, and subject formation. Hanzalik notes that the assignment sometimes results in punctum stings: "[S]ome were emotionally gripped, awe-struck even, while others remained objective observers, simply entertained by the sublime electracydreamscapes" (Hanzalik).

No courses like Ulmer's or Hanzalik's could be discovered in community college curricula. Though Steve Ersinghaus describes his New Media Perspectives course – via Stacey Mason – as working closely with hypertext, the Tunxis Community College course seemingly remains grounded in literate practice with no trace of electracy. The absence of electracy pedagogy for undergraduates, particularly in community colleges and first-year writing, is alarming, and in the following section as well as Chapter 3, I hope to fill this gap by developing my own electrate relay modules within the VCCS.

How Will Electracy Praxis Be Designed?

In order to construct effective relay modules for electracy pedagogy, a clear understanding of praxis and curricular development is essential. In this final section of the chapter, I will review definitions of praxis and research on curricular design and backward design to inform my VCCS relay modules. Then I will detail what each relay module includes and how those will be expanded in chapter 3. Finally, I will turn to several influential texts including *Writing New Media* and Serafini's *Reading the Visual* as models for designing pedagogical modules.

If electracy is the theoretical framework, praxis is the realization of that theory via experience in the classroom. Praxis is "informed action" that brings a theory into practice (Quinlan). Without pedagogical application and carefully constructed praxis, electracy would remain a theoretical possibility. Instead, the two must work simultaneously as "abstract theorising [sic] is only useful so long as it informs concrete action, but likewise action must be informed by deep thinking and justification" (Quinlan). Arroyo notes that her participatory composition relay builds upon electracy theory and praxis at the same time; as she remixes Ulmer's apparatus to highlight interactivity in social media video-sharing Web spaces like YouTube, her students' texts and assignments shape the pedagogy (*Participatory* 118). Praxis requires a translator or "creative interpreter" like Arroyo for theory to take shape (Smith). The "continual interplay between thought and action" needs an agent who considers the realization of the theory and reflects upon classroom experience; praxis, therefore, is "always risky" since implementation of a theory ultimately leads to

alterations and potentially later adaptations by others (Smith). Curricula take shape in praxis building, and translators must carefully examine the desired "informed action."

Electracy praxis is realized through curricular development in relay modules. To achieve the desired outcomes for a new pedagogy, a "specific blueprint" operating through backward design is necessary (Wiggins 5). In *Understanding by Design*, Grant Wiggins and Jay McTighe explain that curricular development goes beyond activities and content. They write, "Curriculum takes content (from external standards and local goals) and shapes it into a plan for how to conduct effective and engaging teaching and learning. It is a map for how to achieve the 'outputs' of desired student performance" (5-6). The map for a relay module or electrate course includes "the most appropriate experiences, assignments, and assessments that might be used for achieving goals," not just what is covered (6). More importantly, the questions asked by curriculum designers should extend beyond what topics should be learned to inquiries like, "What should students be able to do with that information when they finish the course?" (Stout 1). Considering the end-of-semester "outputs" and goals should come first; Wiggins and McTighe argue that the content and assignments should be adjusted to meet those intended outcomes (6). In most of the relays already reviewed, the goals of an electrate education were likely considered extensively before the content or analogy was put in place. Further adoptions of those relays and the creation of new relays must similarly operate backwards from achievement targets to content and evidence of the goals being met. Lion F. Gardiner of the National Academy for Academic Leadership adds that prioritizing curricular outcomes provides a solid foundation for a course, reduces "the potential for untoward teaching

to the test," protects against grade inflation, and ensures courses and programs retain their primary purposes rather than becoming victim to "academic drift," in which a course's objectives are decreasingly satisfied by what is actually taught in a course.

The backward planning method of course and module design begins with identifying desired results and determining which content achieves those goals before tailoring learning experiences for the student and considering the overall design and assessment (Wiersma). The desired results or outputs should anticipate student questions regarding "why" or "so what," certainly necessary in teaching electracy because of its novelty and difficulty of subject matter and methodology (Wiggins 15). Working from those outputs "leads to greater coherence" of a curriculum (33). The evidence used to reach those goals varies from activities and assignments to textbooks and pedagogical style; the purpose of the evidence is to guide digital native students to transferability, or how to "do" something with the knowledge, theory, or patterns acquired. Wiggins and McTighe highlight the importance of knowing how to "do the subject" (48). These accomplishments will vary by relay in electracy, but the evidence should be agreed upon since assessment is based on how well the students achieve the goals using the evidence (19-20). The backward design method then adds learning experiences and instruction as a third step, thus the postpedagogical "kindergarten" style of learning operates within the framework of established goals and evidence. Gardiner encourages higher education instructors to avoid lecture since there is "little evidence" that traditional knowledge transmission "will develop in students the higher-order cognitive abilities a faculty may value." Interactivity, collaboration, and hands-on learning are all embraced by Ulmer's postpedagogy as

the instructor is decentered in the classroom. Finally, a curricular designer reviews the unit for coherence and a rational sequence. Ideally, the philosophy, purpose, and goals will align with the evidence, but continuous assessment is necessary to guarantee long-term success (Gardiner).

The modules I will design for the VCCS are fully explicated in chapter 3 with assessment criteria to follow in chapter 4, but establishing a general template for those modules using Wiggins and McTighe's and The National Academy for Academic Leadership's curricular design principles will ensure a sound approach. Each module will focus on one electracy relay and contain objectives, outcomes, a theoretical justification, suggested readings, exercises, and assignments juxtaposed with existing applications in literate practice. Relays, or weak models, are stylistic examples that realize the electrate apparatus in praxis and open up new possibilities for further development of the theory. Relays are not proscriptive standards and should not be interpreted as anything other than potential applications of electrate theory open to further remixing and adaptation. Ulmer emphasizes that relays are not templates but rather a method for understanding and achieving the "possibilities of the form and style" of electracy (Ulmer, *Electronic* 66). Various relays reviewed earlier in this chapter demonstrate the excitement in academia of building and realizing Ulmer's theory, though most remain rooted in further theoretical development rather than pedagogy. The three expansive relay modules in the next chapter seek to further bring to fruition electronic cognition through theory and praxis. I will introduce approaches to electracy that (re)appropriate from other relays but also add unique features; each relay will be accompanied by a possible

curriculum. The modules are designed for implementation in first-year literate classrooms in the VCCS, particularly for the College Composition I and College Composition II courses, but will be transferable to digital literacy and new media classes like Writing in a Wireless World and nascent electracy classes. Current course outcomes, objectives, and activities in College Composition I and II will be contrasted to demonstrate how the goals of electracy differ yet complement existing practice.

Influential composition and visual rhetoric texts with a focus on praxis as well as successful implementations of electracy by Ulmer and Arroyo will be used as models for developing my own relay modules. *Writing New Media*, published in 2004 in the midst of the birth and explosion of Web 2.0 and social media (i.e., YouTube, Facebook, MySpace), anticipated the need for a new media curriculum in the composition classroom. Selfe, Wysocki, Johnson-Eilola, and Sirc craft activities at the end of each chapter in the text; each activity reads like a lesson plan in its inclusion of teacher's notes, objectives, an assignment, questions to consider, assessment criteria, and even useful vocabulary. The activity, which works from the objectives first much like backward planning, expands on the in-class or homework assignment to explain its significance to new media pedagogy and possible limitations and restraints. The model established in *Writing New Media* is ideal for not only my own relay development but also a literate-electrate blended course because of its continuity of writing in new media pedagogy. Sullivan praises the text for offering "the means for avoiding the possible instability that multimodal composition might introduce into more conventional print and alphabetic literacy-

oriented college writing courses" (151). Though not opposed to implementing electracy and experimental writing in the modern composition classroom, Sullivan feels that *Writing New Media* and particularly Wysocki's work is appropriately "cautious" and carefully constructed for digital natives (157).

Serafini's *Reading the Visual* is less engaged with new media practice, but his approach to multimodality and visual rhetoric in praxis is another appropriate model for my own relays. Serafini offers 10 multimodal ensembles with an accompanying curricular framework broken into units that contain cornerstone texts, learning objectives, lessons, additional resources, and analysis guides. The design of his units is amenable to backward design and transferable modules in an electracy curriculum. Both *Writing New Media* and *Reading the Visual* offer engaging activities; my own relay modules will similarly approach the curriculum as playful. Many learning outcomes currently in place for postsecondary courses do not fit the modern world, Gardner Campbell argues, and thus emphasizing the "rapid, unpredictable change" of our technologies and the importance of an increased playful curiosity in digital natives is necessary. Campbell adds, "[E]ffective education for the 21st century must trade compliance for curiosity."

Successful electracy relays and courses will likewise inform my modules. Central features of postmodernity such as remix culture, appropriation, improvisation, and fragmentation will guide each exercise and objective (Hughes 2). Ulmer's own pedagogical guidelines, such as eliminating examinations, will also be followed. Many of the key principles of electracy are covered in Ulmer's and Arroyo's courses, openly accessible on the Web and driven by thorough syllabi. Ulmer's Writing

Through Media and Arroyo's Inventing the Electrate Apparatus and Choric Arcade are the prototypes for future electracy pedagogy. Each provides assignments, student samples, and in some cases, interaction between students and instructor. The in-class postpedagogical interaction is lost, but a thorough examination of their course designs and Web spaces will provide a blueprint for my modules. These well-informed and carefully constructed relays will promote active learning with the goal of "creat[ing] a condition in which it is nearly impossible to be a passive, regurgitative learner," but instead developing "homo sapiens digital" who are finely attuned to the postmodern condition and the technological-cultural revolution (Ulmer, *Internet* online supplement).

Chapter 3: Proposed Electracy Relays

"The rapid advance of technology has meant a pedagogical dilemma for me: what do I do in the classroom, what do I teach? … Is the essay still our central genre? Do our students do Web sites? Do we teach html? Email as a genre? Where do we go?"

Geoffrey Sirc, "Box-Logic" (111)

The composition classroom is in flux as electracy emerges as a parallel apparatus. Our understanding of writing – and communication altogether – is transforming in the Information Age, inspiring inquiries like Sirc's about the content and focus of our pedagogy. The traditional notion of composition as occurring in the verbal modality with thoughts conveyed logically in sentences and paragraphs remains as important as it ever in postsecondary courses in spite of an emerging modern definition of writing as multimodal and fragmented. The purview of composition studies has increasingly expanded to incorporate visuals and new media. Indeed, our understanding of "what it means to be literate in the twenty-first century" is taking shape as compositionists scramble to fit newer modalities of communication into our teaching (Selfe, "Students" 4). The February 2016 NCTE guideline "Professional Knowledge for the Teaching of Writing" groups visuals, design, and video into the larger umbrella of composition. The statement reads, "As technologies for composing have expanded, 'composing' has increasingly referred to a suite of activities in varied modalities. Composers today work with many modalities, including language, layout, still images, other visuals, video, and sound" ("Professional Knowledge"). This "suite of activities" now included in "composition"

is realized in digital spaces as verbal language plays as important a role as visuals and audio in communicating to an audience; popular Web sites and social media emphasize "composition" via video and audio uploads as much as text-based status updates or commentary. The NCTE statement expands the scope of literacy to include all modalities of communication, a seemingly necessary move for teachers of writing in the digital age as students immerse themselves in multimodal new media daily.

A broader definition of composition that incorporates the Web and multimedia has been touted as significant for writing instructors in reaching today's students. Johnson-Eilola writes, "[A]n expanded notion of writing will serve to help us have a voice in the types of writing that go on outside our classroom – not just the essays or poetry that a handful of students will write, but in the Web pages they design, in the databases they build" (212). Facility in Web design, social media, and other digital communication then becomes a part of literate skill, according to Johnson-Eilola. All these forms of "writing" must be taught effectively for students to succeed in digital spaces. These fluencies become more than just skills beneficial to digital natives but a necessity. In "Part 1: Thinking Out of the Pro-Verbal Box," Sean Williams argues that a wider interpretation of composition is essential for becoming literate and thus functional in the modern world. Williams contends, "If composition's role is to help students acquire skills to lead a critically engaged life – that is to identify problems, to solve them, and to communicate with others about them – then we need to expand our view of writing instruction to include diverse media forms that actually represent and shape the discursive reality of students" (qtd in Selfe, "Toward" 72). To guide our students to become literate within their evolving discursive realities, a functional

praxis that answers Sirc's inquiries is needed. The new pedagogy must seek to blend the various modes of writing that occur in digital spaces and ensure students can "lead a critically engaged life."

Sirc's questions about what to teach in the post-critical writing classroom imply many modalities each weighted with significance as a type of "composition," and his "pedagogical dilemma" is further complicated by the disjointed nature of postmodern visual and verbal language composition. The logically structured sentences and linear paragraphs and narratives of "the essay [as] our central genre" often take a different form in HTML hypertext and digital communication: non-linear pieces that composers momentarily articulate into coherent meaning. Johnson-Eilola adds, "[T]exts no longer function as discrete objects, but as contingent, fragmented objects in circulation, as elements within constantly configured and shifting networks" (208). The fractured text of digital spaces requires associative logic via articulation and an altogether different approach to composition – not a displacement of traditional composition but a new apparatus of thought in electracy that promotes associative logic and visuals. The "contingent, fragmented objects" of many modalities require a new pedagogy.

Sirc's solution, a proposal for avant-garde curation of boxes, each containing fragments of text, images, and audio that unite to make meaning in an exhibition, might seem radical. Students typically do not consider spatial reasoning or curation from fragments as composition; the box's resistance to clear answers and a central meaning may seem counterintuitive. Yet electracy theory follows suit with articulation, image logic, open textuality, and multiplicity of meaning emphasized,

thus making Sirc's box-logic an electrate relay. The radical pedagogical experimentation of box-logic challenges digital natives and instructors alike, a goal that Ulmer emphasizes as significant in the advancement of electracy praxis. Ulmer writes, "The challenge is to implement a pedagogy of invention from which the institution itself can learn, which could affect the frame itself, recognizing the boundaries of knowledge. The first step in this process of self-education is to design an assignment capable of producing results that surprise the instructors as much as the students" (Ulmer, *Electracy* 105). An unorthodox methodology like curating a box can certainly achieve this result and highlight what makes electracy different than literacy. Writing instructors who embrace the "suite of activities" endorsed by the NCTE could benefit greatly in adopting electracy to utilize relays prepopulated with objectives, readings, and exercises.

Development of relays like Sirc's offers an alternative approach to subsuming new media in the writing classroom. Rather than supplant literate practice, the relay can be taught alongside writing. Hink's Writing Through Media course blends the two apparatuses to ease the transition. Hink writes, "Rather than idealistically 'starting from scratch,' or feeling creative anxiety, with the loss of familiar conventions of literacy, of course, what emerges and guides the course is the 'hybrid genre' working *toward* Electracy [sic] and still within the Literate [sic] framework of education" (3, emphasis not mine). The traditional form of composition then can continue to be the focal point of English curricula while electracy praxis is slowly introduced and juxtaposed alongside writing; this move highlights the theoretical and practical shifts in "composition" native to the Internet. It also creates more well-

rounded citizens of the digital era, according to Ulmer, who writes in his online supplement to *Internet Invention*, "Literacy and electracy in collaboration produce a civilizational left-brain right-brain integration." The NCTE "Professional Knowledge" guideline that expands the scope of literacy should be interpreted instead as a call for the inclusion of an electracy curriculum to be taught alongside composition; contrasting the two apparatuses in a "hybrid" relay like Hink's allows for a suitable theory for new media composition in digital spaces while maintaining traditional verbal composition practices.

In chapters 1 and 2, I reviewed the existing digital composition and electracy literature, courses, and relays to signal the necessity of electracy praxis in the writing classroom. The dearth of pedagogy for the new apparatus in first-year composition courses illustrates that much work is to be done to bring Ulmer's theory to fruition for a wider audience and answer Sirc's questions regarding what to teach in a post-literate world. In this chapter, I construct a series of non-proscriptive relays in adaptable modules to develop a workable praxis for electracy instruction with the first-year VCCS composition classroom in mind. Each of the scaffolding relays revolves around a central assignment that aims to "surprise the instructors as much as the students" and elicits the hallmarks of electracy as described by O'Gorman and Rice in their terminology glossary. All three relays are created with flexibility, adaptability, and easily implementation in mind. Utilizing backward design and Gardiner's key principles for designing a college curriculum, I start with a description and justification of the relay. A clear explanation of how and why the electrate relay module fits into a post-critical composition course precedes the potential objectives

and course learning outcomes. What a student should know and have the ability to accomplish from each relay is foregrounded so that the assignment becomes a conduit for reaching that competency. Including the philosophy, purpose, and goals of the relay allows instructors to connect it to their institutional missions and responsibly integrate Ulmer's theory. A brief list of optional readings – I avoid "suggested" to remain non-proscriptive – for the class offers instructors choral possibilities for supplemental material to the assignment; in electrate fashion, however, the readings vary from Ulmer and Florida School theorists to music and film. Ulmer's call for a challenging yet fun pedagogy should be immersive in multiple modes; the use of avant-garde texts, video, and audio is a deliberate attempt to "stimulate resistance" as Ulmer encourages (Ulmer, *Electracy* 92). Optional exercises and the central assignment follow with literate assignments juxtaposed to illustrate how the activities could fit into a writing curriculum and meet similar objectives. The assignments, like those designed by Ulmer, Hink, Arroyo, and others, are intended to challenge students and instructors alike. Assessment and evaluation of assignments in these electrate relays are reviewed in depth in Chapter 4.

The three relays I propose are the Playlist, the Transduction, and the (Sim)ulation. Like Ulmer, a self-described "nomopest," – one who abuses or relies heavily on neologisms and often puns – I title my relays with a double entendre or pun (Ulmer, "Toward"). The playfulness evoked by each module is not a form of *pun*ishment for those averse to Ulmer's nomopest sensibilities but a conscious effort to acknowledge and continue Ulmer's practice as well as a way to emphasize the playful nature of electrate composition. The first module, the Playlist, is intentionally

titled to underscore the "play" involved in the act of curation for a choral collection of works in various modes. An egent acts as an anthropologist, as Corrigan and Gers describe first-year students of the digital age, to equally privilege video clips, music, articles, images, and other artifacts in a moment of articulation (172). The result of this choral, multimodal assignment, a substitute or parallel to the traditional, first stasis definition essay, is a playlist that serves as a digital recreation of an anti-definition, event, or mood. Plurality of definition and the amorphous quality of a collection are highlighted; wikis and Twitter, which share the same characteristics as collections, are reviewed as useful "readings" in preparation for the assignment. The Playlist relay strives for the development of a pervasive mood, a goal not often weighted with much importance in the writing classroom. Rice notes that we ask students to read and analyze film, video, and Web sites, but students do not create in those genres and thus are deprived of the skill of generating mood. In "Funkcomp," he writes, "We teach students to write as students write. In turn, other forms of writing, as in particular, other forms of writing charged with emotion, remain ignored" (284). The Playlist, on the other hand, prioritizes mood as students create virtual felts (another one of Ulmer's double entendres).

The second and third relay modules, the Transduction and (Sim)ulation, ease the transition into electracy by guiding digital natives to the creation of the new media ensembles that Rice argues students should become fluent in producing. The Transduction, which loosely connects to the literate narrative and its subsequent conversion to a digital story, draws attention to the translation of content from one modality to another. In the act of transduction, Kress and Van Leeuwen argue, an

image, for example, undergoes a transformation – much like energy does when converted to matter, heat, or signals – to audio, the written word, or some other semiotic domain. As with any translation or remix, much is lost in the process; the limitations – and affordances – of the transduction thus become focal points for student exploration in the relay. The student as translator recognizes the multiplicity of meaning and limitless potential choices involved in moving a fragment from one mode to another. The remix then "involves asking students to recognize the scholarly implications of vernacular remix practices that are more usually seen as part of the flow of media in which they are immersed" (Gye, "Halflives" 9). The digital story serves as an appropriate exercise to accompany the Transduction as students work with multimodal artifacts – often appropriated and juxtaposed visuals – to capture a mood. This relay also delves into the rise of mashup culture and sampling; plagiarism concerns are addressed as an aspect of assessment in chapter 4.

The (Sim)ulation, my third and final relay, advances an assignment that similarly explores electronic cultures steadily gaining popularity: simulations, virtual worlds, and social media. This relay, which serves as a parallel module to a traditional research argument, builds upon Ulmer's mystory project by having students discover their introspective images of wide scope via avatars. In exploring the four discourses of the popcycle in a simulation and/or social media profile(s), egents closely examine questions of identity and agency. The postmodern notion of identity is fragmented and distributed; one's image of wide scope is an attempt to understand several aspects of self, and through the use of and reflection upon an avatar, a clearer sense of one's position within larger ideologies and networks comes

into perspective via a eureka moment. This mystory-based project varies greatly from a standard composition research essay in that the emphasis is more about exploration of self within these Internet-era power structures than corroboration of facts and truths. Rather than visit a library or database to find scholarly research to confirm a thesis statement, students embrace uncertainty and seek an emotional punctum. Ulmer writes, "Mystory approaches theory from the side of discovery, from the side of not yet knowing what it is, rather than from the side of verification, telling about it afterwards" (Ulmer, "Textshops" 55). Discovery in a virtual world might sound outlandish to luddites or the uninformed, but "these playgrounds of the imagination are becoming an important host of ordinary human affairs" (Castronova 2). Exploration of distributed identity and agency via avatar creation and play extends the mystory genre to new digital spaces. Blended with a post(e)pedagogical approach to in-class instruction and careful attention to assessment and evaluation, these relays help realize electracy pedagogy for the 21st century classroom.

