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# Para-Expertise, Tacit Knowledge, and Writing Problems



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# Para-Expertise, Tacit Knowledge, and Writing Problems

#### Jenny Rice

y office is on the thirteenth floor of an eighteen-story concrete tower that sits in the heart of campus. The building is so massively disproportionate to other buildings that it looms over the entire campus. Inside, the hallways are long and narrow, with no windows or natural light. A bank of six large elevators takes up the center space of each floor. Perhaps it is not surprising that this office tower has become the source of campus lore and legends among students and faculty. During my first semester on campus, a student asked if I knew the history of my office tower. "It was designed like a prison so that students in the 1960s wouldn't cause riots," he said with great earnestness. "Do you believe that story?" I asked. "Sure," he replied. "Just look at it."

This was not the first time I had heard the narrative of "riot-proof" campus architecture. Campuses across the country seem to have some version of this tale. On certain campuses, the riot-proof buildings are said to be libraries or administrative buildings. For example, on the Southern Illinois University campus, Faner Hall is rumored to have been constructed in order to quash student demonstrations during the 1970s. Other campuses have longstanding stories about dorms built on prison designs or structured to resemble a prison. I first heard the "dorm as prison" tale as an undergraduate student at the University of Texas in Austin, while living in Jester dormitory, a massive fourteen-story brick complex. The small rooms and concrete walls certainly did not look like the home I had just left behind. So, when a friend told me that my dorm had been built by the same architect who designed the Texas state penitentiary in Huntsville, I believed him.

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Decades later, I still hear students repeating the very same claims about their dorms built on prison designs. But now, as a teacher of rhetoric and writing, I hear this tale as an interesting problem of expertise. It goes without saying that students who circulate this ersatz history are "nonexperts" in the fields of design, architecture, and spatial engineering. Yet, at the same time, the fact that these urban legends persist on multiple campuses across the country suggests that something coherent is being articulated about the experience of bodies in spaces. According to urban legend researchers Joel Best and Gerald Horiuchi, urban legends like these persist because they articulate certain kinds of social experience (492). Best and Horiuchi examine the longstanding legend of tainted Halloween candy and razor-filled candy apples, any real evidence of which seems to be nonexistent. However, they explain, this narrative remains so powerful because it allows the tellers to express a wider social fear of strangers and a sense of lost community (490). Urban legends are thus allegorical narratives for the "public feelings that begin and end in broad circulation," as Kathleen Stewart has written about our experiences of everyday life (2). They allow us to share experiences and feelings that cannot easily be articulated in other words.

Similarly, ongoing narratives of "riot-proof" campus buildings and "prison dorms" may reflect a larger experience born from embodied interactions students have with campus architecture. While the history of my office tower is not accurately reflected in the "riot-proof" narrative students repeat, there is nevertheless something very real and accurate being articulated by that urban legend's circulation. Specifically, what gets articulated is a particular kind of knowledge born from the encounter between bodies and material sites. In the words of Michael Polanyi, the knowledge that students are articulating in these stories is a "tacit knowledge" of aesthetics, design, space, and bodies. Students may not be experts in a disciplinary sense, yet at the same time, they know more than they can tell (4).

If we think of expertise as either the acquisition of skills or the acquisition of ethos—two common ways expertise has been discussed in rhetoric and composition—then students who circulate these campus urban legends certainly qualify as novices. However, the category "novice" or "nonexpert" does not quite capture the *experience* being articulated in those stories. What exactly should we call this kind of knowledge, then? These students are not experts, but neither are they exactly non-experts. Neither label quite captures the work that is happening in their narratives about living and moving in campus spaces. In short, what is being shared in "prison dorm" narratives is a recognition of architectural effects. While it is not actually the case that bad architecture implies bad origins, these faulty histories do communicate an intimate understanding of the ways that spaces affect bodies. We need a different category of expertise—beyond expert or nonexpert—to bring this understanding into fuller view, a category that addresses special tacit knowledge that is qualitatively different from casual experience.

In this essay, I want to expand upon the concepts of expertise, especially as we use those concepts in rhetoric and writing studies. While "expertise" has been both an implicit and explicit focal point of composition, what has fallen outside of our disciplinary conversations about expertise is the way in which tacit knowledge can play a role in writing. Our most familiar models of expertise—running along a spectrum from novice to expert—may not allow for a nuanced deployment of tacit knowledge. Without dismissing any of the field's important work on expertise, therefore, I introduce the concept of para-expertise in order to add complexity to this ongoing conversation. I define para-expertise as the experiential, embodied, and tacit knowledge that does not translate into the vocabulary or skills of disciplinary expertise. While the prefix "para" might have connotations of supplementation or a secondary position, I am drawing from its older etymology as "beside." In this essay, para-expertise should be seen as alongside (touching the side of) different forms of expertise. The concept of para-expertise may help to resituate how we conceptualize, teach, and use notions of expertise in the classroom, since it can teach nonexperts to pursue rhetorical action through strategic expertise alliances without overstepping the very real limitations of nonexpertise. As a pedagogical approach, this articulation may also help students better understand the work of expert interactions among audiences, texts, and themselves as novices.

I begin by examining how expertise has shaped the field of writing studies and how the concept has informed much of how we operate as a discipline. I then introduce the concept of para-expertise by returning to the scene of "prison dorms" and other sites of campus architectural lore. Rather than rejecting faulty anecdotes and narratives of campus architecture, I attempt to listen for a different kind of expertise at work in them. To this end, I interviewed students on multiple campuses and asked them to share their stories of living in and moving through campus dorms. Finally, I conclude by addressing how a concept like para-expertise can enrich the ways in which we teach, practice, and discuss the main goal of expertise in the writing classroom, which is always some form of rhetorical action.

