VOLUME II

CRITICAL READING ACROSS THE CURRICULUM

SOCIAL AND NATURAL SCIENCES

ANTON BORST • ROBERT DiYANNI

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Critical Reading Across the Curriculum

Volume 2: Social and Natural Sciences

Edited by Anton Borst and Robert DiYanni

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Preface

What is critical reading, and how do you teach it in the college classroom? Exploring answers to these questions, as they vary across discipline and individual practice, is the purpose of *Critical Reading Across the Curriculum, Volume 2: Social and Natural Sciences*, as it was for its predecessor, *Critical Reading Across the Curriculum, Volume 1: Humanities*. For both volumes, we asked our contributors – accomplished professors who recognize teaching as an essential part of their role as scholars – to discuss critical reading and what it looks like in their discipline. We asked them to describe the goals of critical reading in their field, the questions it typically pursues, and the skills it requires. We asked them to demonstrate how it's done. More important, given our primary pedagogical aim, we asked these experienced educators to share with our readers the methods and materials they use to cultivate their students' critical reading skills. The following chapters thus present an array of classroom practices that our sixteen contributors use to critically engage students with a variety of texts, both written and visual, scholarly and popular, in the social and natural sciences.

We are grateful that they were up to this double challenge of not only defining and demonstrating critical reading in their disciplines, but also explaining how they teach it to their students. Teaching critical reading in higher education often involves confronting a pedagogical paradox: that being an expert on a topic can make teaching that topic more, rather than less, difficult. When we learn things well, when we master them, we internalize that knowledge, beginning with the fundamentals. This knowledge becomes ingrained and habitual, even unconscious. When speaking with other professionals in our field, we likely employ a conceptual shorthand without knowing it, packed with jargon we take for granted, with chains of thought we wouldn't think to spell out. To the uninitiated, it sounds like another language. Teaching what we know well thus requires an effort to explicate what's implicit, to unpack complex and multi-staged processes that to us may seem unitary and automatic.

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This is what our contributors have attempted to do for their students through the activities and learning experiences described in their essays. Instead of one definitive theory or taxonomy of critical reading pedagogy, they offer a wide range of practices from which college instructors may draw, adapt, and extrapolate, whatever their discipline. Because our contributors work in a variety of institutional and programmatic contexts – at community colleges as well as research universities, in general education curricula as well as capstone research courses – this collection offers a broad perspective on critical reading pedagogy in American higher education.

Despite the differences in pedagogical approaches and practices, however, a number of common themes emerge.

Frameworks. All the essays offer frameworks for teaching and practicing critical reading based on the disciplinary questions prioritized by their authors, who recognize the work of critical reading as an iterative, ongoing process. Consequently, they have designed – and describe here – series of exercises that they implement across the semester. For them, critical reading is not a single skill to be dealt with once or twice, but, rather, a layered set of skills, each of which requires attention in the classroom and multiple opportunities for student practice. The framework that Michael Busch and Garri Rivkin offer for use in the political science classroom encapsulates many of those presented throughout the book. Busch and Rivkin identify three levels of critical reading and present sample exercises targeting each: text, context, and subjective response. Fittingly enough, these three levels correspond to three other major themes of the collection: *argument*, *contexts and connections*, and *making it personal*.

Argument. Unsurprisingly, a number of essays emphasize the ability to identify a text's argument. Noelle Liston in anthropology, for example, emphasizes the need for students to abstract conceptual arguments from what she calls their "content." Conceptualizing a particular argument can make it applicable and relevant to other contexts. An argument about the way the imagery of sperm and egg in medical textbooks perpetuates gender stereotypes, for instance, can suggest a broader argument about how scientific discourse can be shaped by – and perpetuate – social prejudices. Other contributors, such as Anna Shostya and Joseph Morreale in economics, ask students to identify the central questions addressed by texts and to consider the relevance of those questions to everyday life. And to help students extract such core information from scientific research papers, Andrea McKenzie and Eric Brenner (writing and biology) and Pascal Wallisch (psychology/neural science) offer strategies and sample exercises that clarify the different elements of academic science writing.

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Contexts and Connections. In addition to a focus on the text itself, we find an even greater emphasis throughout the collection on understanding through contexts and connections between and across texts. Many contributors demonstrate how text and context are inextricably intertwined. Robert Lyon (business) and Jesse Goldstein (sociology), among others, guide students in situating difficult texts in particular areas of scholarly discourse, or within different "schools of thought." This benefits student writing as well as reading. When students understand their own research as contributing to an ongoing conversation among scholars, their work becomes more meaningful, and what's expected of them – in writing a paper, preparing a presentation, or developing another kind of project – is clarified. Goldstein, furthermore, requires his students to define their own areas of discourse, arguing that the literature review is never simply a survey of existing literature, but is instead an act of creative curation – a skill students need to develop as critical readers in the information age.

While Goldstein asks much of his students in terms of finding their own texts to connect with one another, other contributors scaffold this process. Michael Rodriguez (political science), as well as Shostya and Morreale, assigns strategic groupings of texts that invite and challenge students to make conceptual connections among them. Lindsay Anderberg, in guiding students through her institution's engineering archive, assigns bundles of materials (passports, catalogues, photos, patents) that only begin to make sense when looked at together, in multiple contexts.