Relay #1: The Playlist

In "Box-Logic," Sirc details various attempts by composition scholars to integrate collection assignments, including Rice's multimodal, hypertext project that asks digital natives "to pick the date of their choice and research what was happening then in areas such as history, politics, literature, film, comics, music, art, business, or science" (125). Each of Rice's students' ensuing contextual Web sites is pieced together from fragments of various modalities – facts, narratives, videos, audio, images – to serve as a sort of digital monument to or recreation of an event. A collection assignment like Rice's, however, does not only offer historical perspective

but also has the potential to capture or develop mood and emotion as well as facilitate discovery of new connections. Students shape how an audience (re-)experiences an event and which causes and effects are most prominent; in the process, they practice some of the key electrate goals: plurality, antidefinition, and image logic. It's also not an uncommon exercise; I use a modified version of the collection for my 20th Century Cultures course as students compile various works of the humanities (i.e., literature, art, music, film, television, dance) from around the world to present to classmates. My assignment is not a hypertext-based project like Rice's, but it remains rooted in the act of curating multimodal artifacts for commemoration and exploration.

These examples of artifact curation demonstrate the curiosity of composition instructors in quasi-electrate instruction with an assignment that resembles Sirc's box. The multimodal collage requires a different research methodology than students are accustomed to, and the non-linear, loosely structured product is unlike most other deliverables in our classes (e.g., narratives, analyses, and arguments). The collection, however, could be designed as a truly electrate felt if approached as choral, collaborative, playful, and mood-driven. Emphasizing a fun, participatory approach that equally weighs all meanings and seeks an emotional punctum sting – a strong emotional impact on one's memories – can guide digital natives to a deeper understanding of the electrate apparatus. This relay, the Playlist, is an attempt to construct a module with a justification, objectives, and assignment so that future electracy adopters can implement Ulmer's theory to some degree in his or her composition course. Building upon Rice's and my own projects as well as Sirc's box, I appropriate aspects of each while designing the Playlist relay as a new contribution

to the electrate literature. Johnson-Eilola suggests that an assignment like the Playlist might be far from standard in the writing classroom. He writes, “We do not typically encourage our students to compose texts simply from fragments of other texts” (206). Yet, that’s precisely what this relay promotes: “composition” through aleatory arrangement of fragments without the inclusion of original thought, narrative, analysis, or argumentation. Ulmer’s electracy encourages practices often unpopular in literacy, and this relay highlights the necessity of separating electrate composition from the literate apparatus.

Description and Justification

The popularity of mix tapes and playlists in modern culture has grown considerably since the rise of hip hop in the 1980’s and streaming services in the 2010’s. Mix tapes, usually associated with music cassettes, are often home-made collections of songs – either separated as tracks or seamlessly connected via interludes – that collectively capture a genre or mood. A common practice in the cassette era (circa 1975-1995) was to compile a mix tape by copying from a live radio broadcast or other cassettes inserted into the same stereo system. The mix tape, like hip hop, was the result of electronic culture (Jarrett 74). Technology facilitated the act of curating collections of songs or fragments into a new whole. Jarrett describes a common hip hop methodology as “making new recordings by rhyming over stitched-together fragments appropriated from already made records” (73). The same process – minus the rhymes – describes the composition of mix tapes, demonstrating their electrate qualities. The modern mix tape, which utilizes digital files like MP3s and occasionally physical media like CD-Rs, has steadily transitioned to the playlist form

in iTunes, Spotify, and other music media players that offer streaming capabilities. Rather than the cut-and-paste approach of the mix tape, the playlist, due to technological advances and the benefit of using digital audio files, is a drag-and-drop operation in which users find tracks in a larger collection and develop a mix by arranging the links to various files. The digital playlist, removed from physical media, is unlimited by time and space constraints. Yet the sequencing and juxtaposition of songs still play a major role in the aesthetic of the playlist, which for many is an art form. The arrangement establishes a flow for listeners, and Burn and Parker note that the resulting tempo is essential in establishing mood (19). The playlist remains widely popular as a fun endeavor, and its untapped potential as a composition method is realized in electracy.

The Playlist relay attempts to capture the qualities of mix tape creation as an engaging post-critical composition exercise. This relay expands on the traditional mix tape or playlist and serves as an electrate parallel to the traditional definition essay in composition courses; this playful, collaborative antidefinition assignment forgoes argumentation to emphasize mood, multimodality, and collage. The conventional first-stasis definition essay found in most composition textbooks and many first-year writing courses requires students to choose an abstract, debatable term and argue for a unique perspective. A sound, clear thesis statement encapsulates the writer's interpretation, and compelling evidence paired with the use of heuristic definition tactics supports the argument. This literate writing assignment, centered on certainty and often regarded as the foundation of a larger argument, is inverted in the electrate apparatus. The Playlist relay promotes ambiguity via antidefinition.

In *Internet Invention*, Ulmer encourages rhizomatic multiplicity as the methodology for definition (33). An open-ended approach that encourages plurality via choral thought is undertaken in developing a playlist as students compose from various fragments to develop many meanings. In Ulmer's choral writing, the straightforward is replaced by articulation, mirroring the shift in computer logic. Ulmer writes in *Heuretics*, "The change in thinking from linear indexical to network associational … is happening at the level of the technology itself" (36). Thus, developing an assignment that is antidefinitional suits the new apparatus. Ulmer even encourages a brief antidefinition exercise in *Internet Invention* in which students develop 10 Web pages that could mix text, pictures, and animated gifs (40-41). This multimodal antidefinition informs relays like Mauer's clipography, an intertextual project that utilizes video sampling, as well as Hink's readymade assemblage; in this relay, however, the focus remains on the (anti-)definition of a term and the resulting mood in the multimodal playlist. The multiplicity of fragments collected to capture meanings exist in what Arroyo labels an "active receptacle" for generation (*Participatory* 51). Arroyo adds that a definition essay, in "asking what something is, in order to define and set up boundaries, undoubtedly excludes and purges that which it is not. This purging, which creates a hole in order to re-create a new whole, deflects that which is has excluded" (51). The antidefinition playlist explores those contingent boundaries and grey areas, allowing for all meanings to shape an atmosphere or mood.

Like mix tape curation, the collection and arrangement of a Playlist is a fun, collaborative process. Students are encouraged to "play" with the content to discover

articulations from the multimodal fragments. Ulmer's electracy courses inform this decision; he divides students into "bands," which collectively reach understandings of readings and assist each other in peer review. Ulmer argues in an interview with Clinton, "For my generation electracy is probably achievable *only* by a team" (Ulmer, "The Genealogy," emphasis added). Though today's digital natives and future generations may excel without a collaborative effort, it might be advisable to use "bands" or teams for all electrate work as the nascent apparatus comes into shape. A group-based playlist can present its challenges (e.g., determining which fragments, discovering a punctum from a collection others have shaped, and establishing true collaboration rather than cooperation), but it will help students work together to solve technical issues, much like how many digital spaces (i.e., wikis, troubleshooting in Web design) operate. Collaborative development of a playlist also fosters an electrate understanding of collective rather than solitary authorship, furthering the transition away from deeply ingrained literate practice. Composition of a playlist involves finding many pre-existing works rather than the generation of original ideas; though electracy is highly generative rather than analytical, the assemblage or collection requires minimal originality.

Arroyo acknowledges that Barthes's 1967 proclamation has not resulted in a transformation of our writing practices. She writes, "Even though the 'death of the author' has been pronounced for decades and played out in digital spaces, composition pedagogy teaches that writers should maintain complete control and authority over their work" (*Participatory* 31). Electracy pedagogy, in encouraging postmodern authorship as articulation and collaboration in coursework, also breaks

from a long tradition of discouraging play. Defined by Ian Bogost as possibilities for exploration within specific restraints, play is often associated with fun (42). The "play" in Playlist could represent performing in a band, acting in theater, or expressing oneself freely. Play, according to Ulmer, is essential in electracy as egents "deconstruct the work/play, serious/frivolous opposition," allowing for a multiplicity of definition (*Electracy* 42). Ulmer notes that the history of play in composition has been a tenuous one. He writes, "Educators in [the] Platonic tradition attempt to contain the frivolousness of writing (its potential for 'play') by assigning 'play' to the 'innocent and inoffensive' category of 'entertainment' or 'fun'" (35). With electracy's embrace of entertainment and fun, play re-enters composition. Digital natives openly experiment with various fragments and their arrangements in a playlist to seek maximum emotional impact; their use of play in the curation process bolsters effective collaboration and ensures a "fun" approach to new media. After all, as Edward Castronova writes, "Ordinary life, without play, seems to be emotionally unsatisfying" (75).

Mood is a key outcome of the Playlist, much as it is for Sirc's boxes. In juxtaposing and positioning multimodal fragments, students establish a flow or rhythm that evokes a mood for an audience that is listening, viewing, or reading. Sirc writes that students as designers seek "associational drifts" for their blank canvases as they conjure moods and visions (121). As the Playlist crystallizes, a polyvocal virtual felt is weaved. The emotion conveyed by the felt is what Rice labels "the thang" in funk music; this mood is the key to electrate expression. Ulmer writes, "What clarity is to literate truth, aura is to electrate truth" (*Electronic Monuments* 61). The "aura" of

a Playlist is designed by the student(s) (or DJs) as intuition guides them toward "the thang." The resulting mix fits Ulmer's description of a felt, which replaces text (textile) because of its emotional overtone (167). The felt, like a Playlist, may have "entanglements" that seize the listener/viewer emotionally (Ulmer, *Internet Invention* 36). Yet it remains a cohesive whole. The felt can be modified by addition or subtraction but its non-linear antidefinition and emotional impact remain. Arroyo writes, "Felt is rolled, mashed, and difficult to break into pieces or sections" (*Participatory* 113). The Playlist can be felt and functions like a felt; moreover, its multimodal qualities ensure it reaches more senses than just auditory.

The Playlist relay is centered on a Web collage that is curated by students to feature audio, video, text, design features, and multimodal ensembles. Usually a mix tape or playlist is assumed to consist of music, and its place in a felt is undeniable as music is regarded as closest to one's inner being. Ulmer cites Leo Spitzer in *Internet Invention* as conveying the significance of music in one's education during the middle ages because of "the idea of morality as a tuning of the individual soul to this world harmony" (101). Harmony achieved through euphony (or cacophony) occurs in all of the musical electrate relays: blues, hip hop, jazz, funk. Subjective taste will undoubtedly play a role in how a playlist impacts a listener, but pacing, rhythm, and juxtaposition become essential, illustrating that a playlist requires curation on behalf of a collaborative group of students and not simply a Dada-esque, aleatory "shuffle" feature. Curation was one of the earliest facets of electracy determined by the Florida School (Freeman, "Imaging Florida" 341). The curatorial process requires careful selection of materials and, as Johnson-Eilola argues, a strong sense of creativity. He

writes, “Collection is a social and political act; there are not mere disembodied facts, but choices. … [Literate understandings of texts] have blinded us to enormous cultural shifts” (212). The choice of the playlist curators to incorporate other modalities that may accompany, supplant, or recontextualize music is a difficult choice despite the intentional ease of the project. Digital native students are faced with a challenge of articulating the many meanings of an abstract term to convey emotion, and the instructor’s role is to fully allow students to connect the multimodal dots.

Objectives and Learning Outcomes

In Chapter 2, I reviewed curricular design scholarship to demonstrate the importance of grounding electracy praxis in sound backward design principles. A key inquiry that curricular designers ask prior to developing course content or assignments is Stout’s “What should students be able to do with that information when they finish the course?” (1). Though the overarching answer to that question for all three relays is to reach an understanding of composing within the electrate apparatus, specific objectives and learning outcomes should be highlighted to better facilitate backward design from assignment to goals. The desired student outputs can then be fairly assessed based on how effectively the deliverables achieve the objectives. The central learning outcomes for the Playlist relay include achieving a choral antidefinition, in which one writes with all definitions rather than seeks a certain answer, evoking a “eureka” revelation that stings the punctum and impacts the viewer emotionally, collaborating in groups on a single collage, and improvising

competently. Students who can accomplish all four objectives will have satisfactorily completed the Playlist assignment.

In the VCCS, where I have taught since 2012, students in College Composition I and II are assigned at least one argumentative essay, whether a definition essay or research paper. This relay, if implemented in one of those courses, would juxtapose – not supplant – one of the central modes of literate practice (argument) with an essential electrate skill (articulation). Arroyo writes that "building networks" as archivists is weighted much more importantly than argumentation in electracy (*Participatory* 8). Choral thought is composing with all meanings; fragments unite in a moment of articulation, which Hall argues is a temporary connection, perhaps even the listening and viewing experience of a playlist. Poststructural work prioritizes the "fragment as rhetorical gesture" with no hierarchy of information but rather the construction of isolated details into pleasurable moments (Rice and O'Gorman 7-8). Unlike the traditional understanding of knowledge transmission in literate practice, in a rhizomatic process, the aleatory fragments may exist in many directions and many places as the egent "composes" through arrangement and connection (Johnson-Eilola 201-2). Music, videos, images, and multimodal works are sprawled across the Internet, and the act of articulation weaves them together for a temporary collection. Curating those pieces into a felt that conveys emotion and mood requires choral thought and antidefinition rather than argumentation and explication.

Freeman adds that explication "undermines" the logic of association ("Imaging Florida" 341). Rice and O'Gorman likewise add that syllogistic thinking

should be considered less important as the logic of electracy is one of choral thought (8). The resulting multiplicity of meaning from an antidefinition playlist leads students to critical thought and in-depth consideration of possibilities. Rather than identify and classify a term with pinpoint clarity, the egent engages it through all of its meanings conveyed in artistic expression (Inman 53). Critical engagement of a term via choral articulation might result in a strong understanding of the complexity of language, the diversification of audience, and the logic of the digital age. It also hones an egent's skill in what Durst labels attunement: channeling feelings by identifying the punctum and finding an appropriate mood (54-55).

Throughout his corpus, Ulmer stresses the importance of the emotional prick that leaves an imprint in one's memories: the punctum. Originating from Barthes's attempt to understand the essence of photography, the punctum is the obtuse meaning that is unnamable – as opposed to the nameable studium – and a "response of the body to certain details in the pictures" that is felt later, "emerging as an aftereffect (the quality of being 'unforgettable')" (Ulmer, *Electracy* 10). Students can via attunement seek an emotional punctum by identifying patterns and using intuition to discover eureka moments; Ulmer's heuretic methodology is based on this "eureka" process, hence the similarity in heuretic and eureka (106). The a-ha moment, according to Santos, is "accidental in literacy, but fundamental in electracy," and though it must be discovered by an audience, the egent can strategically design a multimodal playlist utilizing more than just photography to evoke emotional pricks. The punctum can bring about fear, joy, sadness, pleasure, pain, or any emotion that affects a viewer; however, a general perception of the punctum by electracy

advocates is that it induces a sense of anxiety that may require a safe space in the classroom (Gye 5). For students to realize the expressivist nature of electracy, designing their Playlists to reach eureka moments is crucial. Arroyo adds that it redefines our perception of definition: "The concept of the punctum is important for reenvisioning the question of definition for the electrate apparatus, since it provides access to knowledge residing in the body" (*Participatory* 57). Attunement then is a learning outcome of the Playlist relay.

In addition to introspection, Ulmer's electracy theory encourages free-flowing collaboration. Developing groups – or bands – helps students approach and explore massive databases to generate their collections (Hayles 39). Explicitly taught and designed collaboration guides students to enter digital spaces with the notion that knowledge creation is not solitary; Ulmer further makes this clear in the post(e)pedagogical approaches to in-class instruction. Collaboration occurs synchronously and asynchronously in both space and time; in other words, students work together with others across generations and ages (Inman 49). Once a student has gained competence in electrate ability and embraced a lifelong collaborative method of inquiry, she can display that the learning outcome through improvisation. Ulmer writes in his online supplement to *Internet Invention* that improvisation is to examination as play is to interrogation. One's competence to improvise with given materials is "manifested as creative play" in groups. In the Playlist, students may be given access to a limited number of materials or have open access to all artistic fragments found on YouTube, Spotify, Flickr, and any number of Web spaces with materials used for arrangement into punctum-evoking collections. Collaborative play

results in creative generation of new remixes rather than reproducing or regurgitating information.

Optional Readings

In his *Internet Invention* online supplement, Ulmer openly displays the course readings he assigns to students in his advanced Hypermedia seminar and first-year Writing Through Media courses. His own text, of course, is a bedrock for both, but students also engage Leonard Koren's *Wabi-Sabi: For Artists, Designers, Poets, and Publishers*, Susan Griffin's *A Chorus of Stones*, Adrei Tarkovsky's *Sculpting in Time*, and Conlon and Rue's *Networked Writing Environment*. Though this relay will not proscriptively assign readings that help to achieve the course learning outcomes, Ulmer's precedent is followed in offering additional material that illuminates the objectives. The optional readings listed here and in the following two relays are suggestions, in no hierarchical order, which could be useful for new electracy adopters and students alike. In following the NCTE's "Professional Knowledge for the Teaching of Writing" guideline to define composition broadly, I include traditional books and non-traditional compositions as readings. Each is intended to further one's understanding of the Playlist assignment.

In "Video and Participatory Culture: Writing, Rhetoric, Performance, and the Tube," Geoffrey Carter and Sarah Arroyo explain the act of contributing material – usually videos – to the wider database of YouTube, Vimeo, or any video sharing Web site as "tubing." Often, videos belong to one or more assemblages or playlists that forge unique connections and immerse viewers in a theme or mood. Carter and Arroyo write, "Tubing captures the drift of an electrate, digital conduit that is

remaking our understanding of writing." Rather than assign their essay to explain tubing, an optional reading for this relay is to link students to several "tubing" playlists on a music or video sharing Web site like Soundcloud or YouTube. The playlist could serve as examples of how other egents have approached the task of evoking a mood and highlight the affordances and limitations of each Web site for uploaded content. Pairing Mauer's "Nietzsche at the Apollo: An Experiment in Clipography" with the playlist(s) could reinforce the conceptual aspects of a video collage such as intertextuality, collective authorship, use of fragments, and polyvocality. Mauer writes of the emphasis on clips in clipography: "[B]ecause computer screens can display only a limited amount of information at one time, it is more appealing to use shorter 'beats' in composition – no more than a few key ideas in one unit – and to link these beats hypertextually" ("Nietzsche" 245).

The appeal of "beats" might also be seen in collaboratively-authored media. The inclusion of a popular wiki – Wikipedia or Wikia, for example – would illustrate open authorship and collaboration across time and space. The wiki, like some tubing and music playlists, could be open to student involvement, so the "reading" would be interactive. Wikis are by their definition fluid and ever-evolving (Johnson-Eilola 214). Most wikis are non-profit entities in which users collaborate on individual pages that foreground the verbal over other media and fact-based information over creative endeavors. A nascent project like actor Joseph Gordon-Levitt's avant-garde collaborative media production Web site HitRecord (usually stylized as hitRECord) could be juxtaposed with a wiki to highlight alternative approaches to collective authorship in a larger collection. HitRecord, a for-profit organization, fosters the

generation, review, and remix of others' works to build feature films, books, music, and multimodal innovations. Despite the for-profit model in which Gordon-Levitt and his employees benefit from the sales of products created through his multimedia conduit, HitRecord is ideologically grounded in electrate principles that are necessary for the creation of effective playlists in this relay. Alternately, students could view Storify timelines built from tweets to witness the results of a curatorial process. Storify, which has grown in popularity since its launch in 2010, allows users to compile various fragments and re-order them to provide context or an entire narrative regarding an event. Though the product of a Storify creation is linear and structured as a narrative, the process mimics playlist building. Scott Rettberg's "All Together Now: Hypertext, Collective Narratives, and Online Collective Knowledge Communities" elaborates on contributions to open texts like wikis, HitRecord, and Storify and could serve as an optional supplement.

Other potential readings for instructors who implement the Playlist relay include excerpts of Ulmer's *Internet Invention* and Johnson-Eilola's "The Database and the Essay." Chapter 2: Image (Punctum, Haiku, and Cultural Mood) of *Internet Invention* might prove a difficult read for many, but Ulmer explains in depth the significance of the punctum and mood in electrate composition. The haiku relay offers an alternate methodology for achieving those goals, and Ulmer's inclusion of several exercises to evoke mood might further clarify the Playlist. Johnson-Eilola's "The Database and the Essay" in *Writing New Media* similarly mixes theory and praxis. Collection, articulation, curation, and deconstructed non-linear narratives are Johnson-Eilola's foci, and his blog project and search engine analysis might help

future electracy adopters in understanding articulation theory in action. Finally, a sample student project from my 20th Century Cultures course at Tidewater Community College titled Motownhitsville might give instructors an impression of how a basic playlist homework assignment might look. The student, whose name is withheld, mixes imagery, video fragments, background verbal descriptions, original lyrics about Motown, and quotations in a Tumblr blog to capture the feeling of the legendary 1960's music scene in Detroit.

Assignment and Exercises

The Playlist antidefinition collage assignment is deceptively simple. Despite meeting several electrate learning outcomes and utilizing various readings from tubing playlists to collaborative wikis, the Playlist instructions can be contained in a single statement. Mauer's electronic monumentality assignment for first-year students or Ulmer's Writing Through Media Image of Wide Scope project set the precedent for simple electrate assignment descriptions, though both receive further elaboration for students in and out of class. Following these examples and Dilger's call for "ease" in electracy, the Playlist relay assignment is as follows: *Collaboratively construct a multimodal antidefinition playlist that captures a mood and evokes an emotional response*.