#### EXPERTISE IN RHETORIC AND COMPOSITION

Getting back to my eighteen-story office tower for a moment, it is easy to see how expertise gets distributed spatially. Each floor of the tower is organized by department: Mathematics offices are on one floor, Geography on another, Writing still another. The very top of the tower is reserved for the Board of Regents' meetings. Of course, there is nothing new in this kind of distribution. The spatiality of expertise is obvious to any elementary-school child whose desk faces the teacher-expert sitting at the front of the classroom. We can similarly track the ways in which different concepts of expertise have materially shaped how writing courses are taught. In some ways,

the development of writing studies as a professional discipline was born out of an idea that composition has a subject matter and a genuine area of expertise. Maxine Hairston's essay "Diversity, Ideology, and the Teaching of Writing" infamously admonished compositionists that "as writing teachers we should stay within our area of professional expertise: helping students to learn to write in order to learn, to explore, to communicate, to gain control over their lives" (186). While Hairston's reprimands garnered some criticism, her broader claims argued strongly that we must recognize composition as an actual area of expertise. No longer could anyone, anywhere, with just any background step into the writing classroom and claim to be qualified to teach. Of course, many writing studies scholars still bemoan the ways in which rhetoric and composition is still left "in the hands of those whose scholarly expertise is not in rhetoric—young academics for whom this work is either a deadend or something to be gotten up and out of as soon as possible" (Farris). Debates about who is expert enough to teach writing remain fresh and relevant on many campuses (including mine) even today.

A focus on expertise has also led to pedagogical innovations like Writing Across the Curriculum (WAC) and Writing in the Disciplines (WID). In one early essay on WAC and WID, James Kinneavy suggests that one advantage of WID is that the composition instructor does not have to reach beyond her areas of expertise in order to respond to the student. "Since the specialist teacher is the immediate audience for the student's writing in these programs," explains Kinneavy, "students can be as technical as they want, and the accuracy of their statements can be checked by an expert" (14). In the decades following Kinenavy's essay, discussions of WAC and WID have proliferated and matured. Implicit within many of these conversations, however, is the premise that WAC and WID pedagogy ground students in some kind of disciplinary expertise (McCloud and Maimon). Tellingly, however, WAC and WID pedagogy is often still premised on students' lack of expertise. As Doug Brent laments in his overview of WAC in first-year seminars:

Some-what depressingly for those of us who would like to introduce students to at least a taste of the university's research-based activity systems in first-year composition, or in interdisciplinary seminars, . . . there is very little point. Only in fairly advanced disciplinary settings . . . can students have enough background that such an introduction can make a difference. (260)

The ongoing interest in WAC and WID is arguably driven by different views of how expert discourse should be engaged, practiced, and framed within the writing classroom.

Similarly, the movement to design the first-year writing course around the primary content of writing studies scholarship is also born from conversations about expertise. This is the very proposal articulated by Doug Downs and Elizabeth Wardle

in "Teaching about Writing, Righting Misconceptions: (Re)Envisioning 'First-Year Composition' as 'Introduction to Writing Studies." Downs and Wardle object to the ways that first-year writing too often "silently support(s) the misconceptions that writing is not a real subject, that writing courses do not require expert instructors, and that rhetoric and composition are not genuine research areas or legitimate intellectual pursuits" (553). Just as WAC and WID pedagogies reinforce the notion that writing should be taught in conjunction with content, Downs and Wardle also argue that writing classrooms should be grounded in some type of disciplinary discourse. Furthermore, they write:

it follows that the more an instructor can say about a writing's content, the more she can say about the writing itself; this is another way of saying that writing instructors should be expert readers. When the course content is writing studies, writing instructors are concretely enabled to fill that expert reader role. (559)

Because writing instructors are experts in writing studies, they argue, the aim of a first-year writing course should also be to introduce our students to that same expert practice. The pedagogical aim of such a course is thus to increase students' own expertise in writing studies.

In some ways, these different pedagogical models are based on a vision of nonexpertise as a lack or deficiency. Whether we are talking about instructors who lack expertise in writing pedagogy, or whether we are talking about students' lack of disciplinary background, expertise is seen somewhat as an attribute that a person possesses to a greater or lesser extent. However, a different version of expertise also exists within the history of rhetoric and writing studies. Linda Flower and John Hayes's early essays on novice writers most vividly illustrate this version. In their landmark studies, Flower and Hayes conclude that "novice" writers differ from "good" writers in the way novice writers fail to construct a problem in the same ways as expert writers. Novice writers tend to repeatedly read a prompt in hopes of finding some kind of direction for the writing situation. Meanwhile, "good" writers use the writing prompt as a way to articulate and define their own understanding of the rhetorical situation to which they are responding.

Flower and Hayes identified the differences between novice and expert writers as a problem of how different types of writers pose problems throughout the writing process: "[P]oor writers often remain throughout the entire composing period with the flat, undeveloped, conventional representation of the problem with which they started. The main conclusion of our study is this: good writers are simply solving a different problem than poor writers" (30). The differences essentially relate to what problems the writers articulate for themselves from the very beginning. Whereas expert writers are able to define a complex idea of exigence, audience, and authorial persona, the novice writers often flatline around fulfilling the details of the prompt, including word count and other conventional details.

Significantly, Flower and Hayes introduce an important way of thinking about expertise in writing that does not necessarily presume expertise as an attribute. They make clear that *problem-posing* is one of the activities separating the novice and the expert. Indeed, in rhetorical theory, *problems* have long been seen as the heart of expertise. Zoltan P. Majdik and William M. Keith write that expertise is essentially an argumentative practice. That is, "expertise invokes not a relationship to specialized knowledge but to the ability to respond appropriately to problems" (373). According to Majdik and Keith, there is no single state of expertise. Rather, expertise can only be defined within a particular situation and context. "Expert judgment . . . is, thus, particular to a case, and oriented toward resolving a particular problem relative to the case," they explain (380). In many ways, Majdik and Keith identify a defining feature of many "expert" theories: expertise is all about problems.

One of the most important contributions from Flower and Hayes's studies of novice writers is this foregrounding of problem-posing. Flower and Hayes took aim at the myth of "discovery" as a metaphor, which can be terribly discouraging for the novice writer. "The mythology of discovery doesn't warn the writer that he or she must often build or create new concepts out of the raw material of experience," they write, "nor does it tell the writer how to do it" (22). And yet, this creation must occur in any significant act of writing. Indeed, invention and creation are at the heart of rhetorical acts altogether. It is not simply the ways that a problem is solved that defines expertise, in short. Experts *pose* problems in ways that differ significantly from novices or nonexperts. Or, as Flower and Hayes put it: "People only solve the problems they represent to themselves" (30).