Anderberg's work, along with that of Christopher Leslie (expository writing/science and technology studies), demonstrates the opportunity critical reading in the sciences provides for students to consider the material contexts of scientific discovery and innovation. Often undergraduates labor under the illusion that science and scientific writing are to be understood divorced from any context, be it historical, social, or institutional. To correct such misconceptions, examining artifacts and documents from the history of science, as well as reading critical studies of scientific developments, helps students understand how scientific work is actually accomplished. Students gain a fuller sense of their own potential to do science, and develop an informed perspective from which to critically analyze and assess its results, including its social impact.

The critical reading activities described by McKenzie and Brenner also disrupt a common misconception of scientific practice: that science is about finding answers, just as student lab work is all too often focused on recreating specific, pre-determined results. Instead, they want their students to read with an eye for the questions scientists ask and explore, as any result coming from the experimental process has the potential to inform.

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Reading scientific literature, including experimental reports, shows students how scientists pursue questions of relevance to their field, often by finding gaps in the existing research. It also gives students the opportunity to read critically and skeptically – in other words, like scientists – by evaluating whether interpretations of evidence actually fit the evidence they purport to describe, and considering what other questions, unrecognized by the experimenters themselves, an experiment might raise.

Making It Personal. Several of our contributors discuss how they engage students in critical reading by establishing the personal relevance of a text. Can a reading be situated within the immediate context of students' lives? What kinds of opportunities can students be given to practice connecting what they're reading to their everyday experience? To what extent do the concepts and theories they're reading about impact or illuminate their careers, their social interactions, or the natural world around them? Many of the essays here consider such questions of personal context. Deborah Gambs makes a case for using fiction in sociology courses, particularly narratives that describe situations and settings familiar to students, in order to engage them with sociological questions. (*Corona,* her primary example, is a novel centered on a character from a New York City neighborhood many of her students recognize.) Shostya and Morreale describe how they precede reading assignments in economics courses with questions that connect the readings to common student experience (e.g. "What is a bank?"). In biology and other natural sciences, McKenzie and Brenner provide exercises that help their students identify the human relevance of seemingly abstract experimental work in scientific research papers (as it applies to particular medical treatments, for example).

Other contributors describe powerful avenues to personal relevance through service learning and social justice. For Rodriguez, making global awareness a goal of critical reading provides students with a necessary twenty-first-century competency, while also pursuing the higher aim of fostering global citizenship. Kiersten Greene, who teaches literacy education, asks her students to critically evaluate teaching materials through a social justice lens. And Gregory Donovan (communication and media studies) has his students work with community stakeholders to design and facilitate technology-focused community development programs, as they critically "read" other, municipally-directed, smart urban design initiatives.

Positionality. One theme that emerged among the social scientists was positionality: an awareness of the effect of our position – in terms of history or society or geography – on our interpretation of a text, and an appreciation for the difference in point of view between ourselves

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and the authors we read that such positioning may entail. For Liston and Rodriguez, for example, critical reading thus involves positioning oneself, as much as possible, in the subjective experience of the author or intended audience of a text, be that text a critical analysis, a political argument, a Balinese cockfight, or, in Liston's own example, a stiletto boot. Both Liston and Rodriguez offer exercises to activate students' empathic imaginations, not to enforce blind agreement with particular texts, but in order to engage students in deep understanding before they launch into judgment.

Donovan and Greene emphasize a different aspect of positionality: its limits. What does our background, our culture, our technological hubris, allow us to miss or take for granted? The service-learning component of Donovan's course on smart urban design requires students to develop relationships with community members to learn their needs before unilaterally implementing service projects. Greene, as a teacher of teachers, has her students critically read their own teaching practices, including the books typically incorporated into literacy curricula, which often quietly smuggle racial bias into the classroom. For both Greene and Donovan, the task of critical reading and thinking extends beyond the texts being read to investigating the positions of authority assumed by instructor, observer, and community developer.

Relevance. As may be apparent from the forgoing, one overarching theme to emerge from this exploration of teaching critical reading is *relevance*: critical engagement depends on students recognizing why a text matters (assuming it does), and how it connects to the work of other scholars, to the world, and to their personal lives. But teaching critical reading does not mean doing that work for students, and it does not mean expecting them to be able to do it on their own simply by telling them to do so. It requires mediating the space between dependent and independent learner, through strategically scaffolded exercises and instruction, so that students ultimately are able not only to distinguish valid arguments from false ones, scholarly work from opinion, but also to hold even well-established perspectives and theories up to critical scrutiny. That is the goal of the contributors in this volume, who share in these pages the tools they have developed to foster critical reading in the college and university classroom. We hope you find the practices they share as adaptable, instructive, and inspiring for your teaching as we have for ours.

Anton Borst
Robert DiYanni

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work requires researchers to simultaneously embed themselves in and study the day-to-day activities of the researched group or place. Anthropologists as ethnographic readers seek to gain access to the meaning and value of what local individuals would see and understand in their culture-as-text. The image of over-the-shoulder reading reminds us that anthropology seeks to bridge the gap between what the native or local first reader sees and understands about the world, and what the researcher or secondary reader sees and understands through careful and dedicated field research. In order to read a cultural text, anthropologists must actively imagine how it is being read by the native reader.