This one-sentence assignment is intentionally open to interpretation; digital natives have the flexibility to post the playlist to any number of digital locations, including a Web site, YouTube, or a flash drive. Groups can take whatever form an instructor prefers, and the antidefinition encompasses any abstract term, not just one limited thematically. Students might, for example, elect to (anti-)define a term closely

related to emotions like “love” or “pain,” or they could elect to articulate a playlist based on “civil disobedience,” “obsession,” or “adult.” With each antidefinition comes endless possibilities for audio, video, imagery, and design. The mood or emotional response can be determined by the instructor, classmates, or even a broader public audience, but the connections between fragments – likely radical in literate practice – should be apparent to all. Arroyo writes, “Postpedagogy relies on making and forging connections among disparate, ‘fuzzy’ fragments that, in print culture, appear irrational or simply coincidental” (*Participatory* 102). The “fuzzy” fragments used – like the readymade objects in Hink’s assemblage project – require arrangement and juxtaposition but not one’s own opinion or argument (Hink 14). The identification of patterns from the disparate multimodal pieces results in the eureka moment, much like in Rice’s antidefinition class exercise in which students locate all terms from other disciplines related to an (anti-)definition and review how the initial area of study changes based on those other meanings (*Rhetoric of Cool* 44).

The Playlist relay encourages instructors to view students as curators preparing for an exhibition of their collections. The curatorial process of weaving together felts is one that belongs in electracy pedagogy as well as the writing classroom. Sirc contends that the arrangement of fragments to construct meaning is a postmodern compositional skill (123). Use of visual fragments, whether images, videos, or multimodal ensembles, complicates curation as students must understand their impact on viewers. In *Internet Invention*, Ulmer adds, “To write with images requires an understanding of the atmosphere and aura evoked by things, just as to write with concepts requires knowing the meaning of terms” (56). The latter half of

the one-sentence Playlist assignment emphasizes the generation of mood and a punctum sting; to collaboratively discover a mood, egents need to embrace an aesthetic approach rather than an analytical one. This poses a problem for many students in the curation process because literate tendencies are deeply ingrained. Sullivan writes that her experience teaching a postmodern collage assignment not dissimilar to the Playlist was rife with complications. Her students faced major difficulties in "resisting the inexorable pull of familiar writing conventions" like the linear narrative and rhetorical analysis; the result was an exhibition of "messy" works (135).

To prepare students for the challenging Playlist assignment, a pair of quasi-electrate exercises – a wiki and Twitter use – could be implemented to illustrate the principles needed to curate a collection. A wiki specifically illustrates shared authorship, fluid meaning, and choral thought. The decentralized authority of popular wikis like Wikipedia resulted in their successes; collaborative writing is not only preached but practiced. Rettberg notes that Nupedia, an early predecessor of Wikipedia, failed because the collective efforts often failed to bypass the peer review process. Rettberg adds that unlike Wikipedia, "[Nupedia] failed to trust the collective intelligence of the network" (199). When faith is sustained in the network, vandalism is trumped by passionate amateur editors, illustrating that collaborative efforts can work with enough investment from users (200). The open-source authorship of wikis can lead to choral writing, important for antidefinitions. Susan Loudermilk Garza and Tommy Hern argue that wikis are dynamic and shifting despite fixed meanings of

many pages; connections not anticipated by designers can occur, and the collaborative nature of a page can result in a fluidity not otherwise seen in composition.

Popular multimedia social network Twitter similarly promotes collective knowledge while articulating fragments, or tweets. Twitter users post brief, 140-character updates that can include images, video fragments like Vines, or links to live streaming video on Periscope. The 140-character limit forces users to practice brevity and – ideally, at least – consider carefully their diction and stylistic choices; tweets, however, rarely convey more than a single idea and thus are fragmentary thoughts. The purpose for tweeting varies, but Michele Zappavigna writes in *Discourse of Twitter and Social Media: How We Use Language to Create Affiliation on the Web* that microblogging on Twitter is often to find shared values and appreciate playful uses of language and memes (6). Users seek to "remain in the collective consciousness" as hashtags and trending topics compile fragments into easily searchable categories (37). The collaborative knowledge developed via articulation on Twitter is proof that negative associations with the network as narcissistic oversharing are unfounded. Clive Thompson suggests, "It's practically collectivist – you're creating a shared understanding larger than yourself" (qtd in Arroyo, *Participatory* 45). Assigning first-year students to engage each other and their communities – or even simply their bands in class – via Twitter could offer an entry point into electrate ideology and prepare them for the Playlist.

Relay #2: The Transduction

While the Playlist relay finds its origins in mix tapes, the second electrate relay I am proposing derives from the *re*mix. Originating in avant-garde arts of the

early 20th century, particularly Dadaism and surrealism, the remix has persisted as a viable artistic methodology in Pop Art, hip hop sampling, and now mashup culture as technologies have increasingly enabled easy alterations and accessibility to anyone with a computer (Gye, "On the Way" 7). In new media, the remix has transitioned from avant-garde art to everyday practice; pop artist Andy Warhol's Campbell's soup paintings and hip hop pioneers the Beastie Boys's *Paul's Boutique* were viewed as radical remixes in their original contexts, yet American portrait artist Kehinde Wiley's innovative pastiche paintings and DJ Girl Talk's mashups are a sign of the times. The remix requires an altogether new understanding of authorship, text, and stability of modalities. In their electracy glossary, Rice and O'Gorman contend that the remix is the quintessential new media methodology.

> Stop thinking of media in terms of permanent and stable production. In addition, stop thinking of media in terms of authorial creations. Place yourself outside of the authorial concept and allow yourself to become a media-being, one who is a remix as well as remixes. Instead of producing 'true' texts, consider the alternative, the out-take, the remake, and the remix as new media divergences. (14)

The notions of "authorial creations" and "true texts" continue to be complicated matters in literacy. Warhol, the Beastie Boys, Wiley, Girl Talk, and other remix artists are credited as the creative geniuses behind their re-appropriations despite lawsuits and claims of plagiarism. What constitutes acceptable sampling or fair use under United States law is often a point of contention, especially in terms of academics and artistic expression. Yet the mashup, cut-up, Photoshop, remix, and re-

appropriation remains popular in popular culture, prompting Rice to inquire how we can appropriate non-university interactions into the writing classroom (*Rhetoric of Cool* 47-48). In his foreword to Rice's *Rhetoric of Cool*, Ulmer similarly asks, "Why are we not teaching the cut-up in our composition classes?" (xiv).

This relay, the Transduction, offers a solution in which students transform an artifact from one mode to another, a seemingly simple process that has profound effects upon the content (and potentially the user and his choices). In a transduction, a term re-purposed from biology and genetics by Kress and Van Leeuwen to describe the translation of material between semiotic modes (e.g., image to text, video to script, text to audio), a "media-being" discovers the affordances and limitations of each modality of communication as well as what is added or lost in translation. The move from a text to image, for example, results in the loss of some, but not necessarily all, verbal language and hence narrative, logical reasoning, rhythm, and pacing; however, color, symmetry, use of white space, and other design aspects become salient in the image. The Transduction can occur between any modalities or combinations of modalities and the possibility of appropriating from other works to build the translated content muddles the process.

In *Reading Images: The Grammar of Visual Design*, Kress and Van Leeuwen describe how transduction reshapes the subjectivity of a child who transforms content between semiotic modes; in their extended example, a young student draws lines to connect similar things, a challenge for the child.

> [T]he visual mode offered him semiotic and cognitive resources which were not available to him in the verbal mode. However, once

> expressed in the visual mode, once classified through the visual/spatial mode, the meaning which the child had produced became available as externalized, objective expression; this in turn may have made them differently available for verbal expression, for the verbal ratification of the semiotic, affective/cognitive processes that had already taken place. This incessant process of 'translation,' or 'transcoding' – transduction – between a range of semiotic modes represents, we suggest, a better, a more adequate understanding of representation and communication. (39)

The variation in meaning expressed by the child in the visual and verbal modes illustrates the complexities of the inner workings of our brains. By moving from verbal instructions to visual composition – remixing the answer from one mode to another – the child is able to express understanding. Our writing students are expected to display competence in multiple modalities, especially the verbal, but how might their interaction with new media improve with the implementation of transduction assignments? A remix from one mode to another with an accompanying literate analysis might promote a stronger understanding of the "semiotic and cognitive resources" available in each modality; a transduction appropriates from one's own work – as possibly others' – and encourages digital natives not to "be squeamish about re-purposing images for [their] own devices" (Rice and O'Gorman 12).

Description and Justification

The immediate comparison for a remix assignment in a traditional writing classroom might be the compare and contrast essay; students juxtapose two or more

items, events, or ideologies to find common ground or disparities. But no conversion or translation occurs in a compare and contrast argument. Instead, the closest comparison for the Transduction is a digital storytelling project in which students compose a script or storyboard and then design an electronic narrative – broadly defined – that brings the verbal and/or visual draft to fruition. Though digital storytelling is not widely adopted in first-year composition courses, at least across the VCCS from my personal experience, the assignment principles – an engaging narrative that blends personal experience with vivid detail, arrangement and structure of a story for maximum dramatic impact, and possible immersion into research on a related issue – closely match those of standard narrative assignments while adding other modalities. Amy Patterson writes that because digital storytelling involves students' personal histories, the project helps them to realize that their experiences matter. The digital story can serve as a springboard for further academic inquiry, and the sources students find in designing their projects can vary from scholarly articles to images and videos. Patterson's developmental writing students use digital tools as wide-ranging as MovieMaker, Prezi, and Audacity to convert written experiences into videos, slideshows, and audio files, acts of transduction that demonstrate the shared features of digital storytelling and the Transduction relay. The arrangement of fragments via conduction to create a cohesive digital storytelling video or slideshow also constitutes an electrate form of parataxis, which Rice explains is juxtaposing "items [that] can be arranged and positioned in a variety of ways and each time generate meaning even if the organization is not clear" (*Rhetoric of Cool* 58). The ability to articulate fragments to form new meanings is aided by the open accessibility

of digital tools like those used by Patterson's students as well as the endless results from search engines. Gye adds, "The ease with which one can take from the cultural ether and reuse materials in one's own cultural productions is facilitated by and underscores the explosion of material available in networked culture" ("On the Way" 8).

Though the Transduction captures electrate qualities of conduction, juxtaposition, and aesthetics, it does not replace the traditional narrative. Wysocki argues in *Writing New Media* that new technologies do not automatically overthrow old practices, and the same principle applies to electracy relays ("Opening" 8). The juxtaposition of (digital) narrative composition and the Transduction relay might be viewed instead as a microcosm of the co-existence of the literate and electrate apparatuses. Cultural shifts necessitate the emergence of new forms of writing and attention to the process of creating – or remixing and translating – the new media. The Transduction assignment highlights what is gained and lost just as electracy theory stresses the changes in ideology and knowledge creation. The goal of electracy, according to Ulmer, is to analyze the transductive act from the age of the printed book and its linear nature to the digital age. Ulmer writes, "The major adjustment to be made, and made first of all at the level of epistemology, concerns the shift from the book to television as the principal educational medium" (*Electracy* 14). The Transduction relay guides students to think within the age of television and the Internet by viewing the verbal and new media alike as impermanent and unstable articulations that can be translated and remixed by anyone. The move from one semiotic mode to another requires acts of translation, and an increased awareness of

the “languages” of each mode will begin to foster electrate ability for today’s digital natives.

Objectives and Learning Outcomes

After completing this relay, students will ideally have improved decision-making in the remix translation process. Understanding how a collage transforms into a video or text-based script becomes an audio podcast requires careful analysis of how each modality is created and what is unique to each. The NCTE contends, “Knowledge about writing is only complete when writers understand the ensemble of actions in which they engage as they produce texts” (“Professional Knowledge”). That ensemble of actions might include attention to design, arrangement, diction, or any number of processes that occur when “writing” in any mode. The actions could also incorporate electrate principles like conduction, aesthetic design, and juxtaposition, each of which is a central learning outcome of the Transduction.

Conduction, which Ulmer declares is the logic of electracy, is “inference proper to images” (*Internet Invention* 9). The egent becomes a conductor by occupying a space between incongruent fragments and fields of study, generating new meanings from various pieces – often images – through articulation. Garrett-Petts and Nash further explain Ulmer’s coinage: “‘Conduction’ becomes Ulmer’s proffered alternative to inductive and deductive reasoning: conduction (another neologism) employs the logic of jokes and riddles, and the techniques of film-makers and video artists.” The “grounding” done by an egent in the Transduction relay is a form of play, juxtaposing, mashing, remixing, and exploring the unexpected – all what Rice would label “cool” media (*Rhetoric of Cool* 35). Hawk emphasizes that the conductor

is generating new methods rather than simply following methods (*A Counter-history* 248). Thus, a transduction does not follow rigid guidelines but instead allows for students to invent their own process of translating material from one semiotic mode to another; any software or procedure could be used as each offers unique possibilities for transduction. The importance of play in conduction cannot be underestimated as "it also reminds us of the classical injunction that art should both instruct and delight" (Garrett-Petts and Nash). A fun conversion from image to text or audio to video mashup turns the student into critic, "a kind of performance artist" who is not just interpreting as translator but re-envisioning the process itself (Garrett-Petts and Nash).

When operating with various modalities in a transduction, an egent is unavoidably utilizing visuals; multimodal ensembles like Web sites, videos, collages, and even books include visual components. Very few English instructors are comfortable with the notion of students becoming composer/designers and teaching visual literacy, Selfe contends, but Ulmer would refute that claim by acknowledging that all work – literate and electrate – is inherently visual and our students always have been composer/designers of texts ("Toward"). The egent's goal in all electrate work is to carefully consider an articulated aesthetic, much like the playlist in the previous relay. Ulmer uses haikus as an example of a predecessor of effective Web writing because the poetic "principles of brevity and aesthetic design" capture the zeitgeist of electracy (*Internet Invention* 51). An aesthetic can be constructed in any text or felt, and some scholars like Sirc already emphasize the importance of design in all instruction. Sirc writes, "A primary goal now in my writing classes: to show my

students how their compositional future is assured if they can take an art stance to the everyday, suffusing the materiality of daily life with an aesthetic" (117). An aesthetic response might include reaction to color, form, texture, or other sensory qualities of text, image, or design, but most importantly, the designer and viewer/reader should be "simply having the experience" (Foss 145). Creating texts and images become artistic endeavors. Consideration – and experience – of the aesthetic qualities of both the original and the translation is an essential learning outcome in a Transduction assignment.

In placing an original and an emerging translation side by side, an electrate conductor is inevitably juxtaposing, one of the hallmarks of electracy according to Rice. Electronic media is well suited for juxtaposition because of the ease of spatial composition in programs like Photoshop (Rice, *Rhetoric of Cool* 79). Reading, viewing, or listening to transductive artifacts in close comparison and contrast reveals specifically what translations were made; the placement could even be simultaneous as in the case of mashups. Closer attention can be given to aesthetic design and visual design, and the affordances and limitations of each mode are easier for an egent to analyze. Juxtaposition, remix, and transduction can lead to questions of intellectual property and plagiarism, but this concern is addressed in depth in Chapter 4.

Optional Readings

As in the Playlist relay, the potential readings to prepare electracy adopters and students for the Transduction vary from traditional academic research to non-traditional work that models the remix process. Any number of plays or movies produced from adopted screenplays, for example, could be juxtaposed alongside the

original written transcripts or books to highlight the translations made by the screenwriter, director, and editor. The same could apply vice versa, though the move from feature film to book is much rarer. Instead, the common fan fiction extends film universes like *Star Wars* or *Harry Potter* to future occurrences, origin stories, and mythologies of lesser-known characters. Inclusion of fan fiction, whether written, filmed, or created as an audio book, alongside the original work would illustrate how creative endeavors can occur in any mode and how others use their imagination to translate semiotic material.

Reading excerpts of Kress and Van Leeuwen's *Reading Images*, Arroyo's *Participatory Composition*, and Gye's "On the Way to Electracy: From Mystory to Remix" would offer instructors a theoretical grounding for transduction, video mashups, and remix culture. Kress and Van Leeuwen focus entirely on visual grammar, which encompasses most modalities (excluding audio), and offer an extensive vocabulary for discussing images and multimodal ensembles. An understanding of modality markers like color saturation, depth, and brightness would benefit intensive instruction of visuals and aesthetics (160). Likewise, Kress and Van Leeuwen's emphasis on design as central in the construction of a text or felt could change how composition instructors approach page layout and arrangement. They argue, "[T]he material production of a design is not just the execution of something already complete, but a part of meaning-making" (215). Arroyo's foci on videocy and mashups is useful because of her electrate framing of new media production. In reviewing choral thought and choragraphy, Arroyo offers an example of a successful mashup video remix of French alternative rock band Phoenix's hit single

"Listzomania" (*Participatory* 74). Illustrating how a mashup that blends a popular song with movies like *The Breakfast Club* fits the postmodern framework is beneficial to developing a transduction. Gye's work approaches the remix as a natural extension of electracy. Contrasted with the mystory, a "deliberate attempt" by Ulmer to invent electracy, the remix assignment "emerges from the same networked capabilities of everyday life experienced outside the university in literature, art, music, and image making cultures" and is thus "a form of organic heuretic practice" (7). Gye's experience teaching the remix is included in her brief but informative essay, and her reassurance of the remix's place in the composition classroom might persuade hesitant instructors to experiment with the assignment.

Two other readings for the Transduction relay that meet the learning outcomes and prepare students for the remix assignment include infographics and avant-garde alternative folk singer Beck's *Song Reader*. Infographics are visual representations of research data, often in the form of statistics, patterns, and trends. Graphical displays vary widely in aesthetics as they represent time, space, networks, or hierarchies. Infographics are a fascinating read for students translating material from one semiotic mode to another because they generally improve the readability of information for an audience and popularize scholarly research that otherwise could be buried in academic journals or larger sets of statistics and findings. What is gained in the transduction from data to infographic could provide thoughtful class discussion. Another one-way transduction is from sheet music to performance. Beck's 2012 project *Song Reader* was released to the public as 20 songs in sheet music form without his own interpretations included; the intention was to allow for anyone who

can perform music to release his or her own versions. Though sheet music offers instructions for transduction, the open-endedness of many musical qualities – the unique sounds, tones, timbres, and pitches emitted from instruments, including vocals – ensures a diverse set of realizations of *Song Reader*. The reading might include various interpretations of the sheet music to illustrate the similarities and differences evidence in each artist's performance.

StoryCenter, formerly known as the Center for Digital Storytelling, offers many sample digital stories themed in categories as wide-ranging as education, healing, family, human rights, and place. The digital stories included, almost all of which take the form of a video, do not always include earlier versions of the final products – the written script or multimodal storyboard – to illustrate the act of transduction. However, samples that link to earlier materials can provide instructors with a model for the assignment or a stimulus to spark in-class discussion about the Transduction.

Assignment and Exercises

To complete the Transduction assignment, access to a wide range of digital tools for remixing is necessary, though technical expertise is not. Fortunately, digital natives are increasingly well equipped to develop collages, videos, images, and other new media. In a 2008 Pew Research Center study in partnership with the National Commission on Writing, a focus group and survey of over 700 teenagers and their parents revealed that 94% of all teens use the Internet and approximately 70% have cell phones (Lenhart et al 4-8). Almost three-quarters of students likely have video recording capabilities, and many will have access to apps that allow for video and

image editing, such as iMovie and Instagram. For those who are less tech savvy, the translation of text or video to a collage is easily accomplished as "the Internet is a collage engine" (Ulmer, *Electronic Monuments* 71). And as Wysocki argues, new media does not always necessitate electronics or computers; works created by composers who highlight an awareness of materialities can similarly be defined as new media ("Opening" 5). Thus, the move from image to text or collage to musical performance, both minimally technologically demanding, could be interpreted as electrate.

The Transduction assignment, like the Playlist, is encapsulated in one sentence: *Translate an artifact you created into another semiotic mode, separately analyzing what is lost and gained in the process*. The emphasis on an artifact – a vague term for semiotic production – previously created by the remixer is not essential to the act of transduction; however, it will benefit the accompanying analysis as the student can recall intentionality in the original artifact and perhaps seek the same meaning-making process in another mode. The independent analysis, which could occur in any mode (e.g., video reply, essay, audio mp3) keeps the assignment grounded in literate practice but furthers the discussion of affordances and limitations in the transductive act; simply remixing a text-based tweet or status update to video, for example, would require minimal effort, but questioning what is gained in the tweet-conversion process – perhaps the body and subjectivity as Arroyo argues – requires critical thought (*Participatory* 48). Students as conductors must explain the methods used or generated to translate the material; attention to unique methodologies could lead to further class discussion about the transduction process

and the egent's role in the emerging apparatus. Arroyo's students build their own multimedia projects in her Digital Rhetoric course, blending imagery, videos, voiceover, and research into popcycles with accompanying seminar papers. Though these projects are much more complex than the Transduction and likely too advanced for first-year students in the VCCS, Arroyo's Inventing the Electrate Apparatus course grants viewers open access to student projects and comments from both Arroyo and fellow students. Instructors concerned about the lack of models for transductions could turn their students to these well-developed final projects as relays for conduction and electrate engagement.

To build up to the Transduction assignment, students could complete a simple collage or remix project or a more intensive digital story. A collage assignment, though closely related to the playlist, builds a student's perspective on aesthetics and juxtaposition and how a series of fragments can be remixed into a new cohesive felt. Students who feel underprepared for the Transduction due to a lack of prior artifacts created would now have access to a multimodal ensemble to translate into another semiotic mode. In *Electronic Monuments*, Ulmer explains a brief collage assignment to prepare students for MEmorials; a conductor archives pictures, articles, videos, and other fragments found on the Internet "as a vocabulary of stock representations of your news event as a scene" (71). This simple collage is a low stakes remix exercise that prepares students for a more creative transduction assignment. A basic remix project like the one recommended by Gye could boost students' confidence in their technological and conductive abilities. Gye writes that arts and humanities students in her courses "are often challenged by the use of technology but are often surprised by

how readily they adapt to the challenge" ("On the Way" 9). Having students, for example, convert a Facebook or Twitter status update into a video update or tweet could be a simple homework assignment to prepare students for more rigorous work. An added benefit is the potential for continued student engagement with video updates, which Bonnie Lenore Kyburz bemoans is underutilized "given the technological means" in her engaging video "Status Update."