Here I want to stop and offer a provisional claim: expertise is less an individual quality than it is a description of the *activity of posing problems* (and, consequently, solving them). The way a problem is posed is central for deciding whether and how to take action.<sup>2</sup> Moreover, how problems are framed also shapes the rhetorical situation that defines who should take action. By placing problems at the core of our understanding of expertise, we thus re-articulate one of the questions that motivated Flower and Hayes more than three decades ago: How do we help prepare all kinds of people—from experts to novices—to represent problems to themselves? How should we help nonexperts become better problem posers? We have seen how practitioners of different pedagogical approaches in writing studies attempt to answer this question by gaining deeper disciplinary knowledge (in WID or WAC, for example) or by becoming experts in writing studies itself. A different approach, however, may be to refine and expand our categories of expertise in order to emphasize the activity of problem-posing. This approach differs from previous notions of expertise in that it begins from the presumption that nothing else needs to be gained in order to do the activity of expertise, even when one is clearly not an expert. Students do not need to gain expertise in order to do the work of expertise.

#### CATEGORIES OF EXPERTISE

In order to see how the *activity* of expertise can be pursued by nonexperts, it may help to first consider more nuanced and refined categories of expertise. Cheryl Geisler offers helpful distinctions in the way she distinguishes between "dual problem spaces" for writers: there is the "problem space of domain content" and the "problem space of rhetorical process" (38). The domain content problem space includes the knowledge a writer may have about a given topic. The problem space of rhetorical process, on the other hand, relates more to the writer's process of actually communicating this knowledge to an audience in the rhetorical situation she finds herself. Geisler shows the way that expertise in writing requires the increasing abstraction and interaction between these two problem areas. "For it is only when both the domain content and the rhetorical processes of a field are represented in abstract terms that they can, together, engage in the dynamic interplay that produces expertise," she writes (44). Geisler shows how these two domain areas can develop (or be read) differently for various kinds of writers, either to their advantage or disadvantage.

Outside of writing studies, more refined and useful categories of expertise have been introduced in the interdisciplinary field of Studies of Expertise and Experience (SEE), an endeavor that aims to create a "normative theory of expertise" (Collins, 4). The field of SEE is typically traced back to sociologists Harry Collins and Robert Evans, who defined two types of specialist expertise. The first type, called *contributory expertise*, "enables those who have acquired it to *contribute* to the domain to which the expertise pertains: contributory experts have the ability to *do* things within the domain of their expertise" (24). For instance, a contributory expert in quantum mechanics will actually be able to carry out original research and experiments using the principles from the field. Likewise, a contributory expert in music composition will be able to actually compose songs and music orchestration.

The second kind of specialist expertise they identify is a corollary to contributory expertise. Collins and Evans call this type *interactional expertise*, since interactional experts do not contribute to or create within the domain of their expertise but are still immersed in the language of that particular domain. As Collins and Evans put it, "This is expertise in the *language* of a specialism in the absence of expertise in its *practice*" (28). Interactional experts are, in essence, fluent in the discourses that contributory experts also share. In fact, their discourse is so immersed within this domain of specialization that they are all but indistinguishable from contributory experts (31). Of course as Collins and Evans point out, interactional expertise is somewhat parasitic upon contributory expertise, since the immersion happens within the contributory experts' communities. Art critics, for example, often are not people who create great works of art. They may not be able to draw a single figure. Yet they may have extensive knowledge of the roles played by light, color, brush strokes,

canvas, regional artistry, atmospheric elements, and so forth. Likewise, scholars who study rhetorics of medicine may be fluent in the language of medical practitioners, yet they are not able to perform a single medical operation.

The category of interactional expertise is crucial for helping us to refine notions of expertise in practice. It is an especially useful category for those of us studying rhetorics of expertise. After all, interactional expertise is about communication: How do different kinds of experts talk to one another? Sociologist Michael S. Carolan's study of the relationships between organic farmers and agricultural scholars shows that different types of contributory experts do not necessarily communicate together. What a small, organic farmer knows about local land conditions is not necessarily mirrored in the agricultural researcher's knowledge of crop rotation, chemical distributions, and so forth. Carolan writes, "While it is well established that there are different types of 'experts' in agriculture, little has been said about how these different experts talk to each other. Enter interactional expertise" (426). Carolan's study profiles one organic farmer in Iowa who uses eggshells as a liming source in his fields. When agricultural researchers from Iowa State contacted the farmer in order to discuss his use of eggshells, the researchers and the scientist were able to draw upon interactional expertise in order to gain a working understanding of the others' knowledge. As the farmer told Carolan, "We both knew enough about what the other does to make it work. I'm no ag. scientist but I know enough to be able to talk to them. And I generally felt that they were in the same position" (427).

Similarly, SEE researcher Lekelia Jenkins looks to interactional expertise as a way to "bridge the gulf between hands-on experience of contributory expertise and knowledge without experience" (700). Jenkins examined the collaboration between experienced tuna fishers and academics working for the National Marine Fisheries Service (NMFS) attempting to address the problem of "dolphin bycatch" in tuna fishing. Although degreed marine biologists were able to offer high degrees of contributory expertise on certain areas involved in this problem, the practical experiences of fishing were not part of their expertise. Jenkins documents the collaboration between these groups—academics and fishers—as an important illustration of how interactional expertise facilitates a working relationship among different types of contributory experts. During one interview with an NMFS technician, Jenkins found that his interactional expertise partly made up for his personal lack of experience with purse seine fishing. As the technician put it, he "could speak purse seining" (707). Being able to "speak" in the language of contributory experts "bridged the gulf" between contributory experts who are working with the same problem.

Becoming an interactional expert demands reflexive attention to the work of translating. In "The Rhetoric of Expertise: E.O. Wilson and Sociobiology," John Lyne and Henry F. Howe suggest as much when they argue that expertise is not simply a matter of ethos but is actually a point of conversation between two (or more)

groups: "The expert is not only a repository of knowledge, but also a pivot point for exchanges between discourse communities" (135). Although Lyne and Howe do not use the term "interactional expertise," their observations about expertise as a "pivot point" reflect the need for the development of interactional expertise. That is, interactional expertise is less about a *persuasive act* than about the ability to translate between contributory expert communities.

These two categories of specialist expertise—contributory and interactional—help us to better understand the roles that different kinds of actions play. However, these categories do not necessarily help us to better understand nonexpertise any more than we might have before. We may define the novice or the nonexpert by the absence of these abilities, of course, as if the novice is simply empty of the contributory or interactional expert's skill sets. However, the nonexpert is not an empty cipher. She is embodied, experienced, and emplaced. She is a human who encounters the world on a daily basis. Though she may not possess contributory or interactional expertise of a subject, she may nevertheless possess what Michael Polanyi calls tacit knowledge. As Polanyi puts it, "I shall reconsider human knowledge by starting from the fact that we can know more than we can tell" (4). Tacit knowledge is, according to Polanyi, the underpinning of all knowledge, since we come to explicit knowledge through experience. By "dwelling in" things, we come to understand their meaning in a variety of ways (18).