For anthropologists, the best way to understand what something signifies to the local individual is to stay proximal: lean in; aim to inhabit and embody what it would be like to read like a local, even while being a stranger, at least initially. Consider what you do when you read over someone's shoulder: it requires a bodily and psychological repositioning and constant readjustments in order to discern the movements and focus of the local reader's attention and gaze. Teachers often speak of "staying close" to the text, and indeed Geertz' metaphor offers us a way to imagine anthropological reading as a practice of cultural proximity, a huddling in to construe the meaning and comprehend the meaning maker. This set of challenges confronts the anthropologist as reader and requires the anthropologist to ask the following questions: What do I, as an outsider, need to know and care about to read like another human being? What must I know historically about the events and lives of this person's life, family, group, or nation in order to know how meaning is made? What unspoken rules and values inform this individual's way of seeing the world? Such questions suggest how the discipline of anthropology embraces research based on the principle that meaning can ultimately be shared and translated.

The first principle of reading in anthropology, then, is about staying close to the context in which meaning is produced; it's about physical, mental, historical, cultural, even moral proximity. Physical proximity, of course, means where and how researchers position themselves and among whom. Mental proximity refers to the psychological and cognitive flexibility needed to question one's own cultural norms and practices and learn new ways of being in the world. Historical proximity involves attention towards the specificity of when and where events occur and what broader social, political and economic contexts shape the local dynamics. Cultural proximity (the goal of the researcher's efforts) refers to the process of learning the spoken and unspoken rules and norms of social behavior and everyday practice of a particular cultural context. Moral proximity refers to the ethical recognition that what human beings know as right or wrong is

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highly dependent on the context in which they were born and raised. The hovering and bending of the over-the-shoulder reader demands that researchers must do some careful guesswork and analysis in order to determine what the main reader, the so-called native or research subject, is in the process of constructing and living, as well as how the local reader identifies and is identified in that particular society or group. It is an art of positions, imagined positions, and repositioning, or, as our field calls the complex dynamic of location and identification, *positionality*.

Anthropology takes very seriously that individuals, both the studied and the studiers, are positioned in time and space, with the basic idea that cultural and historical location shapes and informs the world and worldview of each and every one of us. As researchers, then, we must bend and lean and aim to inhabit the space of other cultural readers in order to read their cultural texts. We adopt this same approach when we read media, scholarly texts, literature and arts, and, certainly, the writing of fellow anthropologists. We consider each text a kind of rich and complex puzzle of physical, mental, historical, cultural, and moral meanings that might be unraveled and examined thoughtfully. Thus, for example, Vincent Van Gogh's *Starry Night* represents a cultural artifact of a Dutch man living in a French mental asylum in the late nineteenth century, made at a particular moment, informed by a particular set of cultural and historical ideas about art and artists, mental health and treatment, masculinity, and starry skies. My own chapter in this book, too, represents one writer's text, but also the writing of an early twenty-first-century American woman who works in a large urban academic institution in the global city of New York.

Geertz' over-the-shoulder metaphor also reminds us about the failures, or at least the limitations, of positionality. The act of over-the-shoulder reading is always a translation of one positioned person's meaning-making, the local reader, by another positioned individual, the anthropologist. In other words, the anthropologist can try to interpret what the local subject sees, believes, and experiences in the world of reading culture, but it will always remain of a secondary order, a slightly different interpretation by another uniquely positioned human being. Each reader's reading of the previous reader is an act of rigorous interpretation, but also an act that is subject to constraints and limitations. Geertz had to reconcile what several Balinese people told him about the meaning of the cockfight. His over-the-shoulder reading of the cockfight thus compiled numerous different over-the-shoulder encounters. When we read what Geertz writes in his book about the cockfight, we are also acting as over-the-shoulder readers. When you read my analysis of Geertz, you are acting as yet another over-the-shoulder reader.

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It's shoulders all the way down. As students and teachers who read the work of Geertz, we already have a few sets of shoulders to read over: we must read over Geertz' shoulder and understand his worldview and values; and we must scrutinize how Geertz reads over the Balinese's shoulders at that time and place. But we also are attempting to climb in alongside Geertz and read the Balinese's texts through the rich ethnographic evidence Geertz provides us. Finally, there is also a meta-analytical component to all of this, because, in theory, the act of reading in anthropology also entails a good deal of self-scrutiny and awareness. In other words, we should question our own hidden assumptions and values to know how we are reading Geertz. What kinds of beliefs, values, and unforeseen blind spots do we, as twenty-first-century students and teachers, wherever we may live, bring to bear on Geertz' text? How do our unique histories and cultural locations inform how we find meaning in Geertz? Reading in anthropology represents a practice both profound and imaginative, and that grounds the discipline's methodology and analytical paradigm: over-the-shoulder reading requires fieldwork. All subsequent interpretation and writing are derived from these live encounters.