Digital storytelling exercises and assignments demand much more of a time commitment as students work through seven steps – from owning an insight and emotions to assembling and sharing a story – to take an idea to a disseminated multimedia production (Lambert 53). Perhaps as a follow-up assignment to the transduction, a digital story pairs well with the content of this relay as students move from script or storyboard to video, Web site, or another multimodal semiotic mode. My own experience teaching digital stories is that they are rewarding projects for composition students who learn more about pacing, citing images, juxtaposing and arranging, and blending fragments to articulate meaning. Because the digital story often involves a student's experiences, the project has much "potential for democratization and empowerment," electrate goals that Ulmer promotes in his mystory (Davis and Weinshenker 50).

Relay #3: The (Sim)ulation

The first two relays – the Playlist and Transduction – are informed by Ulmer's electracy theories, exercises formed by Florida School advocates, and my own minor additions. The third relay, the (Sim)ulation, however, explicitly borrows from and remixes Ulmer's model electrate assignment: the mystory. An immersive, engaging,

and lengthy project, the mystory guides students to self-discovery and awareness of fragmented postmodern identity and interpellated agency. Described by Ulmer as "not a text but a felt," the mystory moves through the popcycle discourses as egents construct their image of wide scope to uncover emotional responses (*Internet Invention* 37). As conductors, students actively – not passively – invent by identifying patterns that emerge as the image of wide scope is constructed (Orozco 32-33). Students' images of wide scope, which are written on several Web pages and contained in one larger project, are fully formed before high school but only realized through introspection and reflection in the electrate apparatus (Ulmer, "Teaching"). Ulmer and Vitanza each share their own mystories to demonstrate that all egents have their own images of wide scope and outwardly display models from which to get an impression of how the project is systematically assembled.

Santos et al. describe the mystory as an exercise in understanding the interpellating forces upon one's identity and agency.

> [T]he mystory is an attempt to map the recursive, feedback-infused influence of networks, to reveal what / who bounds a self into the avatar that plays me / that I play. Ulmer's avatar frames selfhood as a messy conglomeration of body and mind engendered and sustained through networks. A central goal of the mystory concerns exposing this conglomeration via memory. (Santos et al.)

Some key words that Santos et al. include in their depiction of the mystory are map, network, avatar, selfhood, and memory. The methodology of a typical mystory is to map out one's popcycle; charting strands of the rhizome that is one's memories and

experiences might look like an infographic of a social network, a messy conglomeration of color-coded associations that resembles a massive, complex spider's web or chart of flight paths. It might also be comparable to a visualization of synapses firing in one's brain as memories are recalled and emotions are felt. Ulmer points out that the autobiography genre, unlike the analytical or descriptive, thrives in electracy because this mapping of "truth and the real" exists (*Electracy* 15). The importance of selfhood and avatar in the mystory is fascinating because of the opportunities it offers electracy adopters and their students for future remixes of the genre. Arroyo adds, "[S]tudents should invent and reinvent established genres like the MyStory and MEmorial" (*Participatory* 121). A few of those reinventions inform this relay.

To immerse students in the popcycle and externalize the reflective journey of the mystory, exploration of one's avatar through social media profiles or a virtual world or video game is added in the (Sim)ulation. Building upon the method of Web site creation to articulate the image of wide scope findings, this relay – to be realized either as an extensive mystory remix or a building exercise toward the larger mystory project – presents two, of many potential, options for egents to understand their digital identities. Avatars are defined by Castronova as both "the representation[s] of your physical being in that other place" and "just an extension of your body into a new space" (34, 45). What constitutes an avatar varies from crude representations of humans, animals, and fantasy characters to photographs and "real" visuals; the avatar, however, as a representation or extension of self is closely tied to identity, which originates from the Latin word idem (sameness between two qualities) (Turkle 5).

With the postmodern notions of multiplicity and fragmentation of identity – derived from Parisian theorists Deleuze, Guattari, and Jacques Lacan – it is fitting that electracy explores the avatar (6). Ulmer stresses the significance of identity to the emerging apparatus. In an interview with Clinton, Ulmer contends, "The point is that electracy does for the affective body what literacy did for the cognitive mind. Playing one's avatar is for electracy what writing an essay is to literacy" ("The Genealogy"). The mystory – and (Sim)ulation – is then a fitting parallel to the research argument.

The two options presented in the (Sim)ulation relay for experiencing one's identity as it moves through the popcycle are social media profiles and games/virtual worlds. The 2008 Pew Research Center study finds that 58% of teens from 12-17 years old have social media profiles, and that number rises for digital natives who are enrolled in college or a university (Lenhart et al. 25). With so many millennials engaging popular social media that features profiles – not all social media utilize the profile page (e.g., Snapchat) – such as Twitter, Facebook, and Instagram, the likelihood of at least one avatar, and potentially many different avatars, is high. Each avatar is ripe for exploration, or a new profile could be constructed so as to not interfere with students' privacy concerns. Video games and virtual worlds similarly present a "cool" space to spark or recreate memories for the popcycle. Castronova describes virtual worlds constructed for many video games, simulations, and massively multiplayer online role-playing games (MMORPGs) as "intermediate environments" with "genuine feelings and actual phenomena" (9, 8). One example of these 3-D virtual worlds is *The Sims Online*, a now-defunct life simulator that offered users a communal shared experience of living through an avatar. This relay, titled the

(Sim)ulation as an affirmation of the influence of *The Sims* on simulations and virtual identity, encourages students to play in games or simulations to come to understandings about their virtual identities.

Description and Justification

When incorporated into a composition course, the (Sim)ulation is designed to be juxtaposed – or fully replace – a capstone research essay. Like an extensive research project, the image of wide scope development in a mystory takes an extended amount of time. Santos et al. describe a mystory project in a New Media Production graduate seminar as taking nine weeks to complete. An immersive journey into social media profiles, a video game, or a virtual world to discover emotional pricks and simulate one's image of wide scope similarly requires a serious obligation in time and effort. A mystory is not intended to replace research argumentation but rather serve as a supplement to literate schooling; however, it is unlikely that an instructor will fit two major projects into one composition course (Ulmer, *Internet Invention* 18). The mystory can be understood as expressivist research into one's own memories and experiences rather than a broader issue; Ulmer describes the quintessential electrate assignment as "a means to communicate with oneself" as egents exploring electracy theory "perform learning and inquiry using media technology" (Ulmer, "The Grammatology" 141-3). The mystory, which comes to fruition from pattern recognition in the repetitively looped popcycle, does not result in facts or shared knowledge but individual perspectives beneficial for digital agency (Dilger 131). Gye adds, "It does not aim to produce universal truths but rather lets specified subjectivities speak in the full context of their localities" ("On the Way" 4).

In the (Sim)ulation, the mystory is realized alongside or through a student's online avatar journey. The avatar might exist in social media profiles, virtual worlds, or any number of digital spaces, though this project focuses only on the first two. Avatars provide a "point of entry into electracy" because the fragmented, postmodern self comes into light through memory articulation in a mystory (Ulmer, *Avatar Emergency* 76). Santos et al. describe one's avatar in electracy as similar to Donna Haraway's cyborg, not a singular self but an amalgamation of selves and a digital form of subjectivity. Santos et al. write, "Ulmer's avatar frames selfhood as a messy conglomeration of body and mind engendered and sustained through networks. A central goal of the mystory concerns *exposing* this conglomeration via memory" (emphasis added). One's social media profile selves, on Twitter for example, are identity performances to build social bonds and engage in humorous play as part of a community (Zappavigna 38, 94). Exploring how these selves, whether on social media or in virtual worlds, are "exposed" is essential in an electrate mystory.

Extensive scholarship exists on ludology, gaming, and virtual worlds, so only a brief review of how games and simulations offer an appropriate venue for the (Sim)ulation avatar journey follows. Bogost writes that games – especially virtual worlds – often serve as synchronous microcosms for the natural, physical world: "[V]ideogames simulation the actual dynamics of the material world, and playing such games has the same effect as would real learning in the material world" (236). Gamers whose avatars participate in video games and virtual worlds operate within a set of rules and restrictions, much like in the real world, mixing play and agency. Interactive MMORPGs like *World of Warcraft*, *Second Life*, and *The Sims Online*

offer users a restricted set of actions, but the skills available within those rules can be limitless (Burn and Parker 56). One's avatar, for example, can build houses, fall in love, dance, play soccer, and even fly in *Second Life*, and those actions can result in punctum stings due to the visual fidelity immersing a user in the virtual world (Bogost 49). Several electracy adopters, namely Hanzalik, Freeman, and Holmevik, study the use of games in the apparatus to interpret dreams, construct immersive documentaries, and inspire invention and play, respectively. The vivid nature of virtual worlds can cause users to "feel" for their avatars. Bogost notes that games like *Animal Crossing* are "linked to real time, [thus] a player can conceptualize the game as a part of his daily life rather than a split out of it" (267).

Egents who explore their avatars in virtual worlds in which the line dividing simulation and reality is indistinct are more prone to punctum stings via new memory creation and thus the building blocks of mystory creation in the entertainment popcycle discourse. Castronova notes that "the need to connect is fundamental" and this is profoundly apparent in virtual worlds. Postmodern theorist Baudrillard's bold proclamation that "Our virtual has definitively overtaken the actual" is perhaps the truth (27). Johnson-Eilola warns that joining a virtual world or MMORPG that involves other players takes time as users should first explore and observe, "getting a lay of the land" before building and partaking in communal events (234). Though Johnson-Eilola's advice is sound, it might be understated. Castronova advocates for much more intensive exploration and observation in preparation of joining a virtual world community. He writes, "Only after *hundreds of hours* of immersion did I begin to have any success understanding what is happening there and what it might mean"

(3, emphasis added). Egents who involve their avatars in virtual worlds should be prepared for quite a lot of time – perhaps even a full semester – spent growing accustomed to the goals, social cues, practices, and communication of other avatars. This substantial time commitment might not be entirely possible, but true immersion in a simulated world is likely to have the most intense mystory experience.

Objectives and Learning Outcomes

Immersion into a (Sim)ulation is unsurprisingly a lesson in embracing an extended process and learning from the experience and journey as much as it about accomplishing specific objectives and learning outcomes; however, instructors who implement the relay will need several goals to which they align the assignment for effective backward design. Among those objectives are experiences with play and emotional pricks (punctum) and an increased understanding of both digital identity and agency. Play and the punctum were explicated in the Playlist relay; to avoid redundancy, they will not be reviewed in depth here. The (Sim)ulation nurtures play in social media or virtual worlds; though both are considered forms of entertainment, there is no negative connotations regarding play or fun in electracy. Ulmer writes, "Educators in [the] Platonic tradition attempt to contain the frivolousness of writing (its potential for 'play') by assigning 'play' to the 'innocent and inoffensive' category of 'entertainment' or 'fun'" (*Electracy* 35). Play can be taken quite seriously, and emotional investment in multiplayer, synchronous games is "almost unavoidable" (Castronova 74). In electracy, play is simultaneously play and not-play; Castronova adds, "It is a complex thing, a combination of real interaction and play-like context" (69). Thus, an egent can play via avatar but feel a lasting emotional sting. The

punctum, realized through epiphany, originates from personal memories, so collaboration is not as beneficial to discovering emotional stings in the (Sim)ulation. Emotional pricks via punctum a-ha recognition can cause a sense of dread or anxiety, and further realizations might impact one's digital – and physical – identity.

A central concern for theorists in the postmodern world, identity is often viewed as fragmented, unstable, and ever-evolving. Marshall W. Alcorn Jr.'s view of self as a "stable organized collection of voices rather than a random mixture of chaotic influences" is outdated in the digital age (qtd in Corrigan and Gers 169). Fluidity defines one's identity in digital spaces, Corrigan and Gers contend, as "it is human nature to revise self" (168). New media shapes identity, which is always in flux and only capable of (anti-)definition via articulation. A social media profile, for example, is always in flux as profile images change, timelines or walls fuse many voices, and "I" writing is considered identity performance. Ulmer argues that the Internet is an identity experience and the mystory project results in digital identity formation ("The Genealogy"). The concept of "selfhood" is decidedly literate, according to Ulmer, as digital selves are amorphous and authorship is always collaborative (Ulmer, "The Grammatology" 138). Understanding one's digital selfhood is of the utmost importance to community college students, Corrigan and Gers argue, as their direct experiences shape their agency and confidence as scholars of the digital age entering academic discourse communities (170). Students who complete the (Sim)ulation will similarly seek the popcycle fragments that collectively shape their fragmented identities; this awareness can result in digital agency. Ulmer recommends the use of online incarnation (daimon in the Western tradition) for

"identity emerging in the new apparatus" (*Avatar Emergency* 77). He writes, "Through avatar you go beyond the limits of 'self' to understand action from the position of communal well-being (event)" (77). This collective sense of agency available through avatars demonstrates that the potential for action exists in the digital age despite concerns about its postmodern loss.

With acceptance of one's postmodern (digital and fragmented) identity comes the possibility for agency, which Bogost defines as "genuine embodied participation in an electronic environment" (42). Concerns regarding the loss of agency within interfaces and networks interpellating our digital personae are far from unfounded, but awareness of those power structures and empowerment to invent in digital spaces is granted in electracy. Interfaces exist as in-between translational devices in new media, and because of increased interactivity in Web 2.0, interfaces "become instruments that allow us to construct and manipulate the appearance of what might be called 'reality'" (Ganes and Beer 59). A graphical user interface like Windows allows users translucence to operate outside of DOS written commands but still have access to the underlying structure; similarly, an interface that allows for simple Web design like Dreamweaver simplifies the process of HTML design. "Ambient and unseen" interfaces, however, can be a threat to our privacy and perhaps our digital fluency in navigating the Internet (64). These "space[s] of negotiation" require intense scrutiny (68). Timothy Allen Jackson contends, "It is imperative that cultural producers and consumers (including academics) be critically aware of the power that these technologies exert" and how they shape our individual and collective identities (289). The NCTE echoes Jackson's sentiments that awareness of power relationships

in every writing situation must be fostered because "some people's words count more than others … [and] some people's words come true and others' do not" ("Professional Knowledge").

The potential for collective action to operate within and manipulate interfaces as well as power relations in networks and writing situations is possible in electracy. Arroyo relays her experience of empowering students. Arroyo helps to shape students' subjectivities by encouraging them to participate in video culture and proliferate their ideas while engaging in reflection: "The idea of subjects-in-control who can change beliefs and actions based on critical reflection and act in their own best interests changes drastically in video culture, since the ideas of sharing and reciprocity drive action and cannot be separated from the subjects and the content themselves" (*Participatory* 30). The collective sense of agency gained in video culture can be replicated, but students completing the (Sim)ulation must engage in similar critical reflection while completing their projects.

Optional Readings

Given the prominence of avatars and virtual identity in the (Sim)ulation relay, half of the potential readings make digital persona a focal point. Openly borrowing from Kirschenbaum's intellectually stimulating Simulations English graduate seminar at the University of Maryland, I include machinima from *Second Life* (or any other video game) and Julian Dibbell's thought-provoking "A Rape in Cyberspace" as ideal entry points to the (Sim)ulation. Machinima, cinematic productions developed from 3-D video game engines, is edited to construct narratives, battles, quests, comedies, and dramas within virtual worlds or first-person shooters. With endless options to

choose from, instructors could select any form of machinima, though I encourage journey-based stories from *The Sims*, *Second Life*, or another simulation of the physical world so that students can anticipate how their avatars might be submerged in the digital spaces for the mystory building and recreation. Machinima creation could even be reviewed as a supplement exercise so that students document their experiences throughout the course. In Kirschenbaum's class, students were asked to develop avatars and document a journey – broadly defined – through *Second Life*. This immersive experience, captured by some students as a form of machinima and by others as a collage of screen captures, opened my eyes to the intensive efforts required to integrate into a virtual community. Students who view machinima or attempt to "play" in an MMORPG might gain a similar appreciation for virtual worlds and begin to understand their task in the (Sim)ulation relay.

Dibbell's "A Rape in Cyberspace," originally published in 1993 may seem outdated for today's digital natives who experience avatars much differently than Dibbell had at the time, but instructors still might expect an emotional response from students as the essay documents a cyber rape that occurs between avatars in a text-based LambdaMOO virtual chat room. The punctum sting felt when avatar Mr. Bungle violates the chat room users for hours conveys the authenticity and bodily response to avatars in virtual spaces. Dibbell's essay pairs well with Ulmer's mystory project with its intense focus on fragmented identities and the quest for emotional stings. A third option for instructors who plan to teach the (Sim)ulation with social media profiles rather than video games or virtual worlds is to "read" the various social media profiles of a visible celebrity. Kanye West, for example, builds a

fascinating persona on Twitter that can best be described as "an ongoing performance of identity" (Zappavigna 38). Whether that persona is an avatar, a carefully crafted image, an avant-garde performance, or a real look into a complex celebrity is a possible topic of discussion in preparation of this relay.

Readings that could further clarify the assignment for instructors include excerpts of Ulmer's *Internet Invention* and Santos et al.'s "Our [Electrate] Stories: Explicating Ulmer's Mystory Genre." In the introduction and Chapter 1 of *Internet Invention*, Ulmer defines, clarifies, and arranges the mystory by the popcycle institutions family, community, and entertainment. The mystory emerges, Ulmer argues, as egents recognize patterns in their everyday lives (18). The reflexive, expressivist composition of a mystory is elucidated as Ulmer reviews the discourses of the popcycle "into which members of a society are interpellated" and offers supplemental exercises to improve understanding of electrate terms such as conduction, antidefinition, and felts (24). Ulmer's *Internet Invention* is occasionally dense, but his opening introduction and first chapter clarify more than obfuscate and highlight the significance of identity and subjectivity in the mystory. Santos et al. offer another perspective of the mystory: their own experience with the assignment. Santos et al. reflect upon the good – increasing focus on listening and feeling, experiencing eureka moments, and developing digital agency for "acting politically and ethically in the 21st century" – and the bad – struggling to transform work that satisfies the guidelines to revelatory patterns, experiencing emotional shock, and lacking an understanding of Ulmer's jargon. Their findings indicate the importance of

careful planning prior to assigning a mystory, and certainly new electracy adopters considering the implementation of a mystory will appreciate their candor.

Assignment and Exercises

The (Sim)ulation assignment, due to its many facets, requires a number of supplemental exercises to steer students toward completion of the image of wide scope virtual journey. These activities when paired with the (Sim)ulation assignment culminate in a fully developed, well-structured project. One of the suggested exercises is to develop and/or analyze one's own existing avatar(s). In constructing one's avatar, countless choices are presented to the designer. Should the avatar look similar to the "real" person? What sex, race, age, and species is the avatar? If the avatar is a conglomeration of social media profile pictures, which images and accompanying descriptions best capture that online self? Sherry Turkle contends, "Identity play in cyberspace can be serious business because it can become a form of self-knowledge" (12). Indeed, many scholars consider avatars and online selves as prostheses of our human bodies. Hayles argues that in the age of technogenesis, online interactions may affect our bodies; her own anecdote of feeling as if her hands had been amputated during an Internet outage shows that our experiences in digital spaces can be "serious business" (2-3). Analysis of one's online selves in a brief video or essay might help prepare students for the (Sim)ulation use of avatars.

Other exercises that can scaffold toward the (Sim)ulation mystory are brief gameplay and simple mystory exercises from Ulmer's *Internet Invention*. Rather than become engrossed in expansive video games and potentially lose significant class time, students could be given the opportunity to play short video games that take

under an hour to complete. Portal, for example, features many levels that students could finish in minutes. Traditional arcade games like Tetris and Pacman could be played for hours, but both usually last only minutes. Many smartphone app games similarly approach the experience of play as a fleeting one. Experience with a "fun" game is not necessary; serious games that mimic real-life tragedies or cause punctum stings could similarly prepare digital natives for the (Sim)ulation. Though Ulmer does not promote video games in *Internet Invention*, his exercises to form an epiphany and make a homepage set up egents for the mystory process. The brief epiphany exercise, which helps students locate their point of entry into the new apparatus, is based on personal memories (63-64). Students who compose their epiphany can begin the process of building memories in each of the discourses of the popcycle. The homepage exercise provides students with a conduit for their mystory findings; by comparing their site with other personal sites on the Internet, design choices can be juxtaposed (73). With the student now prepared to post (Sim)ulation findings, she can begin sparking or building memories in virtual spaces and recognizing patterns via choragraphy.

The (Sim)ulation assignment, like the previous two relays, is simple despite its seeming complexity: *Articulate your image of wide scope mystory through the journey of an avatar – either online selves in social media profiles or virtual world representations – noting punctum stings and realizations of identity and/or agency*. The term "journey" was used for the avatar experimentation to emphasize the play involved and the discovery process of a mystory; instructors could interpret "through the journey of an avatar" as play prior to composing the mystory or as the

reenactment of mystory memories in social media profiles or virtual worlds. The options for avatar play were explicit, as was the significance of punctum stings in forming a mystory and the resulting awareness of identity and/or agency. Because a mystory is a discovery process, students might not come to a "realization" about their fragmented selves or possibilities for digital agency until well after completion of the project. Vitanza writes in a review of Ulmer's *Heuretics* that Freud's development of psychoanalysis was a form of mystory though he did not know it as it was being written ("Writing"). Vitanza adds, "The process of discovery in mystory is proleptic, with the question forever arriving out of perpetually re-answering it. This is composing as discovery. This is writing what will have been" ("Writing the Paradigm"). The inclusion of avatars in the mystory process might expedite the process of discovering one's identity and/or agency, but the involvement of the instructor in the process might also help guide students.