Tacit knowledge throws a wrench into questions of expertise. Consider the many things we know perfectly and intimately, though we cannot say exactly how or why we know it. For example, I know my mother's face and voice immediately, though I cannot describe them in a way that will adequately articulate how I know these things. Polanyi describes this strange state of tacit knowledge as its functional structure: "[I]n an act of tacit knowing we *attend from* something for attending *to* something else; namely, *from* the first term *to* the second term of the tacit relation. . . . It is the proximal term, then, of which we have a knowledge that we may not be able to tell" (10). We attend *from* the features of the face *to* the person we identify. In the act of tacitly knowing my mother's voice from the moment she says "hello" on the phone, I am attending from a complex of pitch, vibration, tone, and other features that never quite rise to the level of conscious articulation. Yet, what I attend to—Mom's voice—is a thing that I know better than almost anyone in the world.

At the same time, the "semantic aspect" of tacit knowledge tends to displace meaning away from ourselves. In other words, meaning is felt to "reside" in the distal term (away from us) rather than from the proximal term (13). Polanyi uses the example of a probe. A probe applies pressure against my hand, yet I interpret the "meaning" of that pressure to be at the probe's end, away from me. Polanyi writes, "when we make a thing function as the proximal term of tacit knowing, we incorporate it in our body—or extend our body to include it—so that we come to dwell in it" (16).

In the act of deploying tacit knowledge, we bring that proximal term "inside," so to speak, by dwelling within it. Polanyi calls this a kind of "interiorization" (17). The particulars are "interiorized" and "dwelled within," rather than explicitly stated. A focus too much on particulars renders an entity somewhat meaningless, like repeating a word over and over again.

My mother's voice and face are two simple examples of numerous others I could have used from my everyday life. The key to my front door sticks in such a way that I have to maneuver it (and here my words escape me) *just so* in order to get the key to catch. When I try to explain this to a house sitter, however, the limits of my tacit knowledge break down. There is no interactional expertise for this kind of tacit knowledge. But the fact that this knowledge is neither contributory nor interactional does not mean that I lack something approximating expertise in these two areas. I have a kind of *para-expertise*. By naming this category *para-expertise*, I mean to signal the way that this kind of knowledge is a parallel, a counterpart, to contributory and interactional expertise. Para-expertise approximates expertise, yet the para-expert does not necessarily possess the same kind of knowledge or skill set as contributory or interactional experts.

The para-expert draws from the experiences of her own body in spaces. To this end, we are talking about the embodied knowledge that Kristie Fleckenstein calls somatic mind. As Fleckenstein writes, "With being-in-a-material-place mooring us organically, we can evolve discourses and identities that testify for and to the ragged edge of necessity and the shudders of awe" (293). Some of the discourses generated by being a body-in-a-material-place are recognizable as expert-like discourse. Bodies in place are bodies that *attend from* those spaces: their contours, intensities, densities, textures, rhythms. An imperfect description of embodied knowledge might be the vernacular phrase "gut feelings," which are born from the discourses of being-in-a-material-place. Or, as Debra Hawhee has written, embodied knowledge reflects our enmeshment within rhetoric's sensorium: "a locus of feeling . . . that . . . is not confined to presumed bodily boundaries" (5). The sensorium is the participatory dimension of communication that falls outside of simple articulation without falling outside the realm of understanding.<sup>3</sup> Para-expertise comes through our ordinary movements through rhetoric's sensorium.

Building upon recent scholarship on embodied knowledge that has already been explored quite fruitfully in writing studies and rhetoric (see Fleckenstein; Selzer and Crowley; Hawhee), I want to explore how para-expertise can play a role in the work of expertise—that is, the *activity* of *posing problems* (and, consequently, solving them). In an effort to examine this question, I sought to listen for what exactly para-expertise *does* when it is at work. That is, while nonexperts are lacking certain knowledge and skills of experts, it may be an oversight to conclude that they cannot perform activity of expertise. In my attempt to listen to what para-expertise does,

therefore, I sought out those spaces where tacit knowledge thrives: in the spaces where our bodies live, move, and work.

#### DORMS, WINDOWS, LIGHTS: LISTENING FOR PARA-EXPERTISE

It is here that I want to return to my opening scene about prisonlike dorms and ersatz histories of campus architecture. We have already seen how students fall short of expertise in the sense that they are neither contributory not interactional experts where something like architecture is concerned. They also have very little ethos with any particular kind of audience. However, we have also seen that these same students are not unfamiliar or somehow distanced from the experience with architecture and its effects. In order to better understand how tacit knowledge and expertise is articulated among non-contributory or -interactional experts, I interviewed hundreds of college students about their experiences in the dorms and other spaces where they lived, worked, and spent the most time. In no way could these students, most of them freshmen and sophomores, be considered contributory or interactional experts in terms of architecture, design, campus planning, or anything similar. In that sense, they are nonexperts. Yet, I was curious about how their embodied, emplaced, and tacit experiences led them to a state that pushes beyond nonexpertise as mere lack. In other words, what exactly does a nonexpert with tacit knowledge know? And how does that knowledge affect what a nonexpert can do, rhetorically speaking?

In order to answer these questions, I began by interviewing hundreds of students on four different university campuses about their knowledge of particular campus stories surrounding controversial spaces. For example, all four campuses had popular stories (or, more appropriately, urban legends) about certain dorms being designed by prison architects. When I asked students if these stories sounded credible, many of them agreed that the stories did indeed sound credible. Some students were quite vocal in their skepticism, however, and they also shared the reasoning behind their doubt. In almost all the interviews, students provided detailed explanations about why they found such stories believable or not. When I analyzed the students' explanations, I discovered that students based their reasoning on what we might call tacit knowledge rather than on the ethos of any storyteller or source.

On all four campuses, for example, students reported a fairly consistent body of conclusions about the physiological effects of windows and hallways and the relationship between design and emotions. The similarity of these conclusions across student groups and campuses led me to identify something important at work. While students' embodied experiences with their dorms do not lead to contributory or interactional expertise, those experiences do help generate tacit knowledges that have not yet been translated into more coherent or technical disciplinary language.