Empathetic Reading

Years ago, when I was teaching a multi-disciplinary summer course, I was asked to present a primer to my colleagues on how to teach cultural anthropology using a physical item to represent my discipline, something that would fit on the seminar-room table. On a warm morning in June, I placed a black leather knee-high pointy-toed stiletto boot on the table. Why is anthropology like a boot and what does this tell us about critical reading? For starters, the boot embodies a foundational principle of anthropological inquiry, which is empathy, the act of understanding another person or thing from their perspective and point of view. Yes, the boot offers us the somewhat clichéd reminder of walking in someone else's shoes. But it also reflects, more crucially, the principle of cultural relativism, the act of analyzing from the cultural perspective of the insider. Like Geertz's reading-over-the-shoulder analogy, anthropologists try to understand what it means to walk in another's boots, in this case, on a spiked four-inch heel, and what doing so means to the boot-wearer and to members of the boot-wearer's society.

The boot also represents the unpredictability and uncertainty of cultural meaning and material form. The shape of the human foot might predict some basic contours of shoe shape and size cross-culturally, and this work,

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I would add, is of particular interest to physical anthropologists that study comparative human development and human evolution. However, to a cultural anthropologist, what is most compelling is that knowing our human foot shape does not predict the astonishing variety of shoe shapes cross-culturally. Nor could we ever predict, based on the form of toes and foot arch alone, the meaning of a shoe fetish, or that wearing a high-heeled leather stiletto boot might garner the wearer esteem, class status, or sexual appeal. In order to assess the value and meaning of the shoe, one must examine and scrutinize a whole world of particularities, from the cultural history of leather use to how and why shoes became elite or luxury goods, to local sexual norms and fantasies.

Thus the boot is shorthand for a problem, a complex issue or question worth investigation and inquiry. Typically, then, anthropologists don't just study boots as if boots were made in a space–time vacuum. Rather they create a meaningful constellation of contexts tied to a particular place and time and in which the boot is situated, such as the unlikely revival of artisan shoemakers in Italy in an age of global luxury brands, or the shift in Americans' sexual practices suggested by the success of Broadway musical *Kinky Boots*.

Part of the anthropological analytic, then, involves an act of estrangement, of defamiliarizing oneself with what is familiar and considered "normal." Anthropologists love to say that their discipline makes the strange familiar and the familiar strange. Put differently, anthropological readers should come to appreciate something taken for granted in a new way, or learn to value and appreciate what they might initially dismiss as unusual or weird. The very choice of research object could itself serve as a defamiliarizing provocation: studying American compulsive shoe shoppers, for example, might reveal surprising facets of twenty-first-century American culture.

The boot also reveals another hidden value of anthropology, what anthropology's founding father Bronislaw Malinowski (1922/1984) has famously called "the imponderabilia of everyday life" (p. 20). The imponderables of life represent common facets of everyday life and culture that are difficult to define precisely but nevertheless constitute something of significance and worth. From this perspective meaning is imprecise and unstable: we could not say with any confidence that stiletto boots have a single or fixed meaning. Indeed, the meaning of any cultural object or immaterial value, from boots to religious value to what is accepted as good science, is dramatically and mercilessly subject to change. The research objects of anthropologists are moving targets that pinpoint the unique value, meaning, and circulation that something has at a particular moment and for a particular

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people and, therefore, the meaning of the investigated object is neither timeless nor universal.

Anthropologists love to scrutinize particulars, and they take pride that the scrutiny of imponderables is wildly and radically inclusive. The study of culture means researchers might study anything from the work of Wall Street bankers to the fishing practices of Bengalis to HIV prevention programs in Ghana to the artistic production of Australian Aborigines. What may be cultural minutiae to one person may be important and worthwhile objects of research to others. In order to read critically in this field, we must be aware that researchers in anthropology value everyday things that other rather closely related disciplines – economics, political science, or sociology, for instance – might not.

Here, then, are some boot-informed critical reading questions, suitable for any anthropological text:

1) Name the boot: What object is the anthropologist trying to understand?
2) Why this particular boot: Why is this object timely or important or compelling for this particular group of people, time, or place?
3) The boot becomes embedded into a socio-cultural puzzle: How is this particular object tied to a compelling issue or problem worth investigation and inquiry?
4) The defamiliarized boot: How does the researcher help us understand something that initially seems bizarre, or offer fresh insight on something we've taken for granted or underestimated?
5) Position of boot-wearer versus researcher: How does the local or studied group view or understand this object? How does this differ from the way the researcher interprets this problem? What argument is the writer making about the problem? Anthropologists make interpretations and do not simply report the views of the insiders, so different interpretations between researchers and locals are likely to appear in texts. Although this interpretive difference might be initially seen as problematic, it can provide a means of engaging students with anthropological writing, especially if students notice details in the insiders' perspective that conflict with the interpretation offered by the anthropologist.
6) Walking in the boot: How does the researcher represent the perspective of the boot wearers? To what extent do these unique points of view become visible in the ethnographic material the researcher provides, which may include historical or cultural context, interview narratives, descriptive vignettes, and other sources of information? Students should look for instances in the researcher's text that might obscure or hide the insiders' perspective. While informants in anthropology are often given

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account of the author's argument. Doing so forces students to engage with what is generally the most complex version of the author's idea or argument.