The NCTE advocates faculty building their own products at the same time as students so that they have a clear sense of the students' writing process from challenges to triumphs. In "Teaching Composition: A Position Statement," the NCTE states, "Writing teachers should themselves be writers. Through experiencing the struggles and joys of writing, teachers learn that their students will need guidance and support throughout the writing process, not merely comments on the written product" ("Teaching Composition"). Electracy instructors who assign the (Sim)ulation are similarly encouraged to experience the immersive project at least once; familiarity with the avatar creation or analysis process, technical skill and gameplay advice in virtual worlds, and troubleshooting memory articulation to navigate the popcycle are

all benefits of joining students in the creation process. McCormick writes that we should make our pedagogy visible to students (204). The post(e)pedagogical egent-instructor embraces open pedagogy; the electrate teacher is decentered yet deeply engrossed in praxis.

Conclusion

In proposing and juxtaposing all three relays, several guiding principles were followed: ease, balance, and flexibility. To guide the transition from literacy to electracy, Dilger's call for ease and translucence and Ulmer's and Mauer's simplicity of assignments were duly noted. Future electracy adopters – especially my colleagues in the VCCS attempting to integrate Ulmer's theory into first-year writing courses – and their students will be more likely to succeed in completing the relays if the assignments are brief and straightforward; complexity and opacity will not help the theory proliferate or the praxis continue its growth. The balancing of relays so that they inform each other and offer different learning outcomes from electrate theory allows for the modules to work in unison. Though any could be adopted on its own, constructing a class from all three would lead to a comprehensive electrate education. Coverage of a wide array of electracy skills results in ample content to assess one's level of electracy (or analectracy). The CCCC's "Writing Assessment: A Position Statement" states, "One piece of writing – even if it is generated under the most desirable conditions – can never serve as an indicator of overall writing ability … Ideally, writing ability must be assessed by more than one piece of writing, in more than one genre, written on different occasions, for different audiences." The Playlist, the Transduction, and the (Sim)ulation satisfy this criteria and provide a well-rounded

introduction to electracy. The flexibility of the modules was also by design. Each features a number of appropriations from electrate exercises and relays as well as literate practice; further remixes and improvements of the modules are encouraged as the apparatus promotes constant invention. The Transduction, for example, could be framed by a theme or focused as a specific modality translation; likewise, the (Sim)ulation could drop aspects of Ulmer's mystory for a more journey-based approach to digital identity in virtual worlds.

The NCTE maintains that students write a lot, whether through the verbal, visual, or multimodal ("Professional Knowledge"). Though many digital natives communicate most often in digital spaces, often through new media, their composition remains traditional literate practice shaped by age-old ideologies about authorship, knowledge, and truth. With the development of electracy praxis via new, engaging relays, an alternate approach to new media can be implemented. Students can cultivate their digital fluency by writing a lot within an electrate framework that encourages postmodern appropriation already seen in Hollywood remakes, jazz compositions, and standup improvisation (Ulmer, *Internet Invention* 9). Ulmer contends that new media requires a new practice; these relays provide a starting point for student to become electrate conductors.

Chapter 4: Electracy Assessment

In her 2016 keynote address at the Old Dominion University 37th Annual Spring Conference on the Teaching of Writing, Michelle Fowler-Amato reasoned that today's teenagers are always writing, though their compositions are not traditionally literate but rather creations in "uncommon writing spaces." Graffiti, Instagram posts, and tweets, for example, are frequent written contributions by digital natives (Fowler-Amato). Our students, whether intentionally or not, are embracing the notion of postmodern, multimodal composition. Writing as artistic expression (graffiti tagging), image conduction (posting images and video), and fragmentation and collaboration (brief tweets and re-tweets) is the preferred choice of everyday communication outside of the university. Students regularly engage one another, the NCTE confirms, via e-mails, instant messages, blogs, Web sites, and fan fiction ("Professional Knowledge"). These "uncommon" written forms and spaces are encouraging to composition instructors who fear a rapid decline in student interest in writing; if students are always writing, they are regularly engaging the composition process and honing their skills in developing multimodal artifacts.

By the NCTE's standards, reviewed in Chapter 3, and Fowler-Amato's contention, any multimodal projects developed from the guidelines established in the three relays I propose – the Playlist, the Transduction, and the (Sim)ulation – would be classified as "writing." However, digital natives do not consider their image-based or electronic compositions – text messages, e-mails, and social network posts – to be writing (Lenhart et al. i). The 2008 Pew Research Center study of teenagers' writing habits discovered 60% of respondents do not believe their common out-of-school

habits qualify as composition (ii). The NCTE's liberal definition of writing is not reflected in students' conservative definitions of writing, indicating many possible causes (e.g., the "uncommon writing spaces" are not being taught in college writing courses, students have misconceptions about the skills necessary for modern academic writing discourse communities) but more importantly, an opportunity to align the two.

In Chapter 3, I introduced the building blocks of an electracy curriculum to be implemented in increments and juxtaposed with traditional literate first-year composition pedagogy. In praxis, electrate writing more closely resembles what teenagers are already using to communicate: brief video clips (clipography), remixed YouTube videos (participatory composition, the Transduction), video and music playlists (the Playlist), emojis ("cool"), and shocking filtered images ("What the" outrageousness). The relays introduced in this project aim to guide and inspire instructors to harness students' existing curiosity and exploration in new media to immersive electrate experimentation. Writing teachers and composition scholars may experience hesitation adopting electracy relays, but the commonalities between assignments in the new apparatus and what students are already composing should ease any worries. More likely, the modern perception of writing will be anxiety-inducing when the "uncommon" works are in need of assessment. How are instructors to evaluate electrate new media? How does one critically analyze a collaborative choral antidefinition collection, a remix using only pre-existing fragments, or a mystory simulated via avatar? Hass's inquiries regarding electracy pedagogy and assessment deserve repeating: "[H]ow should we approach digital

technology in a pedagogical manner? … What LEVEL of electracy are we aiming for when it comes to pedagogy?" These inquiries regarding the assessment of "uncommon" digital compositions and electrate articulations serve as the driving force of this chapter.

Hass is not alone in her confusion. The general unease of instructors regarding electracy and new media generation and review is genuine and pervasive; the mystification of new media in writing – and specifically its grading and evaluation – has been documented by Linda Stewart in her 2011 essay "Measuring Up: The Uncertainty of Assessing New Media." Stewart relays an anecdote from the question-and-answer session of a conference presentation on new media assessment that she delivered:

> [One attendee asked whether] the presentation was 'an administrative attempt to control classroom grading to the extent we would all have a common rubric for every composition assignment.' … They also questioned whether 'in addition to being comp teachers, do we have to become computer gurus or art history majors too?' (233)

The nervous apprehension of the attendees' questions that Stewart fielded illustrates the widespread resistance to incorporating new media – and hence emerging apparatuses for new media like electracy – in the writing classroom. Some teachers express their concern as a perceived threat to their authority and autonomy in a department or division; the fear of a common rubric being handed down at a programmatic level prevents many writing instructors from embracing the inclusion of new media in their classes (234). Other composition faculty are opposed because

they feel they lack the proper credentials to teach and/or evaluate writing in the modern sense, as the NCTE defines it. Stewart adds, "[U]niversity teachers in composition (or any other field, I would guess) are rarely trained in assessing student compositions with new media" (229). The lack of training, and perhaps the lack of an educational background or scholarship in a field whose contingent borders are constantly in flux, can scare away some writing instructors from integration of new media. For others, however, assessing multimodal, fragmented, remixed writing is simply overlooked as all students receive high marks for participation. One student conveys to Stewart that multimedia projects are her personal favorite because they are always graded as A's; without fail, new media assignments end up graded highly. Stewart expresses her displeasure with this careless approach. She writes, "If her remark is representative, this teacherly neglect or avoidance of assessment, so often hidden from one's colleagues, program directors, or university administrators, must be confronted" (232).

To ensure sound assessment of avant-garde new media assignments in the Playlist, Transduction, and (Sim)ulation relays, strategic solutions in the curricular design process are essential. Continuous emphasis on the trademarks of post-literacy – listed by Freeman as montage/fragmentation, association instead of explication, interdisciplinary collaboration, virtual community, and process over product – was deliberate in all three relays ("Imaging Florida" 356-9). Writing instructors who attempt to integrate electracy into their courses are encouraged to invent, experiment, and remix, but their curriculum must be grounded in learning outcomes that emphasize how modern "texts are fluid, contingent, and constantly changing [as]

[a]uthors are more like designers or deconstructivist information architects" (Johnson-Eilola 222). Electrate compositions are not designed to be assessed by a checklist-based rubric; the significance of aesthetic principles in the apparatus cannot be ignored. Egents and Florida School advocates seek to "reclaim writing as an art form" in the postmodern epoch (Sullivan 8). Ulmer's intentions for electracy most of all should serve as guiding principles for assessment of mystories, MEmorials, remixes, and other electrate formations. The repeated themes in his oeuvre are captured by Rice, Freeman, and other electracy scholars, yet Ulmer also makes explicit the goals of his own pedagogy in his online supplement to *Internet Invention*. The course objective for his upper-level Hypermedia seminar is "to test the possibility that hypermedia is especially suited to support and augment creative thinking." Ulmer calls attention to "testing" via exploration and experimentation in the apparatus as well as "creative thinking," meaning that writing, despite being the social articulation of pieces already in existence, involves choices on behalf of the conductor (Johnson-Eilola 200). Ulmer's core electracy principles complicate as much as clarify the assessment process; the multifaceted theory makes authorship unclear and writing products constantly in flux. But if one approaches electracy assessment not from a literate mind but an electrate one, the process becomes less daunting.

In authentic electracy pedagogy, concerns regarding a common rubric being handed down or a lack of educational preparation to assess dissipate. In electracy, the logic of association and collaborative nature of knowledge trump literate certainty and mandated standards; a common rubric applied to a diverse set of classes would be in direct opposition to the principles of electracy. The emphases on invention,

"testing," and experimentation encourage continued development – but not mastery – of skills in new media and art; composition instructors do not need to become "gurus" of other fields with an architectonic knowledge. One can become electrate without being fluent in technologies. Ulmer assures students in his Writing Through Media first-year course that no previous Internet or computing skills are required; uncovering electrate logic takes precedence over technical proficiency. Assessment criteria for electracy praxis must be approached as shared principles rather than a proscriptive rubric. Allowing for flexibility and offering options to instructors considering an adoption of the relays I propose eases potential anxieties and assures a sound electrate approach.

In this chapter, I consider approaches to the assessment and evaluation of electracy compositions – particularly the Playlist, the Transduction, and the (Sim)ulation – with careful consideration given to the review of visuals and trepidation regarding possible issues of plagiarism. A review of the literature on electracy and new media assessment reveals as many questions as answers; the possibility of forms of assessment for chance, participatory composition, agency, and identity are explored. A general consensus is that electracy assessment is underexplored. Next, current practices in electracy assessment and evaluation are examined. Openly accessible completed courses taught by Ulmer and Arroyo showcase two attempts by celebrated electracy scholars to assess postpedagogical work. Many other electracy and new media evaluation practices – often theoretical – demonstrate that a variety of methods are used in grading "uncommon" multimodal ensembles and remixes. The sample activities and recommended assignments in

Writing New Media, for example, sometimes provide readers with supplemental handouts for student self-reflection and instructor evaluation; these models can spark discussion regarding the weighting of specific criteria in a new media assignment. An examination of curricular design principles follows. A clear understanding of assessment and evaluation and how they fit into the backward design model offers grounding for my own proposed criteria in Virginia's community colleges.

My own proposed articulation of assessment criteria principles and ideas borrows from and builds upon the practices of other electracy adopters. The introduction (and remix) of avant-garde, collaborative assessment practices like upvoting and student comments as evaluation and feedback illustrates that new, experimental models as needed for the emerging electrate apparatus. The proposed assessment criteria focus on prudent and collaborative assessment, stringency in grading, a pluralism of grammars for visual rhetoric, and professional development opportunities to train faculty on electracy assessment and remain current. The chapter concludes with an analysis of the impact of electracy appropriation and remix on plagiarism. Postmodern articulations certainly break from the stringent policies in place at all VCCS colleges – and presumably all higher education institutions – regarding the use of others' creative works without appropriate citation. Yet electracy scholars embrace this disregard of academic honesty policies. Gye's contention that plagiarism concerns in postpedagogy can be destructive or a welcome opportunity for postmodern invention is echoed by many in the Florida School and other electracy adopters ("On the Way" 10). A(n) (anti-)redefinition of plagiarism is crucial for the new apparatus as egents are urged to generate using fragments without concern for

citation. Electracy assessment principles will look nothing like those of the literate apparatus, but their sound implementation will similarly have profound effects on student success and instructor adaptability.

Research on New Media and Electracy Assessment

As electracy grows in popularity in scholarly publications and conference presentations, adopters explore new, fascinating relays from a theoretical perspective. Jarrett's rapsthetic and Rice's funkcomp, for example, map electrate philosophies on to existing musical genres to foster experimentation, appropriation, and improvisation in new "writing" styles of the electrate apparatus. The rupture of both from traditional, popular music parallels their abrupt break from traditional academic writing. Students who compose the montage via cutting, pasting, and appropriating mimic the productions of DJs and rap artists; these postmodern assemblages might incorporate research but not in the conventional sense to which writing instructors are accustomed (Jarrett 74). Egents who avoid the "unfunky language" of textbooks in the academic discourse community can be freed to explore and celebrate their fragmented, "offbeat" identities in search for "the thang" (Rice, "Funkcomp" 286). The funky digital native writes with emotion rather than reason, striving for "the outrageous" composition (282). In these electrate relays, much of the conventional writing classroom is inverted as principles of Ulmer's opus are foregrounded. Jarrett and Rice clarify via analogy – seemingly an oxymoron, but truly Ulmer's preferred electrate methodology – what it means to be an electrate writer, a postmodern "media-being." However, neither explains in his essay how these sonic DJ mashups or outrageous, pathos-driven creations, respectively, come to fruition in the

classroom. The absence of praxis in many electrate relays like Jarrett's and Rice's is not surprising; after all, the proliferation of electrate thought via relays is highly conceptual. However, a major implication of introducing avant-garde composition without close attention to assessment and evaluation of its products is the overwhelming sense of unease and anxiety felt by Stewart's presentation attendees. Current electracy literature uncovers chance, participatory composition, agency, and identity as principles most in need of assessment guidelines.

In composing rhizomatic assemblages, collages, or playlists, students engage in the act of articulation, in which contingent linkages form temporary mood or meaning. In the Playlist relay, it is recommended that students collaboratively work with various fragments from across the Web – music, articles, Web pages, images, videos, sounds – to compile their collections for arrangement. The process, which Ulmer promotes over product as the focal point of instructor review, involves choices on behalf of the designers; however, the unlikely juxtaposition of fragments in a collection is likely to result in random moods or meanings. Vitanza defines this act of invention as aleatory chance. He writes, "[C]hance means unaccountable hazard, not accountable probability. Chance means accidental" ("From Heuristic" 187). Aleatory findings result in punctum stings – emotional pricks that leave a mark in one's memories – in Ulmer's mystory project, and chance dictates much of how patterns emerge in electrate logic. Vitanza argues that randomness, inspired by computers, is a sort of "antimethodology" appropriate for the generative nature electracy (193). In *Heuretics*, Ulmer adds, "Method becomes invention when it relies on analogy and chance" (8).

The problem with relying upon an aleatory (anti-)methodology that encourages randomness is that the process is difficult to assess beyond broad categories such as satisfactory completion or incompletion. Instructors can assess whether egents trust in the random nature of events or not, but there is no reliably precise manner of determining the extent to which students engage in the process. Instead, the chaotic nature of articulation is only reviewable by unique choices and effort. In assessing his students' research boxes, Sirc recommends that instructors encourage students to creative efforts with accompanying reflection. He invokes American artist Donald Judd in his judging of contemporary art: "A work needs only be interesting" (qtd in Sirc 133). Sirc adds, "I think any interesting effort – where some obvious care in choices has been taken in terms of finding images and text that produce, when juxtaposed, a frisson of drama or amusement – should be rewarded" (133). Judd's and Sirc's shared stress on "interesting" work promotes product over process, but the added emphasis on "care in choices" demonstrates that Sirc also seeks creativity in his students. The self-reflective supplement is added as a means of identifying the level of student creativity and assessing the process. Sirc writes that the reflection allows an instructor "to better estimate the quality of the student's effort in terms of the selection and arrangement goals targeted" (133). While an aleatory methodology in the writing process has the potential to confound writing instructors, a brief add-on reflection like the one Sirc recommends could facilitate assessment.

In *Participatory Composition,* Arroyo questions another aspect of electrate composition that obscures the ability of a writing instructor to grade. Multimodal participation in social media and other digital spaces varies greatly by the activity

completed. Students, for example, who are asked to compose videos, post to a blog, or assist in the design of a playlist may spend hours or minutes to finish tasks that are unquantifiable by number of pages, word count, or other traditional assignment criteria. Like Hass, Arroyo inquires into assessment criteria in new media and electracy: "How, for example, would a student quantify watching and commenting on a video? Participating in social media sites? Adding and commenting on discussion posts? Using a search engine and sifting through Internet sites? Uploading media content? Creating a video? Remixing a video?" (*Participatory* 10). These participatory, collaborative forms of online communication are far from immeasurable by the standard of completion but certainly difficult by the standard of specific quantification, especially when compared across modes. Arroyo's questions reveal the complexity of assessing within her participatory composition relay and present good reasons for the anxieties of hesitant new media adopters.

The best way to tackle these concerns is to approach the participatory composition products via electrate assessment rather than literate assessment. Gye remarks that the dominant forms of assessment used for postmodern writing and new media are still literate ("On the Way" 6). This should come to no surprise given Dobrin's contention of the writing discipline being too conservative. The result of literate assessment remaining central for new media production is unease of instructors who seek word counts, paragraphs, thesis statements, pages, and other hallmarks of traditional essays. Instead, grading for how "interesting" a work is moves the assessment style into the electrate apparatus. Ulmer encourages instructors to avoid literate formats (courses, exams, and lectures) altogether in integrating

electracy (*Internet Invention* 5). If juxtaposed alongside literacy, electrate new media should be considered apart from the literate apparatus. The importance of unique creations in literacy, for example, completely dissolves in electracy; rather than seek creativity in ideas and careful integration of sources via citation, electrate composition encourages appropriation and remix without regard for citation. Ulmer contends that videos, social media posts, collections, and transductions need not be innovative at all since they could all be composed of other fragments. He writes, "The undergraduate participant in a textshop is not expected to invent a new form or to be 'original' in his or her creations any more than his or her counterpart in the sciences is expected to find a cure for cancer or the like" (*Electracy* 93).

Often, remixes that mash up more than one work not originally by the author are best received, though an audience's reception is unpredictable as most new media are unstable in meaning, according to Serafini. Instead, he writes, "they are open to revision and negotiation as they are shared with other reader-viewers" (36). The open-ended meaning of electrate works and new media can result in possible misinterpretations by instructors or viewers; the practice of posting and later deleting Instagram posts and tweets that are unintentionally offensive is a sign that meaning cannot be controlled despite intentionality. Felts and other electrate compositions created in Ulmer's mystory genre similarly might be misunderstood by readers as they are expressivist self-explorations intended not for a broad audience but for the writer himself. Thus, a self-reflective addition can be useful not only for process-based assessment but also for evaluating intentionality and remixes like the Transduction relay.

Two of the recommended learning outcomes for the (Sim)ulation relay are increased awareness of one's identity and potential to enact one's digital agency, yet assessment of whether a student has "achieved" either one is difficult even with the addition of a self-reflective essay. Identity and agency are intricately tied to one another in that a student's realization and acceptance of fragmented selves allows for subjectivity and agency. Identities are, according to Cynthia Carter Ching and Brian J. Foley, "always being actively built and rebuilt" (9). The postmodern notion that our identities are fragmented selves means that building and rebuilding of our identities is continuous. One's identity is flexible and fluid in that it is constantly shifting and repositioning based on one's context and experiences (5). There is no stable, coherent self but various selves that one articulates at any one moment to determine identity. The notion of identity in flux is, according to Rice, best expressed by funk music legend George Clinton, whose many alter egos and fluid selves illustrate his keen awareness of postmodern identity. Rice encourages students to mimic Clinton and "adopt the funk model which prompts writers to create an alter ego as precursor to invention" (*Rhetoric* 290). The abundance of alter egos and fragmented selves is further complicated by the existence of avatars and online identities. Jesse Stommel writes, "For many of us, it is becoming increasingly difficult to distinguish between our real selves and our virtual selves, and in fact, these distinctions are being altogether unsettled."