Although they are not architectural or design specialists, students were not simply sharing "lucky guesses" or ubiquitous knowledge. Instead, they were operating from what I call *para-expertise*.

Consider, as an example of para-expertise, the way students discussed the role of windows and window designs in dorm rooms. Students almost universally concluded that windows affect whether or not a dorm will be felt as an emotionally positive or negative space. As one student explained:

The absence of windows makes you feel like you're in a box. Like you're kind of a pet in a box being taken to a home and you have no idea what's going on outside. The walls may not be all that thick, and you can still hear things, but part of the, I guess, human experience is like being able to visualize and see things. And even if it's something as basic as a hallway, it's something other than the four walls that are immediately around you, and you don't necessarily feel as trapped or stuck. . .

A room's window size was commonly used to evaluate its institutional context and value. When I asked students whether or not they believed stories about particular dorms being based on prison designs, many students used the window size as evidence that the story sounds credible. "I think it makes sense. It has small windows and everything's built in," one student replied. This sentiment was shared across multiple campuses, in spite of the different dorm designs in question. Another student put it like this: "If a room doesn't have a window in it, you feel kind of anxious and jittery." Similarly, students freely offered up comparisons with other spaces whose windows were larger and more open. The connection between these larger windows and the corresponding positive "moods" of occupants was a common conclusion. The following assessments are representative of many comments:

FEMALE STUDENT 1: I live in [older dorm], which is one of the really old dorms, and I have a corner room on the top floor. And I have two really, really big windows. So in my room every day I open the windows. And also, one thing that's different between my dorm and [newer dorm] is that we have stained concrete and the wood is really inviting, and in [newer dorm] it's more plasticky and not so inviting. My boyfriend lives in [newer dorm], and his window's always shut because it faces directly to another building and there's just no reason to open it cause all you see is the laundry room of another building.

FEMALE STUDENT 2: I lived in two different dorms in one year. And on one hand, the [older dorm] room was smaller, but the window was bigger. And it felt more open, it felt happier.

Similarly, the designs of hallways were also seen as crucial for creating a positive or negative atmosphere. When students at one university described a recently built dorm, they often pointed to the size of both the windows and the hallways. "The hallways are a lot larger . . . each room has a huge window. And you just *feel* better," one student told me. Other students pointed to small dorm hallways as evidence of either the prison design or an overarching design for student behavioral control.

During one set of interviews, for example, students focused on the hallways of one dorm as the most egregious design feature:

Male student 1: The hallways are these narrow little submarine things—

MALE STUDENT 2: (in response) Yeah, I live there. And it's not welcoming at all. It's all just—not nice.

Female student 1: (in response) I live in the newer dorms, and whenever I have guests, they always talk about how the hallways are like a hotel. Just really nice. It's a lot of open space.

Female Student 2: (in response) It feels like such a labyrinth, just feels so confined. Everyone is always at each others' throats.

During this conversation, students were able to draw several conclusions about the effect of spatial design on mood and emotional well-being. The "narrow little submarine" hallways are quickly equated to a nonwelcoming environment. Likewise, the "labyrinth" hallways in the older dorms are seen as a contributing factor to social disharmony.

One common theme among almost all interviews, across all campuses, was the notion that design materials have physiological effects on a body. When I asked interviewees to describe campus buildings that affected their bodies in positive ways, they had ready examples to share.

Female student 1: What I've noticed about newer buildings that make them more aesthetically pleasing is kind of like lighter wood, more metal, and, like, clear glass. And it's just brighter, and opposed to [older dorm], which is dark stone, dark wood, and dark surfaces. So it does a lot for your mood.

MALE STUDENT 1: The buildings have glass windows, everything. And I've noticed that all the [new] buildings have high ceilings and a wall that goes out and over a couple feet. You feel happier.

Of course, not all students agreed that newer designs led to positive social effects on campus. Several interviewees explained why the newer dorms—specifically because of their more positive individual effects on one's mood—actually lead to decreased socialization among students.

MALE STUDENT 1: Even though we live in a nice dorm, we don't have that same sense of community as the older dorms do. It's easier for us to be by ourselves and be alone, because it's such a nice experience. Even though we're happier being there, you, like, you don't get to share that not-wonderful experience. You don't bond.

Female student 1: (In response) I agree. I live in the nice dorm, but I go to the older dorms to hang out. I think it affects your experience, but not necessarily positive or negative.

These conclusions certainly do not rise to the level of contributory or interactional expertise, yet the kinds of knowledge they share are nevertheless developed through specific experiences and are clearly articulated through a particular discourse. In these responses, students are demonstrating para-expertise: *experiential*, *embodied*, *and tacit* 

knowledge that does not translate into the vocabulary or skills of disciplinary expertise. The para marks these speakers as being outside of the community of specialists, yet, to borrow the words of Polanyi, their experiences lead them to know more than they can tell.

At times, students offered claims that seem to come from their own embodied encounters with those spaces. For example, on one public university campus, the largest dormitory towers are rumored to have been built by prison architects. Students tended to claim that they believe these origins, or else they expressed a sympathetic reading of why some students might believe this story. When I asked why these origins seem believable, some students drew upon "knowledge" of prison architecture.

Female student 1: It kinds of makes sense to me if it was a prison architect, because obviously they know how to house a lot of people.

MALE STUDENT 2: Efficiency. You want to pack the most people in the minimal amount of space, and a prison architect probably has one of the best experiences of doing that.

Female student 2: One of the main goals of prison architecture is control, order. So you have a lot of college students who are new to the world, without their parents, and you want to maintain order.

These responses are quite typical of similar answers I heard across multiple campuses. There is no truth, of course, to the claims that the dorms were intentionally designed as prisons. Yet, in these responses, it is possible to hear the embodied experiences of students who encounter these spaces. The hallways are highly ordered, confined. The spaces are narrow and cramped, which can cause a body to feel highly constricted.

During my interviews, I heard multiple versions of another story concerning prison-based architecture. This version was about high school architecture that was based on prisons. More than a few interviewees told me that their own high schools were designed to look like prisons, or were perhaps even meant to serve as a prison.

Female Student 1: My high school—and people fact checked this—actually was designed like a prison. It was like an "H" block. There was no windows and it was all concrete. There was no air conditioning in the hallways.

Female Student 2: (Describing high school said to be built on prison plans.) There were no windows. The design was—it was a very gloomy building. It was very much like a prison. And it was. It wasn't just a rumor. It was actually, historically.