Reading for Content-Based Argument versus Conceptual Argument

Students must also learn how anthropological texts may have applications beyond anthropology, and that arguments can be read as both content-based and conceptual. In reading an argument for content, students identify the particulars of an essay's argument: the people, place, time, and situation or events it deals with. In reading an argument for concepts, students read for the author's development of transferable and abstract ideas. Emily Martin's (1991) "The Egg and the Sperm," a classic anthropological essay, broke ground for feminist anthropology, science studies, and anthropology of the United States. Martin scrutinizes the imagery of the egg and the sperm in American medical textbooks on reproduction, criticizing the tendency to depict the egg as a metaphor of a stereotypically passive woman and the sperm as a normatively heroic man, arguing that "The imagery keeps alive some of the hoariest old stereotypes about weak damsels in distress and their strong male rescuers. That these stereotypes are now being written in at the level of the *cell* constitutes a powerful move to make them seem so natural as to be beyond alteration" (p. 500). In the classroom, I ask students to focus on this passage in order to recognize two levels of argumentation. What I am calling the content-based argument stays close to the author's key terms and particular objects of study. In other words, we might represent the content-based argument as Martin claiming that stereotypical imagery of egg and sperm in medical textbooks distorts our understanding of cell behavior as well as our understanding of gender norms. Because of the authoritative power of scientific discourse, transforming cells into gendered adult humans deceives readers into thinking that gender norms are as unalterable and universal as the biological structure of a cell.

Once we establish a content-based reading of Martin's argument, orally or in written work in the classroom, I ask the class to move towards replacing the specific key terms with broader concepts. To push students in this direction, I ask: In what slightly larger conceptual category might the "egg and the sperm" fit? For example, "the egg and the sperm" might become "biological matter" or "scientific objects of study"; "gender stereotypes" might become "cultural norms"; and "biological imagery" might become

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"scientific representations." Thus, in a *conceptual* version of the argument, we might suggest Martin argues that scientific representations that deploy stereotypes may deceive social actors into believing that their ever-changing cultural norms are stable and fixed and, moreover, that seeing those norms as stable and fixed misses or distorts vital knowledge about the natural world. Whereas the content-based version makes students assume that the only relevance might be to other texts related to gender stereotypes or studies about the egg and the sperm, the conceptual version of the argument opens the door to a wide variety of cultural applications.

Indeed, the writing assignment asks students to use Martin's text as a lens to read other texts. Students choose a variety of texts about scientific metaphors, from "stream of consciousness" to cancer as a "battle," and analyze how such metaphors shape the thinking of social actors and, in particular, what might be naturalized. For example, one student reasoned that the notion of the stream of consciousness might prevent scientists and laypeople from recognizing how cognition can be punctuated and uneven, as the stream conveys a sense of endless flow. Another student analyzed how the cancer "battle" makes disease appear as if it were naturally a fixed period of combat, thus distorting how preventative health measures shape our "battles" with cancer. The generation of these new ideas was dependent upon a more imaginative and capacious rendering of Martin's original argument. Some students, of course, wrote successful essays by leaning more heavily on the content of the argument. For example, one student examined the "birds and the bees" metaphor for sexual reproduction and found similar patterns of activity and passivity – men as active bees and women as attractive flowers – as Martin did for the egg and the sperm.

Students need to learn how to apply content analysis through locating and explaining examples similar to the object or case being studied. But they also need to do some higher order thinking to understand arguments in conceptual terms, and how to apply argument concept analysis more broadly to other more wide-ranging situations and scenarios. Learning to read for these two types of argument brings students' comprehension of texts closer to that of insiders in the field. As anthropologists, we are conditioned to do this analytical and conceptual work because we are trained to mine other scholars' work for what might be relevant to and compelling for our own research. We might confront new texts with the following question: How do this author's ideas help me understand the problem I am examining? As someone who studies contemporary Italy, for example, and depending on the problem I am examining, I might find greater insights in research on South Africa or Japan than in an essay focused on Italy. Therefore, advanced writers in comparative studies, be it anthropology,

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history, or politics, learn to move fluidly between content-based and conceptual arguments, such that this unspoken understanding of argumentation becomes secondhand. Once again, the key for students new to the discipline is to become aware of these implicit rules such that they, too, can practice reading – and applying – ideas at multiple levels.

Reading Context as Argument

If I imagine myself as reading over the shoulder of my students, I recognize another novice's dilemma in the study of culture and society: what anthropologists talk about when we talk about context. Let us first return to students' assumptions about context when they encounter texts in anthropology: context as synonymous with what we typically call "background." And because background implies insignificance or setting, students typically only skim or quickly scan any text that concerns context. But, once again, we find that a trained anthropologist places a different value on context, which means that unless students know precisely how anthropologists theorize context, they risk poorly comprehending a text. For anthropologists, any text – meaning any utterance, writing, image, event, or experience – lives in a particular and non-repeatable historical and cultural nexus of present and past conditions. Context, thus, is much more than mere background. Context is rich, complex, and ineluctably contingent.