Stommel's claim rings true especially for social media, where many digital natives spend much of their time outside of class performing their digital identities. Online profiles and avatars, disembodied and disconnected from our brains (at least

for now), may be becoming a larger part of our actual identities in the age of technogenesis. Turkle writes, "[N]ew [digital] spaces [are] changing the way we think, the nature of our sexuality, the form of our communities, thus our very identities. In cyberspace, we are learning to live in virtual worlds" (3). Awareness of fragmented identity that is always in flux and influenced by digital spaces is not a given, but through an electrate exercise like the image of wide scope popcycle discourses, a student can potentially reach that understanding. Trust is needed in the process of discovering patterns in a mystory or (Sim)ulation; identity emerges as patterns come to light. There is substantial evidence in the form of anecdotal experience from Santos, Brooks, and others that Ulmer's projects reach their intended effects. Gay's assertion that the mystory "works to break us," for example, illustrates that the mystory project can have profound effects on egents who complete their images of wide scope (Santos et al.). Assessment of one's realization of fragmented selves could involve looking for an emotional response (a "broken" student) or clarity expressed in a reflection essay – or both.

If identity is always in flux and nonexistent as a stable, cohesive whole, agency is similarly fragmented and fluid. Digital rhetoric scholar Cheryl Geisler recounts a heated debate regarding the possibilities for agency in a postmodern world. Several fellow rhetoricians questioned whether agency is limited, lost, or illusory with the rampant spread and influence of networks, interfaces, and external forces constantly interpellating us. Geisler emerged from the conversation with a positive view of the conditions of agency, arguing that fragmented agency is possible ("How Ought" 11). The postmodern critiques eventually gave way to "productive

investigations" into the reality that agency still exists in digital spaces (14). However, the notion of solitary agency is called into question by Geisler. For one to make meaningful rhetorical choices, collaboration and participation of others is necessary. In an extended metaphor, Geisler describes rhetors creating meaning at a Ouija board.

> Agency does not lie in the hands of any one person at the proposal writing table, but rather lies in the interaction among them. It is a complex interplay as one player at the [Ouija] planchette makes subtle movements, the other player picks up and responds, reinforcing or resisting, back and forth through minute by minute adjustments that eventually lead to an outcome that neither player could have, in advance, predicted. ("Teaching" 112)

The "complex interplay" to foster agency interestingly may involve many users at the table; articulations developed by many egents will inevitably result in a multiplicity of truths (fragmented agency). Yet digital agency can be possible if those egents come to a general consensus regarding their findings. The "subtle movements" leading to unpredictable outcomes, which coincidentally yet unsurprisingly resembles Ulmer's mystory project, are a good starting place for assessing one's agency.

Though "subtle movements" may clue us in to attempts at fostering agency, there is no certainty as to a "level" of one's digital agency. Wysocki's *Writing New Media* activities and exercises do not quantify one's agency but rather determines if students are alert to their materialities or not. Wysocki writes, "[A]gency comes precisely in being alert to the 'social forms' … in which we move, in understanding where and how our practices fit, and hence where and how we have room and

opportunity to make change" ("Opening" 13). The 'social forms' for digital agency are increasingly networks and interfaces, reviewed in Chapter 3. Cultivating "network* writing" is one method of acknowledging and challenging the interpellating forces of networks and interfaces. John Jones writes that network* writing attempts to "gain [a] competitive advantage" communicating within a network by understanding its inner workings ("Network* Writing"). Awareness of the forces and materialities that lead to a "competitive advantage" of any form is an ideal form of agency in the postmodern world.

Similarly, students new to academia can collaboratively foster agency within interpellating discourse communities by understanding their materialities and taking risks by trying out new selves (Corrigan and Gers 170). Students who engage in expressivist network* writing build a path to success. Corrigan and Gers argue that it is paramount for community college students; they label expressivist network* writing "a way for the previously underrepresented and disenfranchised, as represented by student populations found in community colleges and open admissions universities, to position themselves in the academic discourse community" (169). The development of postmodern agency by egents can be followed by an instructor as students gain confidence within discourse communities and networks through the "complex interplay" of collaborative materiality awareness. Discovering their fragmented physical and digital selves grants egents the opportunity to self-assess their awareness of the forces causing fragmentation and potentially preventing meaningful action.

Current Electracy Assessment Practices

Though electracy has flourished as a theory since Ulmer's earliest works addressed an emerging apparatus, it remains in its relative infancy in regards to praxis. Despite countless relays, reviewed in Chapters 1 and 2, and a widespread embrace by students of "uncommon" writing practices, electracy pedagogy is only beginning to come to fruition. The many relays established by Florida School advocates and early electracy adopters serve as starting places for electracy praxis, but most neglect to offer a glimpse into their assessment practices. Fortunately, several electracy scholars, including Ulmer, showcase their methodologies in articles or openly accessible courses. Others add details about their own electracy courses or propose activities, exercises, and assessment for new media projects. In this section, I review current electracy and new media assessment practices, noting what seems to work effectively and where there is room for growth.

In his essay "Textshop for Psychoanalysis: On De-Programming Freshman Platonists," Ulmer clearly states that it is "relatively ease" to grade his first-year students' remixed readymade sculptures (*Electracy* 94). The driving principle in Ulmer's assessment of their electrate creations is whether students are following the methodology and criteria established in lab discussions (94). Because his assignments are kept simple and straightforward, Ulmer elaborates on his expectations for electrate work in class discussions and e-mails to assist with remaining questions about the project. The readymade sculptures then are measured by how effectively they meet Ulmer's established expectations in following the process. Ulmer adds, "The criteria for evaluation are the same ones that might be used to determine the

success of work in a scientific laboratory. Did the procedure produce the predicted results? When the chemicals were mixed, did the solution explode or turn solid? Does the writing or sculpture possess the qualities of the genre or not?" (93). Ulmer seemingly leaves no room for error in his assessment of a student's sculpture; the either/or dichotomy presents the instructor with a simple choice. Students are expected to follow genre conventions and construct a remix that is electrate experimentation. Leaving no room for error might seem risky, but Ulmer, like Sirc, assigns a self-reflective supplementary essay with the student "assessing the value of the lab experiments" (94). No judgments regarding students' unconscious contents are made by Ulmer, and the self-reflection is designed to show that students understand the process (94). Though an all-or-none lab experiment assignment might sound intimidating for first-year students, Ulmer remarks that his students are usually amazed by and proud of their classmates' readymades in the class exhibition as they display wit and skill with metaphor that students often did not know they were capable of (93).

Ulmer's *Internet Invention* online supplement provides additional details regarding Ulmer's grade breakdown for his Hypermedia seminar. The three Web sites constructed by students can receive up to 150 points apiece (450 in all); student bands (groups) present their findings to the class twice at 50 points apiece (100 in all); and student e-mail posts (14 posts minimum) are valued at 5 points apiece (70 in all). This adds up to 620 points, with the Web sites constituting 72.6% of the final grade (24.2% apiece). The heavy emphasis on the Web sites illustrates that Ulmer's course values electrate new media creations over any other assignments. Each Web site

grade might include participation or process-based factors, but Ulmer's scientific laboratory analogy for his first-year students' sculptures indicates that the final products capturing the qualities of the emergent apparatus is of the utmost importance.

Arroyo's open courses do not contain a grade breakdown of assignments, but they do feature a much different approach to feedback and evaluation. Students who complete multimedia projects publicly post their projects – usually videos – and comment on each other's creations. Inventing the Electrate Apparatus features an open forum, much like Reddit or a generic message board, in which classmates create and reply to posts, share project proposals for a public audience, submit reflections on discussion topics, and update profiles to reflect their online avatar identities. Students post blog entries and share videos on the Ning hosted Web site, and their open feedback for each other leads to potential revisions and edits. Posting videos on YouTube allows for not only commenting on each other's videos but also up- or down-voting (likes and dislikes), a fascinating approach to new media that could be applied to all areas of the Web site to encourage a social media feel. Arroyo's assignments, also publicly posted, are compared to literate assignments to guide students toward the proper requirements; one project, for example, is compared to a 10-page paper with specific rhetorical and technical aspects to be considered. Requiring students to participate in an open, reciprocal space and post their new media creations, blog entries, and forum messages is all a part of Arroyo's *Participatory Composition* approach. Only turning in a video or essay to the instructor, she writes, "does not actualize in a dynamic space" (*Participatory* 121).

In her Web essay "Electrate Dream Interpretation: A First-Year Composition Post-Critical Project on the Dreamlike World of Video Games," Hanzalik discusses her course and shares her Electrate Dream Interpretation assignment. Hanzalik's fine attention to detail in the organization of the assignment, from brainstorming to reflection, helped guide students through a potentially convoluted project. Hanzalik writes, "Creativity, critical writing, and effort was systematically built into the assignment via its aesthetic, analytical, and electrate emphases and via a step-by-step procedure that helped students to stay organized. It was difficult for any student *not* to be innovative" (emphasis not added). The significance of creativity, aesthetics, and innovation indicate Hanzalik's close ties to electrate composition. Her students' journeys through video games to explore their dream-like qualities are accompanied by a multimodal argument that is "the equivalent to a 2,000-word paper" with at least 10 sources. The assignment, which constitutes 20% of the semester grade, is assessed for effort, creativity, overall quality of argument, and design quality. Hanzalik reports that her students were truly engaged in the video game process – "emotionally gripped, awe-struck even" – and their multimodal projects were successful.

Writing New Media, despite being only quasi-electrate, presents several captivating exercises and activities for instructors that accompany each essay. Wysocki and Johnson-Eilola offer thoughtful new media assignments ready for implementation in any writing course, but their activities do not contain substantial information regarding assessment and evaluation. Wysocki's Analyzing a Composition activity, which is clearly grounded in literacy because the methodology used (analysis) is not electrate, contains goals, time commitment, target student level,

and a purpose, but no criteria or suggestions for assessment or evaluation. Sirc's proposed exercises, which mix electrate (curation, articulation) and literate (traditional, linear research essay composition) principles, contain commentary regarding evaluation; his call for "interesting" works paired with self-reflection is designed to measure student understanding. In his Arcades Project, Sirc presents students with an interactive exhibit – his is devoted to rap music, particularly "powerful and unknown works that might otherwise go unnoticed" – as a starting point for sustained inquiry and notetaking as students immerse themselves in the works and potential additions to the curated collection (138). Students use their inquiry-based notes to compose a traditional research paper. Sirc notes that the process is familiar to students, except their "note cards" are "in a much more interesting format" (142). To evaluate his students' projects, Sirc assesses "how thorough they have been in their investigation," adding that "most instructors can tell the difference between thin coverage and research that satisfies" (144). The focus on process differs from Ulmer's approach, and Sirc establishes a 2-page a week requirement for notetaking that features an engaged and confident scholarly tone to ensure students maintain an appropriate pace (144). Like Ulmer, however, Sirc prioritizes creativity and "interesting" contributions; students are encouraged to find interesting sources of which he was not previously aware (144). Students receive feedback throughout the process to shape their inquiries, and their graded Arcades projects are evaluated only on their inquiries and research, not their design or "Web work" (145). Sirc's process-based approach to assessment confirms whether students are correctly implementing the Arcades methodology but also encourages play and

experimentation. Emphasizing inquiry is not an electrate "research" technique like pattern recognition from fragmented sources, but Sirc's evaluation of the projects is in accordance with many electrate principles and thus may assist with the transition from literacy to electracy.

In her *Writing New Media* essay "Toward New Media Texts: Taking Up the Challenges of Visual Literacy," Cynthia Selfe includes four fleshed-out activities – a visual essay, a visual argument, a traveling photography exhibition, and a text re-design – that each feature supplemental handouts for student self-reflection, peer review, and instructor evaluation. The text-redesign activity, in which students make a print essay effective for the Internet by re-presenting and re-organizing the information logically, adding URLs, and introducing visual elements, is to be creative and "substantially revised" after feedback from review teams (104-5). Selfe's sample evaluation handout consists of five categories – Use of World Wide Web, Overall Impact of the Text, Creativity of the Text, Information, and Mechanics – with assessment scales allowing for an instructor to mark any place within a range and provide comments to justify the mark placement (109-110). Each scale includes three evaluation criteria (e.g. "The text is not very creative," "The text is moderately creative," and "The text is exceptionally creative") but instructors can score at any point between categories to indicate a student's progress (109). The visual essay activity is accompanied by an additional sample completed evaluation; Selfe's inclusion of a completed assessment offers readers unique insight into her pedagogy (83-4). The evaluation scales connect to assignment objectives, and Selfe's feedback

in many categories serves as a lesson on the complex nature of visual and multimodal work in digital spaces.

Other scholars share their assessment of electrate and new media compositions in vague terms. Santos et al. do not address mystory evaluation directly, but reflections on the process of composing the lengthy expressivist project indicate that simply completing the challenging assignment is an accomplishment, especially for those who experience "deep, emotional responses." How students' mystory experiences were graded in Santos's graduate seminar is not clear, but the possibly unexpected result that every student experienced an "aha" moment is noteworthy. Holmevik similarly does not address mystory assessment for his Digital Literacy course, but one of his students' projects accepted to the *Journal of Undergraduate Multimedia Projects* receives responses from editors. Cecilia Jones's "Mystory" is critiqued by Bill Macauley and Kristi McDuffie, each of whom is encouraging in their praise of the project. Macauley notes Jones's coherence and trust in the viewer to make meaning from a non-linear narrative. McDuffie stresses the emotional impact of Jones's mystory as well as the effectiveness of audio, video, and image in creating an immersive, intimate experience. Though these assessments are broad, the feedback demonstrates that each instructor may approach a mystory differently depending on their goals of what a student should be able to do with it after the course.

The difficulty of assessing multimodal new media works due to their complexity is apparent. Alan Davis and Daniel Weinshenker contend that digital stories present a unique problem for instructor assessment in that each component or mode – voice, visuals, audio, and text – has its own semiotic grammar (48). Hence,

any resulting evaluation or feedback ends up as a mashup of various grammars or one that does not utilize some semiotic grammars. Marie-Laure Ryan adds that electronic texts, including digital stories, are like onions in that there are various layers of skin for a student (and/or instructor) to work through in developing and analyzing interactivity (37). Ryan adds that interactivity on five different levels – from peripheral interactions like how one reads from a screen to meta-interactivity such as building avatar costumes for others – complicates the reader-viewer relationship, thus making assessment problematic. Serafini provides units with curricular frameworks on multimodal literacy but does not offer examples of his assessment or evaluation. Instead, he notes a reliance upon Feldman's compositional interpretation principles, from completeness to originality. These assessment criteria – particularly persuasiveness and durability to make sense over time – differ from electrate principles, but they illustrate the diversity of new media review methods.

Curricular Design Principles

Effective assessment of electrate compositions will vary by instructor as each highlights different aspects of electracy, weighs one factor over another, and presents feedback uniquely; yet all share one commonality: connections back to learning outcomes as assessment indicators to ensure the use of backward curricular design. In her 1999 essay "What Is a Grade?" Pat Belanoff questions what exactly a grade measures (Stewart 232). Curricular design scholars resoundingly would reply that assessment of any student product (or process) is tied to learning objectives and outcomes. Evaluation, a much different concept despite being ostensibly synonymous, also connects to learning objectives and outcomes but in a summative

sense. For electracy adopters to succeed in grading avant-garde felts, remixes, and avatar-based journeys to discover identity, an examination of these key terms and principles of assessment is valuable.

The CCCC Committee on Assessment states that the development of assessment practices must be "guided by sound principles to insure [sic] that they are valid, fair, and appropriate" ("Writing Assessment"). The "sound principles" advanced by the committee include assessment by "well-informed current or future teachers of the students being assessed" of a variety of works written over a "substantial period of time," ideological grounding in the latest research and practices, and a clear link to classroom practice ("Writing Assessment"). The instructor's feedback should be a mix of recurrent formal and informal comments. Stout adds that frequent and varied feedback allows her students the opportunity to revise and develop as writers over the course of a semester (4). Though review of a variety of works is more closely tied to summative evaluation than individual assessment, the committee's "sound principles" align with other curricular design research.

Though general agreement exists on the shared features of effective assessment, Stewart contends that instructors lack clarity on what assessment is and the various forms that exist. Stewart writes, "[N]ot only do few instructors understand the different meanings of assessment, but also few understand the distinctions among its many purposes: diagnostic, formative, summative, or reflective. Assessment terminology often is daunting to writing teachers who resist terms of measurement" (229). Many, as Stewart contends, fail to separate formative and summative forms of

measure. The NCTE echoes this sentiment, noting that the distinction is significant as faculty must be able to utilize both forms ("Professional Knowledge"). Formative assessment is "provisional, ongoing, in-process judgments … intended to support students' writerly development" ("Professional Knowledge"). Summative measure, on the other hand, is synonymous with evaluation; one's assessment of many works over a "substantial period of time" constitutes evaluation. Wiggins and McTighe identify assessment and evaluation as one of the most commonly confused pairs of terms in curricular design and grading. Their definition of assessment, an umbrella term that is generally considered "the act of determining the extent to which desired results are on the way to being achieved and to what extent they have been achieved," highlights formative feedback (6). Evaluation, conversely, is summative, credential-based measure such as grades at the end of a semester (6). Assessment is "thus a more learning-focused term than evaluation" (6). Most of the electracy scholars reviewed in this chapter focus on the assessment of individual assignments; however, Ulmer's grade breakdown offers a glimpse into an electrate summative evaluation process.

In assessing and evaluating, electrate instructors must agree upon the evidence that learning objectives were satisfied; though some variation is natural, a consensus on written outcomes and the outcomes that demonstrate students can "do" something with the knowledge is essential (19-20). An implication of unclear goals and no continuous assessment of those goals is grade inflation (Gardiner). Another is the lack of implementation altogether. In the VCCS, the course objectives and general education core competencies for both first-year writing courses – College Composition I and II, both of which I teach each semester – vary by college. Northern

Virginia Community College's College Composition I course objectives, for example, are the writing process, expository and argumentative writing, and critical thinking and research. Tidewater Community College's core competencies are communication, critical thinking, and information literacy. Only one learning objective – critical thinking and research – is shared between the two colleges. Even more competencies are emphasized at other community colleges in Virginia. A statewide attempt to implement electracy pedagogy via relay modules is thus doomed to fail unless the modules are adopted differently at each college (and by each instructor) or statewide objectives are implemented. Channeling Diane Penrod, Stewart decries the top down model that is implemented in the absence of individual assessment models (230). Individual implementation with backward design is thus encouraged. Electracy adopters will, however, need to align the modules to course objectives or propose new objectives through their peer group or college; the former option is possible with the broad competencies currently in place. The modules promote communication in a postmodern, expressivist sense, and a mystory-based project requires critical thinking though associative in logic. The writing process is also foregrounded as electrate principles regarding methodology and process take precedence in postpedagogy.

Proposed Electracy Assessment Methodologies

As more instructors implement electracy relays and modules in their writing classes, taking into consideration the course objectives and appropriate evidence to ensure proper learning outcomes, a consensus on sound methods for assessing avant-garde new media is needed. Informed by the literature on electracy and new media

assessment and current practices in the field, I provide recommendations for bolstering the quality of one's electrate assessment in the writing classroom. My own suggested methods include the simultaneous moves toward individual and collaborative assessment, stringency in evaluation with an emphasis on both process and product, the multiplicity of visual grammars, and sustained efforts to provide professional development.

Prudent and Collaborative Assessment

The instability of meaning of multimodal ensembles, articulated collections, and remixes caused by the many hands at the metaphorical planchette and the impossibility of full control in intentionality results in varying interpretations and a more difficult assessment process for instructors. As Arroyo writes, "[A]ll communications involve interpretation" and thus the possibility of misunderstanding (*Participatory* 84). A student's collection of fragments artfully arranged to evoke emotion might, for example, fail to move an instructor emotionally or signal that it has the potential to impact other viewers and listeners; however, other students in a course might experience the Playlist mood differently due to any number of factors, including the absence of a generation gap, a shared context or experience, or subjective taste. The wide range of possible interpretations of electrate work means that curricular standards may require variation. To offset the instability of meaning and unpredictably of context, Sullivan argues that writing teachers need "to be prudent and imaginative" (145). Sullivan elaborates by describing the difficulty in accurately grading all aspects of her students' collages when relying too heavily upon a "tutor text" to guide assessment of the project (145). Sullivan recommends that

instructors “avoid giving too much authority to any one factor – the tutor text, the teacher, the reader, or the writer” (145). An assessment approach that takes into consideration all possible factors as necessary might deviate from established standards, but it will assure nascent electrate works are graded within good reason. The flexibility of relay modules for each instructor allows for prudent decision making based on local contexts such as student population and unique course objectives. Ulmer elaborates on Sullivan’s notion of prudence: “Prudence names a capacity to make the right judgment in an instant of time, on the spot, improvised in the middle of an ongoing situation, without benefit of law, rule, concept, formula, algorithm. Prudential judgment concerns contingencies, not certainties or necessities, hence its association with practical reason” (“The Chora Collaborations”). An individualization of assessment practice allows for instructors to make prudent judgments for their circumstances. The improvisation of specific criteria that address instability of meaning leads to a flexible situation.

As oxymoronic as it may seem, another way to offset the instability of meaning in assessment is to promote collaborative assessment. Electracy theory preaches the collaborative nature of composition, identity, and agency; why not take the same approach to assessment and evaluation? A collaborative method of reviewing electrate works could take several forms, including upvoting and commenting, exhibiting projects, communicating with a real world audience, and establishing a joint rubric with students. As previously reviewed, Arroyo’s participatory composition course allows for students to comment on one another’s projects, opening feedback to members of the course intimately connected to the

material who are not the instructor. The comments can be viewed as a form of public peer review or critique. The CCCC Committee on Assessment upholds this approach as appropriate for any writing class: "Assessment that isolates students and forbids discussion and feedback from others conflicts with what we know about language use and the benefits of social interaction during the writing process" ("Writing Assessment"). The "benefits of social interaction" in reciprocal spaces of knowledge creation do not necessarily need to be comments. Borrowing from popular social media sites like Reddit and Facebook, upvoting or "liking" – as well as downvoting or "disliking" – could serve as a useful form of feedback. Students certainly benefit from commentary and specific reasons for upvotes or downvotes, but general encouragement or dislike of a post could indicate the class consensus and spark further discussion. Another form "social interaction" could take is an exhibition. Ulmer and Hink require students to share their remixed readymade sculptures with the rest of the class; both find that their students enjoy the experience and gain insight into each other's talents and creative ideas.