Female student 3: I feel like believing it is not really that big of a deal because my high school that I went to was actually designed by a prison—person who designs prisons, so I guess with my experience, it wouldn't really phase me.

Whether or not these high schools were actually built upon prison designs, I cannot say for sure. Yet, within this narrative is a very legitimate expression of tacit, embodied experiences. Concrete walls. Hallways without air movement. Windowless classrooms. What became clear to me in these interviews was the (incorrect) connection students often made between their embodied experiences and the belief that the *feeling* like being in a prison is evidence that this *must* be a prison.

None of this is to say that the embodied experience of place makes students experts, at least not contributory or interactional experts. At the same time, it is clear that they are not necessarily lacking where the *work* of expertise is concerned. Many students echoed one student who stopped me in the middle of my interview to ask me, "Why don't they make dorms more comfortable, anyway?" His question sparked a side conversation with the other students about how such poor, drab, uncomfortable conditions are real problems for students. "If dorms were nicer," responded another student, "I wouldn't have moved away. It'd be a lot easier for me to get to classes on time." Other students chimed in with similar sentiments: *sad dorms are a problem*. As I listened to this conversation, I slowly realized that these students were using their own embodied experience as a tool for problem-posing. In the next section, therefore, I suggest that the activity of expertise can begin with para-expertise and the work of "strategic expertise alliances."

#### STRATEGIC EXPERTISE ALLIANCE: DOING EXPERTISE

These student responses suggest to me that para-expertise may be a more rhetorically useful term than "nonexpertise" in some contexts. The advantage of employing para-expertise as a category is that we may reimagine ways of increasing the rhetorical efficacy of those who lack expert ethos. For example, we may consider making alliances between para-experts and interactional experts both more purposeful and more transparent. In thinking of para-expertise as one part of what we might call "strategic expert alliances," our goal shifts away from any attempt to transform the nonexpert into an expert. Instead, we shift attention to how para-expertise can lead to *problem-posing*.

Para-experts may not necessarily have the resources or time required to become interactional experts as soon as an exigency emerges. Moving into the realm of interactional or contributory expertise involves the learning of skills, techne, vocabulary, practices, and community habits. However, experiential and embodied knowledge allows individuals to articulate exigencies by validating real needs, problems, and experiences. Once a problem has been articulated, para-experts may pursue alliances with interactional experts who can, in turn, create opportunity for the kind of exchanges necessary to address the problem. This is what we might call strategic expertise alliances, or rhetorical action distributed socially across pivot points. Importantly, however, expertise alliances do not necessarily need to begin with contributory or interactional experts. Rather, they can begin with an articulation generated by para-experts and their tacit knowledge.

In the case of students who live on campus, embodied experiences have generated unique para-expertise that recognizes the importance of design on students' emotional health. The observations and conclusions that emerged in my interviews

do not mean that students are themselves interactional experts. However, by recognizing themselves as para-experts, these same students may feel empowered to search out alliances with interactional experts in order to engage those pivot points that make transformative action possible. Such alliances do not necessarily transform the ethos of para-experts, nor do they depend upon dialogic persuasion. Instead, alliances between para-experts, interactional experts, and contributory experts expose the ways in which expertise often operates as a collaborative activity, rather than an individual quality held by individuals.

As an example of how para-expertise can lead to strategic expertise alliances, I want to briefly call upon a different kind of campus story. Unlike the narratives of prison dorms and sad hallways, this story involves a very real and immediate set of circumstances that took place on the University of Kentucky campus over the span of several years. In early 2012, university administration announced that it was planning to outsource campus dining services to a large corporate operation. After the announcement, many students and faculty had a distinct sense that something was being lost. Some of those who opposed the outsourcing announcement found themselves responding to what seemed like an already limited number of choices for fresh food on campus. The student center food court only featured a few fast-food chain outlets, including Subway, Chik-fil-A, and Sbarro. At the same time, the growing influence of local foods movements and the local farmers markets (including a new campus farmers market) were gaining popularity among students and faculty. As alternatives to the fast-food court in the student center, University of Kentucky dining services offered local foods in various outlets across campus. Dormitory dining halls regularly purchased meats and vegetables from local farmers, all in support of the "Kentucky Proud" movement of local food growers. Outsourcing campus dining not only risked this practice of buying local foods but also inevitably meant more fast food chains on campus.

When the announcement came, few students or faculty had specific knowledge about food operations or decisions involving facilities management. Even faculty who had worked on campus for decades could not be considered interactional experts in these areas. Yet, at the same time, many students and faculty had embodied and experiential knowledge of the diminished (and diminishing) choices of campus dining options. Students and faculty who wished to eat locally grown, or local-conscious, foods knew that they had to walk to the "local foods" campus dining sites in order to find nonchain foods. Those who reacted negatively to the announcement shared a sense that outsourcing was a problem for the campus, the local community, and Kentucky as a whole. Beyond their embodied experiences of food cultures on campus, however, they had few discursive skills with which to engage administrative experts.

Nevertheless, a small group of faculty and students recognized their own embodied experiences as a valid form of what I have called *para-expertise*. Such empowering

self-validation led this group to actively seek out local groups and individuals who did possess both contributory and interactional expertise with food systems and facilities management. Many of the dissenters formally organized with one particular group, University of Kentucky United Students Against Sweatshops (UK-USAS), which in turn sought alliances with local agricultural experts, sustainability experts, and local political figures. The student members of UK-USAS reached out to faculty who had also publicly expressed concern, as well as to a local group in Lexington, Kentucky, who called themselves the "Food Percolators." This is an informal group of citizens, farmers, and researchers who meet for lunch every Monday at a local venue every in order to discuss food and sustainability issues in the region. UK-USAS members approached the Food Percolators to request their expertise in agricultural and economic issues, as well as in the complexities of negotiating policy issues. Several members of the Food Percolators work closely with the mayor's office and Lexington City Council, which provided excellent contributory knowledge of policy negotiation. The Food Percolators shared many of the same concerns that students and faculty had in response to the outsourcing announcement, so they agreed to work closely with UK-USAS members in attempting to reverse the administration's decision.

The collaboration between experts and para-experts in this alliance was facilitated by a wiki, which made it easy to share information among the different participants. Agricultural and food researchers contributed technical details, many of which were simplified into talking points that could be used by the student/faculty nonexperts in letters and meetings with administration. Additionally, the wiki format also allowed para-experts to share details and observations that stood out to them. Some of the most interesting contributions on the wiki were photographs and written observations of campus dining sites. These entries were created by para-experts, who collected the images and descriptions in order to simply provide more information (Figure 1).