In fact, anthropologists rely on the active verb "contextualize" to name this kind of cognitive labor. For example, the idea of immigrant "bootstrapping" in the United States might be contextualized in various ways: as a problem about gender and familial roles, about capitalism and the accumulation of wealth, about global migration, or about the cultural imagery of the American dream. When authors select one of these four contexts, they are actually making an evaluative move: assessing one context as more vital or important to understanding bootstrapping than another. Yet writers do not often discuss all the omitted or potential ways of framing a particular problem for readers. Instead they emphasize one context, and thus make that contextual frame the center of an argumentative tactic in which the author indirectly persuades readers that this particular framing is robust and compelling. For students, then, reading for context entails a number of new practices, many of which run counter to learned understandings about context:

1) Context in anthropology is not merely background, and readers should learn to carefully attend to context in new ways.
2) Context is part of crafting a problem in anthropology, and generally you can see the conceptual interests of the author and/or discipline when

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you scrutinize context. Ask students: How does context reveal the author's conceptual focus or concern?
3) Context can be read as part of argument: How does the author persuade you to view a particular context as reasonable, valid, and important?
4) Context is based on the author's interpretation of evidence. Therefore, alternative ways of framing are always possible and students can learn to critically evaluate texts if they can imagine and generate alternative or competing contexts. Ask students: How else might you frame this same problem? In what other ways might the problem be contextualized?

Establishing Context: An Example

David Foster Wallace's (2004) "Consider the Lobster" provides rich opportunities for context-reading activities. While Wallace was not an anthropologist, his essay employs anthropological methodology, including participant observation, and shares with the discipline a serious interest in analyzing a complex and contemporary cultural event and set of values. In the piece, originally written for *Gourmet* magazine, Wallace makes an unusual move: he reports not on the taste and quality of lobsters at the Maine Lobster Festival but on the ethics of their consumption. What troubles Wallace is not only the ease with which we "boil a sentient creature alive for our gustatory pleasure," but also the stupefying excess and celebration of the process: the massive lobster cooker, the cheesy lobster paraphernalia, the cheap McDonalds-like prices, and, most of all, the elaborate pageantry of slaughter, all of which allow the attendees to ignore the question of animal suffering (p. 57). But the lobster's apparent "preference" to not be boiled is a sign, at least for Wallace, that its death is indeed one of suffering, and thus attendees' general disregard represents at best something selfish or, worse, an ethical violation (p. 63). To "consider" the lobster, for Wallace, seems to mean a deeply cerebral exploration of interspecies moral contingencies: the uneven relationship between animal pain and human pleasure.

In my classroom, students encounter Wallace's essay in order to prepare for their first paper, which requires them to expose gaps, assumptions, and insufficiencies in a text and, further, to explore these critical elements through ancillary texts. But, first, we try to make sense of how Wallace frames the problem of lobster consumption with a sun diagram. In the center circle, we write the basic problem: the Maine Lobster Festival and the consumption of boiled-alive lobsters in twenty-first-century America. Next, we name each of the contexts in which he situates this issue and represent them with long lines or rays directing outwards. Part of this activity

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means that students must conceptualize contexts like American consumption, class elitism and "gourmet" eating, violent public ritual, and, of course, the primary one for Wallace: morality and ethics.

Once we have identified the existing contexts, students are primed to name some potential contexts that Wallace does not engage with but might either be pertinent or, arguably, crucial in order to better understand this cultural phenomenon. Examples of such contexts include the industry of factory farming and animal slaughter, wealth inequality, or new posthumanist philosophies viewing humans as equal to machines and animals. Naming new possible contexts reminds students that, though characteristically brilliant and logically airtight, Wallace's analysis is not the only interpretive possibility; it represents one possible way to frame a complex problem. Doing so with the relatively low-stakes activity of naming alternative contexts reminds students that they, too, can engage with a heavy-hitter like Wallace in an intellectually respectable way. Notice, too, that students might participate in this kind of activity with a variety of interdisciplinary texts on cultural events; the principle of reading enacted is the value of context, which makes this reading practice anthropological.

Another way to supplement this activity would be to provide a handout that shows a variety of broad categories of context such as the following:

1) identity and difference (gender, race, ethnicity, sexual orientation, etc.)
2) geographic, including global and transnational
3) cultural or historical conditions, events, or movements
4) cultural values, beliefs, morals
5) science, technology, and medicine
6) economics and politics
7) arts and visual culture.

This list is by no means exhaustive, but it offers students a useful starting point. If students learn to read for context, they become intellectually equipped to be more imaginative in how they frame problems and scrutinize texts. And in broadening their framing and deepening their scrutiny, they will likely write more interesting, engaging, and compelling essays, papers, and reports that include more cogent and convincing arguments.

Reading Media Sources Like an Anthropologist

So far we have discussed reading anthropology and closely related sources with an emphasis on learning about positionality, argument, and context. In this final section, however, I'd like to examine how

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Classroom Activity: Competing Contextual Arguments

Student feedback suggests that the following activity helps them transition from reading primary texts to generating context to generating argument. First, I provide a visual presentation of excerpted primary texts on the many controversies surrounding the work of contemporary artist Damien Hirst. Hirst has sparked numerous scandals during his career with works like his shark suspended in formaldehyde, "The Physical Impossibility of Death in the Mind of Someone Living." The controversies have revolved around how he procures animals used in his work, how he commissions work more often than he produces it himself, and how he exploits his artistry as a brand.