Moxley and Meehan acknowledge the benefits of students communicating with audiences other than the teacher. Creating real world audiences for projects gives students a real sense of target audience and a responsibility for turning in quality work. Arroyo's course, for example, features many high-quality compositions that demonstrate masterful multimodal articulation. Their real world audience might not be the primary factor stimulating their exceptional efforts, but it could have an impact. Similarly, establishing a joint rubric with students that determines how a new media project is evaluated could promote high quality submissions. Democratizing

assessment and incorporating reflective supplements, according to Stewart, leads to increased student investment (235). Stewart describes how the process unfolds in her courses: "Working in groups, they develop criteria, weight the criteria, discuss process and product, and develop assessment tools for all stages of the composition process" (235). Though this approach requires disciplined students and trust in the collaborative process with students to understand the goals of the course, the methodology is sound, according to the CCCC Committee on Assessment. The committee adds, "Valid assessment requires combining multiple perspectives on a performance" ("Writing Assessment"). Whether those perspectives originate from upvoting, sharing feedback in an exhibition, or establishing a shared rubric, collaborative assessment appropriately guides electrate pedagogy.

Stringent Assessment: Process and Product

Electracy and new media projects, according to Stewart, have earned a reputation from some students for always being graded as A's (232). Dilger's call for a translucent classroom that promotes "ease" is not meant to be interpreted as easy grading; conversely, stringent assessment and evaluation should be promoted as instructors emphasize both process and product. As seen in Ulmer's, Arroyo's, and Hanzalik's courses, electracy instructors differ in their assessment practices, especially in terms of highlighting process over product or vice versa. Process should not be relegated to an insignificant class participation grade; students play, create avatars, and test methodologies that might not always result in ideal works. However, a strong emphasis in evaluation on process can skew a grade positively for students whose creations are subpar; assessing process is also difficult because of the

uncertainty of measure. Pairing assignments with reflections like Sirc and Selfe do in *Writing New Media* grants instructors an opportunity to place the onus on students to indicate whether they understand methodologies and engage the process effectively. Establishing clear goals and learning outcomes for each relay, module, or course in electracy assures instructors of sound measure of a product; however, some student works will be more technically proficient than others. Evaluation of technical expertise – even in new media courses – should be lenient. As Selfe notes, even English composition faculty lack expertise with programs like Dreamweaver and Photoshop ("Toward" 67). Technical proficiency does not need to be a non-factor like Sirc's approach, but it should not be of more importance than the realization of core electracy principles. Weighing the success of a project equally with effort and process seems to be the most fair and reasonable approach.

Multiplicity of Visual Grammars

Further complicating the assessment of the postmodern remixes, collections, and mystories encouraged by Ulmer is the issue of visual grammar(s). Olson's contention that a plurality of visual rhetoric grammars must suffice because of the lack of a substantive treatise illustrates a major possible pitfall to assessing electrate new media creations – the same made by Stewart's conference presentation attendees (14). Writing instructors lack the expertise to teach and evaluate visuals from the perspective of multiple fields of study. As early as 1970, Waldo W. Braden argued that rhetorical critics are not trained to teach and assess images (Foss 142). The result of this pitfall is that skill in generating images and multimodal creations is still not emphasized in schools (Kress and Van Leeuwen 16-17). How is a writing instructor

who integrates new media or postpedagogical works into the composition classroom but lacks expertise or training supposed to approach visual grammar(s)? The promotion of a multiplicity of definitions and grammars is a strategic electrate answer that follows principles of choral thought and antidefinition, composing from all meanings rather than one. Awareness of a few grammars of visual rhetoric from which an instructor can articulate his own preferred vocabulary is all that is needed, despite concerns about the lack of training.

Knowledge of the principles governing visual composition and assessment is needed for all writing instructors, regardless of their implementation of electrate relays. Nicole Amare and Alan Manning perceptively acknowledge in "The Language of Visuals: Text + Graphics = Visual Rhetoric," "Combining graphics and text is not actually a hybridization, nor an integration, nor a fusion of inherently distinct rhetorical types. Both graphics and text are visuals to begin with and are governed by the same rhetorical principles" (68). Mitchell echoes their sentiment: "All media are mixed media and all representations are heterogeneous" (16). All composition then – including text-based writing that does not include images or new media – are visuals. The same principles that visual rhetoric scholars like Kress and Van Leeuwen and Serafini review should be utilized in examining and assessing *all* compositions. Though adopters of Ulmer's new apparatus will continue to foreground electrate principles before visual grammars, knowledge of the multiple grammars that could be evoked for assessment is beneficial to all.

Among the key visual grammars to consider in a multiplicity approach are Kress and Van Leeuwen, Serafini, and Foss. Kress and Van Leeuwen, preeminent

scholars in the fields of visual rhetoric and semiotics, cover quite a lot of visual terminology in *Reading Images: The Grammar of Visual Design*. The various elements of visuals (colors, perspective) serve as signifiers of a signified (meaning) (6). Some of the markers within the visual modality are color saturation, color differentiation, color modulation, contextualization, representation, depth, illustration, and brightness (160). If an instructor creates a scale – similar to Selfe's – for each one of these modality markers, a general sense of the effectiveness of the visual statement will be apparent. Visual compositions, including videos, Web sites, and remixed images, relate interactive meaning with viewers through information value (placement of elements), salience, and framing (177). Consideration of the entire image can evoke emotional responses in electracy, but a closer examination of each element may yield a different reaction. For example, an image that attracts a viewer's attention (salience) to a specific object might have an intentional message. Dorothea Lange's 1936 "Migrant Mother" photograph clearly draws the viewer to the mother's face to evoke an emotional reaction of sorrow and pain. Other objects in the frame such as the childrens' dirty clothing is not made salient. Color saturation, differentiation, and modulation are non-factors because of the black and white nature of the photograph, but depth and contextualization can further reveal the history of the woman in Lange's composition. Kress and Van Leeuwen offer many more terms, but the modality markers and interactive meaning categories give electrate adopters a glimpse into their visual grammar.

Serafini's *Reading the Visual: An Introduction to Teaching Multimodal Literacy* reviews many prior visual grammars, including Kress and Van Leeuwen's

and Feldman's compositional interpretation categories. His own curricular framework, however, examines the materialities and affordances of modes. Each mode, Serafini argues, "brings different possibilities or functional specializations to the ensemble" (51). A multimodal ensemble that highlights the visual, for example, could be analyzed for orientation, typography, borders, motifs, and symbols (55). Alternately, a multimodal work could be reviewed using Feldman's standards: completeness, persuasiveness, personal relevance, durability, intellectual force, insight, and originality. Electrate understandings of visuals already highlight personal relevance as an image results in emotional reactions, but awareness of a multimodal ensemble's durability (lasting impact) and originality (fresh meaning) could be useful.

Foss's "Theory of Visual Rhetoric" does not advance much of a visual grammar, but her attention to aesthetics is certainly of interest to electracy scholars and adopters. Though Foss advocates a rhetorical response to images – particularly how the image affects a lay audience – rather than an aesthetic one, she explains how an aesthetic response functions. Foss writes, "An aesthetic response consists of a viewer's direct perceptual encounter with the sensory aspects of the image. Experience of a work at an aesthetic level might mean enjoying its color, sensing its form, or valuing its texture. There is no purpose governing the experience other than simply having the experience" (145). To "experience" an image, its color, form, and texture are starting places for review. Enjoyment, sensation, and emotional reaction are precisely what Ulmer encourages in the collection of fragments and the wait for patterns to emerge in a mystory. A multiplicity approach to Kress and Van Leeuwen's

visual grammar, Serafini's multimodal analysis categories, and Foss's aesthetic categories guides electracy instructors to a finer understanding of visual grammars.

Sustained Professional Development

Because of the instability of meaning, the unpredictability of technological advances and their subsequent effects, and innovations in practice, sustained efforts at substantive professional development for electracy assessment should be implemented in the VCCS and any institution open to its inclusion in pedagogy. Stewart writes, "Assessment is a social act, so it is important for professional development" (231). Learning from others' successes and failures can result in more sound approaches to assessment in future classes; use of their students' sample works and accompanying commentary can guide initial pedagogy and assist students in their troubleshooting questions. Programs, training sessions, presentations, and conversations between faculty members interested in incorporating relay modules in their courses could all be beneficial. Electracy adopters may face many "squeals, stammers, and uncoordinated leaps" in electracy theory and praxis, resulting in pedagogical hiccups and frustrations (Edbauer). Professional development, however, can help instructors grow in their confidence in the new apparatus. Continued efforts to remain up to date and modify assessment methodologies and criteria as necessary will give instructors and their digital native students the best opportunity to succeed in the new apparatus.

Plagiarism and Electracy: The Need for Redefinition

In the Playlist and Transduction relays that I introduce in Chapter 3, students are encouraged to appropriate random fragments found on the Web for a new collection and remix a work from one semiotic mode to another, respectively. These assignments, sans citations, meet several of Ulmer's core electracy principles: fragmentation, appropriation, pattern recognition, and remix; thus, these are ideal new additions to the apparatus that test digital natives' abilities to play with new media and discover the unexpected. By literate standards, however, these new relays would raise red flags. The potential for plagiarism – a major concern at all higher education institutions as evidenced by honor codes, judicial review of academic dishonesty, and emphasis on citations – and disregard for intellectual property laws make the Playlist and Transduction imperfect and highly problematic for the literate classroom. With the two apparatuses at odds over the issues of citation and intellectual property, a re-definition of plagiarism is necessary for electracy pedagogy. A new (anti-)definition highlights the core principles of electracy: collective authorship, expressivist communication, and postpedagogical improvisation and experimentation.

Much scholarly attention has been paid to intellectual property, fair use, copyright, and recently, open educational resources. Laura Gurak, Johnson-Eilola, and others have tackled these issues in their work, documenting the challenges of intellectual property laws as they pertain to new media creation in postsecondary education. In "The Database and the Essay," Johnson-Eilola reviews Matthew Bender v. West Publishing, a landmark case that showed the change in what is considered creativity and originality (205-6). The Romantic, isolated self, according to Johnson-

Eilola, has long dictated intellectual property laws, but Bender v. West Publishing served as a "postmodern turn" toward notions of articulation and fragmentation (203). The transition in what is considered creativity is not surprising. WIDE reports, "[F]air use policies are continually tested when composing with multiple media given the ease of access to media, the ease of manipulating and reforming media, and the ease of redistributing compositions" ("Why Teach"). The accessibility of multimedia compositions and fragments on YouTube only exacerbates uses of the content in ways that might conflict with fair use guidelines; for example, students who construct digital storytelling projects, Web sites, blogs, and wikis in composition courses might download and remix and/or integrate videos and songs that are not Creative Commons licensed into their multimodal arguments. The proliferation of this content, sometimes without any attribution, leads to a chaotic and disorderly trail back to the original author.

The dominant forms of assessment in the literate sphere, however, are too restrictive for electracy composition, specifically in terms of the use of sources and citation. The very nature of electracy is that remix and appropriation shatter the conventional understanding of authorship and intellectual property. For Ulmer and most electracy adopters, plagiarism is a non-issue (Rice, *Rhetoric of Cool* 69). Yet, as Gye argues, a "battle" is underway between literacy and electracy over citation of original work.

> This is where electracy rubs up against an apparatus under duress. In a world where the ability to cut, copy, manipulate, sample – in a word, remix – is now available to anyone with a computer and some simple

> digital tools, an insistence on the distinction between originals and copies makes less and less sense. At the same time, copyright protection regimes are becoming more and more draconian. In educational environments, this plays itself out as a battle between those that want to use the material of culture in their writing in inventive ways (on the way to a new electrate apparatus) and those that what to hold onto literacy as the only way to reproduce the world and the word. ("On the Way" 6)

Gye astutely acknowledges the increasingly "draconian" measures to ensure copyrights and intellectual property; countless cease and desist orders are filed on YouTube by users and organizations like Disney, preventing the further remixes of content. An "insistence" on original works becomes nonsensical when originality is blurred by common "inventive" practices like remixes, mashups, and improvisation. The "battle" mentioned by Gye will persist as new media flourishes in staunchly literate societies, but a redefinition of plagiarism for electracy can result in productive conversations and increased potential for electracy integration in the writing classroom. Plagiarism in the electrate apparatus is virtually nonexistent because of the emphases on collective authorship, expressivist composition, and postpedagogical improvisation; to plagiarize in electracy, one would have to fake memories and fail to truly engage the apparatus, constructing falsehoods, missing out on eureka revelations, and writing sans electracy methodologies. Electrate plagiarism is lying to oneself.

The CCCC Committee on Assessment states, “Writing is by definition social” (“Writing Assessment”). Egents immersed in digital spaces inevitably collaborate. The interaction between writer and audience alone serves as a form of collaboration, and joint spaces like wikis, Twitter, and HitRecord further blur the lines of authorship. In each of the proposed relays, creative choices made by a student simultaneously involve fragments, remixes, appropriations, or fellow avatars. The Playlist is a collection of artifacts crafted by others. The Transduction involves a remix tool or software to assist with the translation. Both relays rely upon non-human agents like computers, interfaces, and networks to assist in the construction of meaning. The (Sim)ulation, a mystory-based project, encourages play with other avatars in virtual world communities. Gye adds that the mystory is inherently collaborative. She writes, “The question of originality, and its centrality to the literate apparatus, is put at stake in the making of a mystory. … [T]he mystoriographical process encourages students to borrow from a broad range of sources when researching and compiling their mystorys [sic]” (“On the Way” 6). In electracy, originality is not a core principle; appropriation and compilation are weighted more heavily. Authorship is an ambiguous term, and the Author – with a capital A – is nonexistent; instead, the author is part of a larger collective. An implication of postmodern authorship is the confusion of digital natives as to which materials are copyrighted and whether they can join in as authors of a remix (Palfrey and Gasser 198). The mystification of authorship in electracy is embraced, and Ulmer’s exercises only further the notion of distributed selfhood and authorship.

Plagiarism is not a concern in electracy because it is almost impossible for a student to be academically dishonest in her expressivist electrate work. The mystory project involves fragments of one's personal memories in four separate discourses of the popcycle; answers are not easily apparent, and pattern recognition takes time. The assignment is highly personalized and composed in the style of the egent, so cheating is nearly impossible. Ulmer writes in his *Internet Invention* online supplement, "Plagiarism is useless in electracy since learning involves designing the user interface (website/database/expert systems) in a way specific to the unique, singular qualities of the learner's sensibility, experience, memory." Each student's user interface serves as a compilation of different artifacts and results in distinct meanings. The artifacts employed in the mystory – or any electrate assignment – need not be cited since authorship is considered collective and originality unimportant; the remix would be less fun and playful if it required dozens of proper citations. The only way to "plagiarize" one's mystory is to falsify memories for a grade, a theoretical problem that could also be linked to fake narratives for a digital story project (Davis and Weinshenker). This unethical move is unlikely, but even then, the mystoriographer must creatively recognize patterns and foster meaning from those patterns. The juxtaposition of electracy and literacy in the same classroom will undoubtedly lead to some student confusion regarding intellectual property and plagiarism; instructors may continue to promote citation for literate argument essays while endorsing the opposite for electrate work in the mystory or a relay. The opportunity exists, however, for the instructor to address the situation via class discussion, which might serve to further reinforce the importance of citation for literacy as students are exposed to

electrate principles. Electracy adopters might also use prudent judgment to determine how citations are handled in a blended literacy-electracy course depending on the context; while student classes will benefit from the in-depth discussion, others could be hindered.

The importance of play and experimentation in electracy assures that coursework is the collaborative creation of students. In slowly transitioning from the literate apparatus, Ulmer promotes improvisation over the examination as a method of assessment for culminated knowledge or skills; a student should be able to improvise based on prior experiences, and an extemporaneous performance can never be the result of plagiarism. A digital native must demonstrate competence of methodologies like articulation, translation, and remix on the fly. What students created from remixes and improvisation is unique, "cool," and altogether new in meaning. Rice writes, "To teach the mix through appropriation, we have to reject the disciplinary fixation on theft … and recognize that appropriation as mix signifies more than just borrowing text" (*Rhetoric of Cool* 69). Postpedagogical creations result in moods and emotions, and the generation of feeling from fragments is not something students can or will desire to plagiarize.

Conclusion

Today's students write in ways that signal an obvious fracture in current literate practice in most colleges and universities. Their appropriations, articulations, and multimedia compositions fit the NCTE guidelines for writing yet remain assessed in traditional literate methods and flagged for plagiarism in an outdated definition. Fowler-Amato recommends encouraging writing journals for students to freely play

and explore their "uncommon" writing interests in whatever organization and style desired; frequent instructor feedback on these spaces could encourage students to invent more and realize their voices as writers. Ulmer similarly recommends free play and exploration to promote creativity and inventiveness through "uncommon" means in mystories, MEmorials, choral antidefinitions, and other electrate exercises, yet ideal instructor feedback for egents remains vague at best. To become sound electrate instructors, we must forefront assessment and evaluation, connecting feedback to learning objectives and ensuring students are able to "do [something] with that information when they finish the course" (Stout 4). Stewart adds, "Assessment is not a subject apart from classroom teaching; it is at the very heart of it" (236).

Rather than avoid electracy assessment out of fear of common standards or unrealistic qualifications, we need to embrace methods that are guided by electrate principles, regularly keeping approaches up to date and connected to evolving objectives. We must soundly implement backward design to ensure that assessment is directly linked to objectives and goals. Standards must be set so that grading new media is stringent and not simply an "easy A," as Stewart bemoans; instructors must also remain encouraging of student efforts in the new apparatus as they become accustomed to a new academic discourse community. We have to embrace various rubrics and assessment criteria since every articulation of electrate and literate principles is different, and we must seek alternate definitions of plagiarism and academic honesty so that students can freely explore new media without fearing or facing unnecessary repercussions.

We also must find ways through our assessment and electrate course objectives to increase student curiosity in creative and inventive new media efforts as they adapt to the rapid evolution of technology. Campbell contends that our learning outcomes must be modernized for the postmodern world and our courses must reflect a new approach to education, one to which Ulmer's electracy opens the doors. Campbell writes, "The Internet was invented to empower collaboration and augment human intellect. The Web has made these possibilities available to a staggeringly diverse global citizenry. Let's … mov[e] away from educational assembly lines toward intellectual ecosystems of interest and curiosity." What Campbell's approach means to electrate assessment is that we must disregard literate assessment practice like the "levels" Hass inquires about. Instead, we must welcome plurality, collaboration, and increased curiosity through new models of (anti-)grading, evaluation, and assessment. Cultivating new, inventive assessment techniques closely tied to electrate principles and digital native practices in "uncommon" writing spaces will foster new media curiosity in future generations of electrate media-beings.

Conclusion

The cultural transformation toward electracy has been underway for decades as rapid advances in the quality and accessibility of computers and digital technologies have facilitated new media production. Creative endeavors to appropriate, sample, and remix have led to advances in artistic expression, from advances in photography and film – anyone can be an editor with Photoshop or iMovie – to flourishing genres of music influenced by electronics like hip hop and EDM. Postmodern notions of authorship and the collaborative nature of writing and knowledge creation have re-shaped intellectual property law and sparked debate regarding the definition of and strict emphasis on plagiarism. The singular self has been rejected as idealistic as fragmented and contingent selves proliferate in the form of avatars and social media profiles. Even the definition of writing has evolved as organizations like the NCTE now accept all new media as composition. These societal shifts have resulted from the aleatory, non-linear logic of computers and new media realized in Ulmer's theoretical third apparatus, and as Prensky contends, our brains have been restructured and rewired by our interactions with modern technologies ("Digital Wisdom" 18). Electracy principles inspired by the paradigm shift have sparked many scholarly contributions to the emerging apparatus in the form of relays and anecdotal experiences with its genres. Yet electracy praxis remains a relatively unexplored area of scholarship, particularly at the first-year level.

In this dissertation, my goal has been to contribute to the growing apparatus through the formation of three pedagogically-sound relays that utilize backward design principles to guide first-year students in the writing classroom from

anelectracy to electracy. These relays, designed to be paired alongside composition assignments to highlight the differences between apparatuses, address Ulmer's key hypotheses for his groundbreaking text *Internet Invention*. Ulmer contends our students as consumers must become producers (or prosumers), the wired community of today's digital natives must become "creativogenic," and a course about the Internet must come to fruition as a workshop for students to find their images of wide scope (5-6). The relays proposed in this project help realize Ulmer's *Internet Invention* goals in the form of first-year praxis; the Playlist, the Transduction, and the (Sim)ulation inspire students to collect, articulate, play, and remix to become "creativogenic" prosumers – producing media as they consume it – engaging in self-exploration in a poststructuralist world. The processes of gathering fragments to build a mood and evoke an emotional response (Playlist), translate a composition from one semiotic mode to another (Transduction), and build one's image of wide scope through an avatar (Simulation) each serve as innovative postmodern composition. These relays should have been implemented in my literate Writing in a Wireless World course; instead, they are designed for flexible adaptation and implementation across the Virginia Community College System. Each module features a description and justification, objectives and learning outcomes, optional readings, and exercises building to a larger assignment that contributes to the electrate apparatus. Proposed assessment criteria for postpedagogical creations connect to learning outcomes and illustrate the importance of curricular design for sustainability and student success. The next steps for electracy praxis development are the creation of additional relays and the use of postpedagogical instruction.