As one specific example of how this strategic alliance helped move rhetorical action forward, consider the way that food studies experts repeatedly outlined points about defining the term "local" in negotiations with administration. As one expert shared with the group:

It is pertinent to define that which can be considered "local." In many circumstances, distributors who source from all over the country qualify as local if the distributor itself is headquartered locally. This should not be defined as local under any circumstance. The definition of local must be one that is given only to purchases that come directly from Kentucky farms. (Rebecca Shelton, letter)

In this instance, contributory and interactional experts in the area of agriculture helped concerned faculty and students to more productively articulate their sense of trepidation. Although many of the para-experts had a sense that "local foods" are positive, they were also largely unaware that the term "local" can be defined according to a distributor's location rather than the food source.

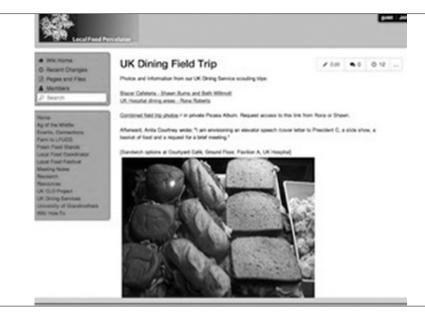


Figure 1: Screenshot from anti-outsourcing group wiki

Although the student and faculty groups themselves did not have contributory expertise, they were able to make two important rhetorical gestures. First, they were able to articulate their embodied experiences as worthy of attention and exigence. Second, once they articulated their concerns as a *problem*, they identified interactional experts and partnered with them in building a rhetorical alliance. These two gestures offer a model for how we can (and why we should) emphasize interactional alliances as the basis of a rhetorical expertise for those lacking different types of practitioner expertise. In my final section, I will turn to the question of how such a model can be useful in a classroom situation with students, that eternal figure of the novice.

#### TEACHING (WITH) PARA-EXPERTISE

By shifting our pedagogical emphasis to para-experts and strategic expertise alliances, we simultaneously de-emphasize the ethos of individual experts. This model asks us to look beyond a model of expertise that emphasizes individual skills mastery. In practice, this model may also shift our normative, pedagogical emphases toward helping students identify "pivot points" in those areas where they have para-expertise. We may do that by first making the concept of para-expertise more concrete for students. What kinds of experiential, embodied knowledge do they possess? What is the tacit knowledge from which they are attending? In the case of students who

live in dorm rooms, for example, their embodied experiences give them important insight into designs of small living spaces in unique situations (like a group of young people living communally for the first time). Once students begin to conceptualize their experience as a form of para-expertise, we may then initiate discussions of how to discover where pivot points exist between their own tacit knowledge and expert vocabularies, such as that of campus facilities operations.

By making the concept of para-expertise more concrete for students, we also value the tacit knowledge that forms the basis of such expertise without confusing that state with an ability to be interactional or contributory experts. One of the easiest ways of deploying para-expertise as a problem-posing tool is by validating a common expression of tacit knowledge: the anecdote. In my interviews with students on campus, I heard innumerable anecdotes about life in the dorms. These anecdotes do not rise to the level of evidence that we might normally expect from expert claims. Yet, we may read them as a testimony to some kind of tacit knowledge that deserves its own validation. The expertise alliance among concerned stakeholders on the University of Kentucky campus began, in some ways, with personal anecdotes that helped some participants to represent a problem to themselves: there's a lack of fresh, local food on campus.

Via the anecdote, the narrative that lacks a solid foundation in contributory expert knowledge, we can help students learn to listen differently. Personal knowledge is most often taught in the writing classroom as a "hook" for readers or, at times, as a supplemental form of evidence. As the textbook I have long used in my own writing classes puts it: "[P]ersonal experience usually won't be sufficient to carry the argument" (Lunsford and Ruszkiewicz 504). While it is true that the anecdote is itself not always strong evidence in support a claim, it still can be a testimony to experience. After all, the anecdote is one way we sometimes express knowledge we possess but cannot articulate. Thus, the anecdote can serve as a teaching tool by reframing it as the beginning point for finding an exigence, a problem. As Flower and Hayes remind us, "People only solve the problems they represent to themselves" (30). Therefore, learning how to represent problems to and for one's own self is the first step to cultivating rhetorical expertise.

In my own writing classes, the concept of para-expertise has allowed me to reframe the ways in which I discuss how expert texts and discourses actually function. The schema of expert alliances makes more transparent how expert texts relate to audiences and the kind of "discourse communities" that many writing teachers struggle to teach. By foregrounding students' para-expertise, I have also found that students are better able to visualize the process of problem-posing, which (as Flower and Hayes also remind us) is one of the differences between "novice" writers and "expert" writers. We may begin from the premise that students already possess a great range of para-expertise, yet their work as nonexperts is to find the "pivot points" of

interactional and contributory experts in order to accomplish the work of expertise. In this way, we teach students that there is no way to "do" expertise apart from others: texts, conversations, relationships. Expertise is thus neither a personal attribute nor a way of writing. Rather, it is rhetorical action that draws upon writings-in-relation.

In my attempt to make this practice a bit more concrete, I will close with one example of how I use para-expertise in my own writing classes in order to teach the work of expertise with students who are disciplinary nonexperts. During the fall of 2012, I announced to my first-year writing class that we would be conducting oral histories with the farmers and growers at our city's local farmers market. Students immediately seemed confused. They told me that they had no idea where the farmers market was or when it was open. I soon realized that, although the market itself was less than mile from campus, students rarely ventured far enough from campus to encounter it. As they made their way through the market stalls for several weeks, talking to farmers and sellers, I also asked them to record their own experiences moving through the market. Their responses were surprising to me. While I found farmers markets inviting and exciting, students wrote about feeling intimidated and out of place in the market. They repeatedly saw themselves as uninvited visitors amidst families and (people they saw as) local residents. After collecting the students' journal responses, we began to talk about their experiences as a form of para-expertise: a kind of experiential knowledge that is not easily articulable but is worthy of attention. I asked students to use their status as para-experts to pose a problem. The problem they came up with was a relatively simple one: How can a community farmers market reach students who only temporarily reside in that community?