1) Students begin by working as a class in the same way we worked with the "test tube baby" controversy: by naming contexts and key themes. The instructor, or a designated student scribe, lists these ideas on a whiteboard or digital screen.
2) Students work in groups to locate at least one or two pieces of evidence and present an argument about the controversy to the class. For example, a group focusing on how Hirst is regularly accused of animal abuse found scholarly articles on animal rights movements and their intensification in the United States and Europe over the past two decades. Another group focusing on Hirst's knack for branding his work found scholarly articles on how branding has characterized late twentieth-century advertising and marketing.
3) Students present their arguments to the class, after which students in other groups may interrogate presenters about why their argument has the greatest explanatory power to understand the Hirst controversy.
4) Once the groups' present their arguments, the class votes on the most illuminating and persuasive argument. Students may not vote for their own group.

The competitive edge makes the presentation of argument feel more game-like to students. But it also conveys a valuable lesson about the need for arguments to be persuasive and compelling, with strong supporting evidence. For example, one group argued that in order to understand why Hirst became controversial, we needed to examine the growing animal rights movement and the shifting attitudes that Americans and the British have towards animals in the late twentieth century. They argued that because some members of these societies view animals as deserving of

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rights and respect, Hirst's use of dead animals in his work represents something socially problematic and, more importantly, morally contentious. Another group, citing Naomi Klein's *No Logo*, argued that Hirst's work strikes a nerve because, while branding dominates contemporary advertising and media, Hirst appears to violate an underlying rule of art by privileging his brand over the aesthetic value of his work.

In this activity, students position themselves, as proximally as they can, as late twentieth-century readers of Hirst's texts. As they read and interpret Hirst's work and the reactions it incited, they must inhabit, or empathetically imagine themselves as, a subject who is outraged and shocked by Hirst. In this act of conceptualization, they can then imagine the ensemble of historical and cultural conditions that might give rise to this social actor's disgust or anxiety at artistic provocateurs. And in doing so, slowly but surely, they learn to read over the shoulder of the cultural subjects they're studying, joining a new tribe of anthropologists.

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2

Developing Proficiency in Economics Through Critical Reading

Anna Shostya and Joseph C. Morreale

Economics and Critical Reading

A student comes to visit his old professor, many years after graduation, and is surprised to see that the professor still uses the same exams as 20 years ago. The professor grins, "The questions are always the same, but the answers are different." This old economics joke is mostly true. The fundamental questions that economists try to find answers to are always the same. How do people make decisions? How can we improve the economic well-being of societies? Why do economies grow? Why is there income inequality? What incentives matter? Yet the answers to these questions and many others are based on the times and conditions in which they are asked. Economics as a field, therefore, must constantly change and develop. Its subject matter – the relationships between economic agents and the decision-making processes involved in these relationships – changes over time. Since 1776, when Adam Smith completed *The Wealth of Nations*, the first comprehensive economics text, the economy has become more complex, the world has become more integrated, and economic issues have become more intricate and intractable. Economics is an organic field, one that is constantly in flux, and one that requires constant re-evaluation. Critical reading is essential to continued understanding of changing economic issues and the increasing complexities of the modern economy.

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At the same time, studying economics can improve critical reading. This is because economics relies on analytical skills, model-building, and quantitative analysis. Economics is interdisciplinary in nature, borrowing ideas and practices from political science, psychology, history, mathematics, philosophy, logic, environmental science, and other fields. It is a unique blend of theory and practice, graphical modeling and empirical data, quantitative analysis and qualitative evaluations. No wonder Lord John Maynard Keynes (1924) suggested that:

> The master-economist must possess a rare combination of gifts… He must be mathematician, historian, statesman, philosopher – in some degree. He must understand symbols and speak in words. He must contemplate the particular, in terms of the general, and touch abstract and concrete in the same flight of thought. (p. 322)

This is why critical reading and the study of economics are fundamentally interrelated.

So, what is critical reading in economics? It requires these elements, at least:

1) Identifying and considering the question a text addresses and its relevance to present-day life.
2) Selecting and evaluating reading materials.
3) Using graphical tools to analyze economic arguments.
4) Evaluating strengths and weaknesses of economic arguments.
5) Understanding the relationship between theory and real-life phenomena.
6) Analyzing data.
7) Understanding differing viewpoints and taking sides in economic arguments.
8) Recognizing the limitations of economic analysis.
9) Using writing as an extension of critical reading.

These elements of critical reading are crucial for the study of economics because they improve students' understanding of economic issues. Although economics as a science relies on theories and models, it is a very practical discipline. It explains how economic agents (households, firms, markets, and institutions) interact with each other. It is important for students to gain economic literacy, so they can acquire important knowledge about how the world around them works. Learning to read critically in economics is an important step toward gaining economic literacy, and the study of economics, in turn, can foster critical reading skills.