In this conclusion, I review the hegemony of literate practice in teaching new media and forms native to the Internet, as well as misconceptions about electracy. Current literate practices stifle the growth of a new communicative apparatus, and students are unlikely to adapt to the paradigm shift without immersion in electracy. Next, I review the necessity of students becoming "digital dilettantes" of new media practice in our age of technogenesis. The promotion of four essential electrate principles – identity, agency, play, and conduction – follows. Further advancements in electracy praxis include the successful juxtaposition of literacy and electracy, the formation of new relays, the existence of professional development opportunities, and the implementation of postpedagogical practice in the classroom. Theoretical scholarship and electracy praxis are materializing, and with continued progress and innovations in the apparatus, electracy will flourish in the writing classroom.

Though the paradigm shift in postmodern communication from literacy to electracy has arguably been underway since the advent of the television, literacy remains dominant in postsecondary education. Print culture informs our ideologies on writing of solitary authorship, intellectual property, clear definitions to ground arguments and reach universal truths, knowledge transmission from writer to an audience, and the importance of analysis and explication. Writing has remained one of the "most conservative fields in its willingness to explore its contingent borders," according to Dobrin, as these ideologies have become outdated in the electronic era (20). One example of the stranglehold literacy has on writing is the continued existence of the in-class, closed-book exam. Ulmer contends in his *Internet Invention* online supplement that the exam is "an extension into the print era of a feature of

manuscript pedagogy" in which students memorized large sections of text to generate speeches. Written exams borrow this assignment without the extensive memory training. Ulmer adds, "The exam maintained an obsolete practice as a means to motivate study. Its persistence and even domination within schooling is one of the great failures of educational imagination in the modern era." The exam then is in dire need of revision or replacement; Ulmer's proposed improvisation exercise is one option for the modern writing classroom, but its popularity is likely stifled by the persistence of tradition in the field.

Electracy theory faces opposition from new media luddites and literacy scholars who protect the "contingent borders" of the field. Academic writing at most colleges and universities promotes clarity and certainty, usually excluding pictorials, intuition, and chance, all of which are embraced in electracy (Arroyo, *Participatory* 62). Arroyo adds, "Electracy emphasizes a multiplicity of meanings for any one concept, supports imagination, and encourages creativity and invention: all of which are traditionally not valued in a university environment built upon analytics" (7). The principles of electracy, inspired by the logic of computers, do not mesh with the traditional views of writing. Whereas the "practice" of literacy, according to Ulmer, is science, which values certainty and the scientific method of analysis, the "practice" of electracy is entertainment. Adversaries of electrate practice, whom Ulmer refers to as "literacy absolutists," however, do not believe that TV and entertainment add in a significant way to human thought (Arroyo, *Participatory* 13). Writing scholarship that does address the inevitable implementation of computers and entertainment in the classroom fails to approach the technology in innovative ways conducive to electrate

principles; instead, computers are treated as a "how to use tool" with a significant gap existing in proper literate student engagement of the tools (Rice, *Rhetoric of Cool* 9).

In spite of the continued influence of "literacy absolutists" on the practice of computers in the writing classroom, the abundance of scholarship on multimodal, new media composition serves as a "testament to the latest attempts to reform and update composition pedagogies" (Sullivan 148). These reformation attempts, often progressive in their approaches to visual and multimodal components of writing, remain firmly grounded in literate practice, solidifying the conservative borders of the field. *Picturing Texts*, for example, is a highly regarded attempt by Faigley, et al. to analyze texts with a focus on the visual aspects of composition. It provides its own visual grammar and many exercises to illustrate principles of visual writing. Rice notes that *Picturing Texts* and others sustain literate culture, "carrying over the very specific assumptions and ideological positions associated with print (writing topic sentences, paragraph-based structuring, interpretation over production, logical reasoning and ordering, referential-based argumentation, the question of purpose, audience recognition" (*Rhetoric of Cool* 8). The foci on topic sentence, paragraphing, and logical structure allow for easy integration of the text into a writing classroom but fail to acknowledge postmodern ideologies best suited for new media creation. *Writing New Media*, praised throughout this project for its blend of theory and praxis and extensive activities and exercises, is an example of a modernized composition pedagogy text that begins the transition from literate ideologies to quasi-electrate principles. Wysocki's awareness of materialities and agency, Sirc's introduction to curation via box logic, and Johnson-Eilola's endorsement of knowledge creation

through the articulation of fragments indicate *Writing New Media* crosses literacy's "contingent borders" to highlight electrate principles. None of the works explicitly endorse Ulmer or a new apparatus – though Sirc briefly mentions Ulmer's emphasis on invention – and all ground their work as composition-based. Selfe, for example, presents a Visual Essay assignment in which a central objective is to "reflect on the entire range of *literacies*" ("Toward" 77, emphasis added). Wysocki similarly presents a Visual Arguments activity in which students build their own; with argumentation not yet a supported genre in electracy, the activity is clearly rooted in literacy ("Openings" 38).

Electracy theory faces a difficult challenge in finding adopters who can break from the overwhelming influence of literate ideologies witnessed in scholarship and misconceptions about the emerging apparatus. Despite its name, electracy is not simply fluency with computers. Conversely, Ulmer argues in his "Foreword" to Rice's *Rhetoric of Cool*, "One may learn all the tricks of Photoshop, Dreamweaver, Illustrator, CSS/DHTML, and still be analectrate," a term that Ulmer, as a nomopest, invents for lacking electracy skills (xi). Though electracy operates via computer logic, Ulmer's theory promotes a post-critical, rhizomatic ideology rather than skill with computers. Brooks writes, "Although Ulmer's writing is theoretically complex, his projects … do not require advanced software or hardware skills." Even Ulmer's own Web sites lack technical sophistication and sound design principles. Ulmer encourages students without a solid background in computer fluency to take his courses since the creation of a mystory project or playlist collection can be done with the assistance of templates and design programs.

Electracy is also not replacing literacy; just as orality was not supplanted by literacy, the new apparatus will co-exist alongside orality and literacy. The emergence of electracy as an accepted field of study may take decades, so its integration in curricula will be slow. The juxtaposition of electracy with literacy is a necessary course of action for both fields; students will be exposed to Ulmer's new ideology as a fitting approach to digital forms of writing without sacrificing an education in traditional literacy. Those who integrate electracy in their writing courses acknowledge that all three apparatuses play an important role in a digital native's education; literacy skills are and will remain valuable and composition studies as a field should maintain some influence. The awareness of electracy ideology, however, requires an open mind to literacy's contingent borders. Teaching the two alongside one another will guide our students to become wise "homo sapiens digital" who can compose in the text of the future. Johnson-Eilola writes, "Hypertext pioneer Ted Nelson once claimed that hypertext, the structure of nodes connected by links, was actually the more general form of text; linear text was the special case" (218). Ability to compose via the logic of association and articulation will benefit students who operate in and out of the university in hypertext.

O'Gorman writes that today's students must become "digital dilettantes" of new media who can gain the necessary skills to design in any program and "'get by' in a given situation" as new technologies come into existence ("Hypericonomy" 94-95). Skill in new media, of course, is not a requirement to be electrate as Ulmer emphasizes, but being able to "get by" is significant as students communicate increasingly in digital spaces. It is not cyberbolic to argue that students must gain an

improved familiarity with new media composition; our students are increasingly digital natives, but they do not all compose new media regularly. Arroyo cites a Pew Research Center study that students are producing more video while reading and writing less than previous generations (*Participatory* 9). Yet another Pew Research Center study that surveyed 700 teenagers and their parents found that only 16% of students have created multimedia for enjoyment (Lenhart et al. 11). So despite an increase in student video compositions, the vast majority do not engage in new media production outside the classroom or on a regular basis.

Students in electronic writing classrooms will need to be savvy and know how to compose with new media, thus more frequent engagements with multimodal projects are needed to ensure students can "get by" (Corrigan and Gers 168). Ulmer explains the necessary amateurization – in the positive sense that students would produce often and learn to "get by" – of undergraduates with a sports analogy.

> Imagine if athletic programs taught only the analysis of sports, and not the playing of them. And yet we relate to the imagination and creativity analytically, never as faculties in need of exercise. By reproducing the specialist's pedagogy for our undergraduate majors, and even for general education, we form only consumers, spectators, very few of whom desire the pleasure, which they must accept on our authority. (*Electracy* 36-37)

Students as prosumers engaged with new media would be active contributors on the court, field, or ice; their understanding of "sports" would be based on their play and subsequent reflection rather than knowledge transmitted from the coaches and other

specialists. Active participation in the sport – or new media – would not automatically result in exceptional skill, but athletes – or designers – would have the ability to become "digital dilettantes," getting by with their knowledge of the sport. Electracy encourages sending our students into the game via constant new media production; embracing Ulmer's theory will result in "amateur" egents who perform rather than students who only read about it.

Hayles argues that our brain architectures are evolving with advances in technology (62). As we participate in hyperreading and the logic of association native to new media, our approach to language and imagery changes. Jackson confirms that, glued to and dependent upon our computers and digital devices, we are "already cyborgs in many ways" (291). Media-beings who experience the proposed relays of this project will fulfill several learning objectives appropriate to the new apparatus. These learning outcomes, previously reviewed in each of the relays in Chapter 3, include identity, agency, play, and conduction. Each electracy principle bolsters digital natives' abilities and brings them closer to becoming "electrate."

As postmodern cyborgs, our distributed identities and opportunities for effective agency are constantly in flux. Arroyo writes, "[E]ach act of writing is an identity performance, and subjectivity becomes the driving force behind composing; the writing subject and the space within which he or she dwells are symbiotic" (*Participatory* 35). A mystory project, for example, helps to open an egent's consciousness by exposing the interpellating forces (networks, interfaces, ideologies) upon one's agency. The image of wide scope simultaneously helps students discover their fragmented selves, including digital avatars. Turkle compares postmodern

digital identity to the various windows on a computer that a user is present in at all times. She writes, "[Y]our identity on the computer is the sum of your distributed presence," one that is a "multiple, distributed, time-sharing self" (5). The (Sim)ulation relay addresses the fragmentation of identity; exploration of one's various popcycle discourses – career, family, entertainment, and community – is what Santos et al. label as a form of expressivist introspection in which metaphor and analogy are prominent.

In discovering one's various selves and identifying the patterns that emerge, opportunities to uncover power relationships in one's writing and context become possible. The NCTE states that power disparities always exist in communicative acts, so "some people's words count more than others … [and] some people's words come true and others' do not" ("Professional Knowledge"). Inman's assertion that "White-male-centric histories" surround computers, for example, illustrates that women and minorities might not have the same agency as their white male counterparts (55-56). Though guaranteed agency to challenge disparities and inequalities is ambiguous, the popcycle can help raise awareness within egents. Corrigan and Gers encourage students, particularly those enrolled in community college, to take risks and try out new selves in their expressivist compositions because "[t]hey develop agency as they create" (170).

In creative self-expression, students are encouraged in electrate thought to take a playful approach. Combining play with artistic sensibility can result in unique discoveries of emotions and patterns. In his musical relays, Rice illustrates how digital natives can utilize electracy principles to uncover unexpected moods. In hip

hop pedagogy, students utilize juxtaposition and sampling to compose rather than structuring around a thesis statement to build an argument (*Rhetoric of Cool* 91-2). In funkcomp, the same methods help students find "the thang," a "funky" mood that captures one's emotional attunement. Playfully searching for "the thang" might be complicated in virtual worlds and video games because of the many layers of interactivity, but engaging other avatars can similarly result in unique discoveries. Ryan writes that *The Sims*, a "powerful narrative interactive system," is driven by blind fate and randomness (55). Allowing oneself to play *The Sims* can result in discoveries like "the thang" as patterns emerge from the aleatory events. Play in the electracy can be educational as a methodology. Garrett-Petts and Nash write, "[W]hile Ulmer's conductive method may emphasize the power of play over reason, it also reminds us of the classical injunction that art should both instruct *and* delight. Ironically, by valuing play it takes art seriously" (emphasis not added).

The conductive method, image logic in which egents serve as translators of meaning, is significant because it asks students to not just play but perform. Garrett-Petts and Nash add, "Conduction asks the critic to become a kind of performance artist, performing in tune with the work of art instead of merely interpreting it." Thinking through media rather than just analyzing it opens up potential new meanings and the possibility of an emotional response. Using conductive image logic, students are simultaneously exposed to visuals in a way they are not in traditional writing classes. Kress and Van Leeuwen lament the multimodal not being taught in schools (16-17). Selfe similarly demonstrates concern about the lack of visual study in writing and insists that composition instructors "expand their own understanding of

composing beyond conventional bounds of the alphabetic" (54). In electracy, students weigh all modes of communication equally, thus acknowledging the importance of the pictorial and aesthetics in postmodern composition.

To guide our students toward each of these learning outcomes, sound approaches to the advancement of electracy pedagogy are needed. Understanding electrate principles like identity, agency, play, and conduction through invention of new media is advisable, just as teaching electracy and literacy side by side is. The juxtaposition of the dominant apparatus and its nascent counterpart allows students to understand the core principles of each and how electracy differs from literacy in its approach to authorship, knowledge, and methodology. Integration of electracy in a literate class is complicated. Connecting relay activities and exercises back to established literate course objectives might require finagling; new learning outcomes might be required to assure avoidance of academic drift. Brooks notes that electracy – and specifically the MEmorial – is very much in its infancy and thus should not supplant any aspects of a literate course "without further testing." Teaching electracy is also a challenge because of how deeply ingrained literate ideology is in students' minds. Gye elaborates, "[S]tudents are so inculcated in the apparatus of literacy that they are both initially resistant to and suspicious of an academic practice that does not conform to … [a] 'clear and simple' style [of] their academic training" ("On the Way" 5). Student resistance can be anticipated, and juxtaposing an electrate assignment alongside its literate equivalent could assist students in understanding how to tackle it.

Further growth of electracy via theoretical additions and praxis is inevitable. Because Ulmer promotes apparatus development through practice, relay development by Florida School advocates and instructors from other disciplines is likely. Sirc contends that a true connection to a work is present when it is an ongoing project (120). Thus prominent electracy scholars like Ulmer, Rice, and Arroyo – and the students and scholars they influence – will be at the forefront of innovative relays. Some new additions have already been suggested or would serve as the logical extension of current relays and assignments.

Gye and Johnson-Eilola point to social media as a likely site for new models of electrate composition. Gye recognizes that the features available on social media like Facebook and Twitter not only make accessible but promote "a remix sensibility" ("On the Way" 8). Users on many social media platforms can share articles, messages, links, images, and videos on each other's profiles and timelines in real time; profiles end up looking a lot like mashups (8). Johnson-Eilola adds that communal sites like Slashdot, Delicious, Reddit, and Digg promote fragmented narrative that calls into question selfhood and "what it means to write" (216). These social networks showcase both self and narrative as ongoing and contingent articulations (217). A relay that utilizes one or more social networks has a lot of potential to meet core electrate principles.

Brooks, meanwhile, encourages further exploration of an existing electracy project: the MEmorial. Brooks's class engaged the MEmorial project over the course of a semester with positive results. He writes, "A MEmorial has the potential to engage its creator in significant social / political problems, but address those

problems from an arts or humanities perspective." Engaging students in social issues might be of interest to many composition instructors, and a course culminating in a digital monument could be themed to reflect a current problem within a community. Brooks emphasizes repeatedly in his text the "potential" for the MEmorial; further development and experimentation with the assignment could yield positive results.

Other potential relays introduce digital technologies not yet mined for electracy. Sirc, for example, analogizes ideal college writing to a DVD with extra features. Most DVDs are used for the storage and viewing of movies, so linearity and cohesion would still be present in the visual composition. However, a multiplicity approach could be used for the special features. One does not need to choose one outtake or interview but could compose "various overlapping, non-sequential strands" with all outtakes and interviews simultaneously, much like antidefinition or choral writing (Rice, *Rhetoric of Cool* 116). Outtakes often feature the "making" of a film, illustrating the process that gets an ensemble to its desired product. The nonlinear logic of this potential DVD additional feature would match the electrate rhizomatic approach to composition. Vitanza writes, "[P]rocess is not to be studied for the establishment of a product. Process, situated in the future perfect, is everything" ("Writing"). Nonlinearity is similarly a feature of Freeman's Imaging Place virtual reality art project. Like a documentary, Imaging Place captures real places and allows users to navigate the spaces in *Second Life* ("Imaging Place"). Photography, video, and three-dimensional imagery bring real locations to life in a virtual world. Freeman's geolocation project could be explored even through modern smart phones, which facilitate tracking one's location and documenting visually one's surroundings.

A live-streaming video on Periscope, for example, could be added to the archive of material for a place to increase interactivity and make Imaging Place synchronous for users. The NCTE states, "Geographic location and embodied presence have become more salient to writing than at most times in human history" ("Professional Knowledge"). A relay like Imaging Place that blends geolocation with handheld devices could further the possibilities for writing in the postmodern world.

The introduction of new relays, proliferation of the theory in praxis, and success of electracy pedagogy will rely on sustained efforts for self-improvement via professional development. In Chapter 4, I noted the importance of professional development in assuring sound electracy assessment, but preparing educators for praxis in the new apparatus will require more than just attention to assessment and evaluation. The NCTE notes that teachers need to understand the "theory and history of modalities, technologies, and the affordances they offer for meaning making" ("Professional Knowledge"). Workshops, courses, and resources that facilitate this understanding will better equip faculty for teaching electracy theory. Johnson et al. add that ongoing training is needed to ensure new media is properly integrated into a curriculum (25). VCCS colleges – like my institution of employment, Tidewater Community College – individually and collectively offer professional development opportunities for faculty, tailoring the content to the stated needs. Many colleges have their own professional development offices, and each region – of which there are five in the VCCS – has a Center for Teaching Excellence that can offer workshops and training. At the statewide level, the VCCS Office of Professional Development offers opportunities for grant projects that could incorporate training of faculty in new areas

of academic research. The yearly New Horizons conference and peer group meetings also give faculty chances to share their findings and network with likeminded instructors across the state. WIDE emphasizes the importance of sustained faculty development with "theoretical scaffolding" and "regular training sessions; mentoring approaches; sustained software, hardware, and other support; and honed conceptual frames." With an ideal infrastructure in place to provide faculty with professional development opportunities, the VCCS serves as a promising site for electracy relay development and experimentation.

Once faculty are prepared to transform their literate classes by introducing electrate new media instruction, attention to in-class practice is necessary. In Chapter 1, I reviewed the post(e)pedagogical teaching style. Suvakovic describes postpedagogy as "a move beyond conventional pedagogy" suited for electracy that features a decentralized teacher, lecture as performative artwork rather than knowledge transmission, and the "anarchistic dismantling of traditional canons and rules in pedagogy." The radical experimentation in a postpedagogical classroom brings to fruition Ulmer's vision for electracy in praxis. Arroyo writes, "[I]n Ulmer's view, there are no 'masters' of knowledge; one is always on the side of the listener" (*Participatory* 88). The teacher, no longer the authority figure, aims to create experiences for students through their collaborative inventions rather than lecture (Stout 2). Ulmer writes that students in a postpedagogical classroom do not seek validation but rather find their own answers through collaboration and discovery. He writes in his online supplement to *Internet Invention* that the instructor's role is "to

wean students from reliance on teachers by showing them a method for using the resources of the discipline for solving problems encountered in their work."

The postpedagogical model of instruction might not be seen as radical by instructors who have already flipped their classrooms or decentralized their authority, but it is far from an accepted model. Marshall W. Alcorn notes that most common forms of accepted pedagogy are "teacher as facilitator" and "teacher as nurturer," which Arroyo labels as "guises" for the traditional teacher as authority figure (Arroyo, *Participatory* 97). In implementing the proposed electracy relays, faculty must consider their approach to in-class pedagogy. If, as Berlin contends, "to teach writing is to argue for a version of reality," then a postpedagogical model of instruction serves as modeling the behaviors espoused in the electracy theory that students seek to understand and perform (256).

Instructors integrating electracy into their courses are accomplishing more than meeting Yancey's NCTE call for innovative models of writing; they are introducing students to an altogether different ideology of communication. Ulmer's electracy is a theory suited for the logic of new media and the Internet. It promotes the articulation of fragments, the appropriation of content and subsequent remixes, and the introspective self-reflection of one's memories and experiences to discover an image of wide scope. Electracy, like many other post-critical movements, "reclaim[s] writing as an art form," emphasizing the aesthetic nature of images and writing (Sullivan 8). The new apparatus breaks from the rigidity of literacy and frees digital natives from the search for truth and certainty, opting for antidefinition and choral thought. Santos et al. state, "It attempts to liberate students from the idea, amplified

by our era of increased standardized testing, that there is one answer – an answer to be discovered rather than created." Instead, the postpedagogical theory encourages students to invent "new, localized, contingent, and multiple answers" (Santos et al). Electracy, most of all, promotes invention. Without student engagement and exploration of new media, electracy is meaningless. Arroyo writes that electracy encompasses more than just "learning through entertainment" (*Participatory* 19). In electracy, "we become participants in the entertainment enterprise of learning while creating" (19). Inspiring our students to generate, create, invent, build, construct, appropriate, remix, articulate, and discover is the core principle of the proposed relays in this project and of electracy theory. Praxis in the emerging apparatus will require sustained efforts by instructors who adopt electracy to create "digital dilettantes," achieve the key learning outcomes of the apparatus, juxtapose electracy and literacy, build and remix relays, join professional development efforts, and implement postpedagogical practices. These efforts will require time, energy, resources, and patience, but as Selfe declares, "I believe in starting slowly, but starting nonetheless" ("Students Who Teach Us" 45).

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