Solving this problem, of course, is more challenging than it might seem. It requires an understanding about marketing, population demographics, food politics, campus life, and students' food buying habits. In short, the solution calls for greater expertise than first-year students possess. Rather than asking students to (artificially) adopt the voice of expertise and pose a solution, however, we turned to a discussion of expertise alliances. Who were the "pivot points" in this problem? Who were the contributory experts, and who had the skills of interactional expertise? We collectively drew upon the contacts we had made through interviews at the market—including the farmers themselves, the market manager, and its board of directors—as well as the Student Activity Board, who had a great deal of experience bridging community sites and campus populations. In the end, the group of experts assembled launched a successful initiative that remains popular even today: a campus branch of the local farmers market. Once a week for three hours, a number of farmers and vendors set up in the heart of campus for an onsite market. This experiment, which is a collaboration between the market's directors and the Student Activity Board, was born from a careful study of student trends and buying habits. Rather than trying to woo students a mile from campus to the market, the market would have to come to campus.

Students in my course were identifying and actively connecting these experts through the problem that they posed through their own para-expertise. They were engaging in the activity of expertise, although they remained nonexperts. As my own class's experience reflects, para-expertise as a concept can improve the ways in which experts of all kinds communicate with each other in exigent situations. Interactional and contributory experts may benefit from validating the para-expertise from those with embodied, tacit knowledges. This recognition does not risk delegitimizing the different kinds of specialization involved in interactional or contributory experts. Neither does it overextend the legitimation of expertise beyond acceptable limits. Instead, the recognition and validation of para-expertise offers more nuanced insight into how expertise operates through collaborative, rhetorical action. By recognizing the potential for developing para-expertise, students may also orient themselves more readily in relation to posing—and thus ultimately solving—public problems.

#### Notes

I would like to thank Kelly Ritter, Joseph Harris, and Clay Spinuzzi for their excellent comments and suggestions on earlier drafts of this essay.

- 1. While these stories persist on campuses across the country, there is little truth to any of them. Indeed, as some architectural experts have pointed out, the urban legends about "riot-proof" buildings or dorms designed to resemble prisons are more likely a misreading of the mid twentieth-century architectural design known as brutalism. When asked why Southern Illinois University's Faner Hall is said to have been built as a kind of fortress, architectural historian Jon Davey explained that the building's brutalist design can be misread by people who do not know architectural history. "Some don't like it but shadows play on it on a sunny day," explains Davey. "On a cloudy day it looks like a prison."
- 2. In fact, the connection between expertise and problem-posing (and problem-solving) has been pursued across disciplinary lines. In *Impure Science: AIDS, Activism, and the Politics of Knowledge*, Steven Epstein describes how the work of problem-posing and questions of expertise were central to the AIDS activism movement, even in its earliest stages.
- 3. See also Thomas Rickert's *Ambient Rhetoric: The Attunements of Rhetorical Being*. University of Pittsburgh Press: 2013.

#### WORKS CITED

- Best, Joel, and Gerald T. Horiuchi. "The Razor Blade in the Apple: The Social Construction of Urban Legends." *Social Problems* (1985): 488–99. Print.
- Brent, Doug. "Reinventing WAC (again): The First-Year Seminar and Academic Literacy." *College Composition and Communication* 57.2 (2005): 253–76. Print.
- Carolan, Michael S. "Sustainable Agriculture, Science and the Co-Production of 'Expert' Knowledge: The Value of Interactional Expertise." *Local Environment* 11.4 (2006): 421–31. Print.
- Collins, Harry M. "The Third Wave of Science Studies: Studies of Expertise and Experience." *Social Studies of Science* 32.2 (2002): 235–96. Print.
- Collins, Harry, and Robert Evans. Rethinking Expertise. Chicago: U of Chicago P, 2008. Print.
- Downs, Douglas, and Elizabeth Wardle. "Teaching About Writing, Righting Misconceptions: (Re) Envisioning 'First Year Composition' as 'Introduction to Writing Studies'." College Composition and Communication 58.4 (2007): 552–84. Print.

- Epstein, Steven. Impure Science: AIDS, Activism, and the Politics of Knowledge. Berkeley: U of California P, 1996. Print.
- Farris, Christine. "Where Rhetoric Meets the Road." *Enculturation* 5.1 (2003). http://www.enculturation.net/5\_1/farris.html. Web.
- Fleckenstein, Kristie S. "Writing Bodies: Somatic Mind in Composition Studies." *College English* 61.3 (1999): 281–306. Print.
- Flower, Linda, and John R. Hayes. "A Cognitive Process Theory of Writing." *College Composition and Communication* 32.4 (1981): 365–87. Print.
- Geisler, Cheryl. "Literacy and Expertise in the Academy." Language and Learning across the Disciplines 1.1 (1994): 35–57. Print.
- Hairston, Maxine. "Diversity, Ideology, and the Teaching of Writing." College Composition and Communication 43.2 (1992): 179–93. Print.
- Hawhee, Debra. "Rhetoric's Sensorium." Quarterly Journal of Speech. 101.1 (2015): 2-17. Print.
- Jenkins, Lekelia D. "Bycatch: Interactional Expertise, Dolphins and the US Tuna Fishery." Studies in History and Philosophy of Science Part A 38.4 (2007): 698–712. Print.
- Kinneavy, James L. "Writing across the Curriculum." Profession (1983)" 13-20. Print.
- Lunsford, Andrea A., and John J. Ruszkiewicz. *Everything's an Argument*. 5th edition. Boston: Bedford/St. Martin's, 2013. Print.
- Lyne, John, and Henry F. Howe. "The Rhetoric of Expertise: EO Wilson and Sociobiology." *Quarterly Journal of Speech* 76.2 (1990): 134–51. Print.
- Majdik, Zoltan P., and William M. Keith. "Expertise as Argument: Authority, Democracy, and Problem-Solving." Argumentation 25.3 (2011): 371–84. Print.
- McLeod, Susan, and Elaine Maimon. "Clearing the Air: WAC Myths and Realities." *College English* 62.5 (2000): 573–83.
- Polanyi, Michael. The Tacit Dimension. Chicago: U of Chicago P, 1966, 2009. Print.
- Selzer, Jack, and Sharon Crowley, eds. Rhetorical Bodies. Madison: U of Wisconsin P, 1999. Print.
- Stewart, Kathleen. Ordinary Affects. Durham: Duke UP, 2007. Print.