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Hansen's Proficiencies and Critical Reading

Critical reading can help students internalize the knowledge they gain in their courses and make them more proficient in their study of economics. This is especially important for economics majors, who, according to W. Lee Hansen (2001), have to be proficient in the following six cognitive areas:

1) Accessing existing knowledge
2) Displaying command of existing knowledge
3) Interpreting existing knowledge
4) Interpreting and manipulating economic data
5) Applying existing knowledge
6) Creating new knowledge

Hansen's proficiencies shape educators' expectations of the knowledge and skills economics majors need to succeed in the workplace after graduation (Shostya and Morreale, 2017). Moreover, we believe that critical reading elements can be mapped onto Hansen's proficiencies. Table 2.1 illustrates the linkages between Hansen's proficiencies and critical reading elements throughout the curriculum. The selection of reading material (critical reading element 2) is done on all levels, albeit in a variety of ways. In introductory courses, which mostly emphasize lower level proficiencies (1–3), we focus on considering the questions addressed in texts, evaluating economic arguments, understanding the relationship between theory and real-life phenomena, using graphs, and taking sides in academic debates.

Table 2.1 Linking critical reading elements to Hansen's proficiencies throughout the curriculum

Hansen's proficiencies	Critical reading elements	Level
1) Access existing knowledge	1, 2	Introductory
2) Display command of existing knowledge	3, 5, 7, 9	Introductory
3) Interpret existing knowledge	4, 5, 7, 9	Introductory/ intermediate-upper
4) Interpret and manipulate economic data	1, 6, 9	Introductory/ intermediate-upper
5) Apply existing knowledge	5, 6, 7, 9	Introductory/ intermediate-upper
6) Create new knowledge	1, 2, 3, 4, 5, 6, 7, 8, 9	Capstone

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Selecting and Evaluating Reading Materials

As students in many disciplines do, economics students often have difficulty differentiating between "poor," unreliable sources and "rich," credible ones. This is because of the enormous amount of information available on the internet and because internet materials are both a blessing and a curse. Wikipedia and Investopedia provide immediate access to information, yet students often fail to read them critically. They tend to take the texts posted there at face value, without evaluating their shortcomings (i.e. their lack of depth or accuracy). Students have to learn the difference between quality analysis and opinion not supported well by data and facts (as presented in blogs, for example). They have to be able make comparisons between arguments, theories, and policy proposals and choose the ones that they feel are more robust and relevant. They also have to be able to select the publications suitable for their own research. Our job as teachers is to help them achieve these learning goals.

One way to help students in their quest for relevant, accurate, and credible information on the internet is to direct them to trust-worthy economics sites, such as the websites of the Bureau of Labor Statistics, the European Bank of Reconstruction and Development, the International Monetary Fund, the 12 Federal Reserve Banks, and other US government institutions and well-known international bodies that publish a wealth of reliable information online. Another way to help students develop their critical reading skills is to introduce them to academic journals that publish high-quality studies, such as *The Journal of Economic Perspectives, Eastern Economic Journal*, and *World Development Journal*.

These may seem simple tasks to us as practitioners, since we have been doing such work on a daily basis for a long time. To students, however, accessing existing knowledge (Hansen's proficiency 1) can be a serious challenge. We experience this first-hand when we assign our juniors research projects. They often claim that they "do not know what to search for," or "feel lost in the volume of articles that are out there." As a result, they sometimes simply resort to news reports and blogs. In a capstone course, we discovered that students had been experiencing serious difficulties in writing a literature review section for their research papers. They often do not know what a professional publication is and how to differentiate between useful publications and those that are of less value. This is why we need to introduce economics majors to professional publications and credible institutional websites in first-year introductory courses.

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Here is a list of common problems with economic evidence that students have to learn to recognize as they progress from low proficiency in economics to high proficiency:

- Fallacies and misconceptions
- Naïve and unrealistic assumptions
- Poor data
- Hasty generalizations
- Parsimonious models
- Excessive dependence on mathematical modeling

To solve the problem of students recognizing quality sources of information, we suggest that at the introductory level students' selection of reading materials be limited to readings assigned by instructors. Students gain more freedom of selection as they progress to more advanced levels in the economics curriculum. A number of readings can be selected to complement, or in some cases substitute, for textbooks. We regularly assign articles from *The Economist, The Wall Street Journal,* and *The New York Times* to students at all levels. We also have assigned articles from *The Journal of Economic Perspectives* to students at intermediate levels and above. In upper level electives, we let students choose articles related to their research topics from a list of sources we provide. And finally, in the capstone course, students are free to select their own research topic and readings with guidance from the instructor.

For example, one assignment for The Political Economy of Developing Nations, an intermediate-level course, is a roundtable discussion of early economists who considered issues of growth and development. The students are divided into groups (Smithsonians, Marxists, and Georgians) according to their own choice and read one of the following three books or excerpts:

Adam Smith (1776/1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Introduction and, from Book I, Chapters 1, 2, and 3.

Karl Marx and Friedrich Engels (1848/2012). *The Communist Manifesto*.

Henry George (1879/1938). *Progress and Poverty*. Introductory: The Problem.

Each group answers a set of questions based on these reading materials, class lectures, and their knowledge of economics. We use the same method in China's Economic Growth and Development, an upper-level elective where students choose between sets of readings: (a) Robert Barro's *Democracy and Growth* (1994) and Amartya Sen's *Perspectives on*

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