Bodysigns: A Biorhetoric for Change

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As we move into the twenty-first century, Lillian Bridwell-Bowles writes, the most significant issue we face is ensuring that “our language and our writing should be adequate enough to make our dreams, our visions, our stories, our thinking, and our actions not just revolutionary but transformative” (“Freedom” 46). Our commitment as teachers is to “make our classrooms vital places where students learn not only the various conventions of academic writing, but also the power of communication to change things, to transform” (47). This dedication to transformation resonates with a similar agenda that permeates feminist studies and cuts across theoretical, philosophical, and political lines.1 Susan Jarratt notes that “both feminist inquiry and post-current-traditional composition studies ... seek to transform styles of thinking, teaching, and learning rather than to reproduce stultifying traditions” (3). However, this commitment is fraught with difficulty because transformation—that is, change radical enough to rewrite the rules supporting a particular arrangement of culture—is difficult to effect. Transformation presents us with three challenges: we must engage in a different way of seeing, one that allows us to recognize the constitution of the status quo through rules and through the enactment of those rules; we must evolve and deploy a different way of speaking, an alternative discourse that allows us to use language in ways that exceed its representation; and, finally, we must live in different ways so that change is neither co-opted nor short-circuited.

A response to these challenges, as well as a tool for and a medium of change, lies with what I will call a “biorhetoric,” or a discourse of bodysigns. In this essay, I explore the ways in which a biorhetoric offers the possibility of effecting radical change by positioning us within the ambiguous interplay of materiality and semiosis. “Materiality” refers to the fluid potentiality of physical reality. It includes bodies, places, and

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performances—"enactments" of reality in particular places at specific times. "Semiosis" refers to all that patterns or shapes the potential of physical reality. It includes any sign system, any rule-governed arrangement, including DNA, immune systems, art, ritual, and language itself. "Bodysigns" emphasizes the inextricability of materiality and semiosis. Although language allows us to speak as if materiality and semiosis were separate, they are mutually entangled in a nonlinear weave of cause and effect. We can know them and live them only at the point where they blur. Positioned within the spin of bodysigns, a biorhetoric provides a double perspective from which to recognize the semiotic-material nature of the status quo and of change. Also, like the cyborg surrealism that Donna Haraway sees in Lynn Randoph's paintings, a biorhetoric offers us a double way to speak, one that can "embody and exceed its representations and blast its syntax" (Haraway, *How* 122). Finally, a biorhetoric provides a means to enact a double way of being, one in which we live within the blur of bodysigns.

I begin my examination of a biorhetoric as a tool for and a medium of change by exploring facets of its double vision. Drawing on the work of feminist writing teachers, I demonstrate in the first section of this essay the desire for and the difficulties of a biorhetoric's double vision. Rather than defining reality as either a textual construct or an experiential one, a biorhetoric represents reality through a double lens of bodysigns. To borrow from Adrienne Rich, I suggest that the realm of a biorhetoric is the point at which the edges blur ("No. 29" 111). In the second section of this essay, I turn to Gregory Bateson's theory of meaning to reweave semiosis and materiality into a vocabulary of metaphor by which we can speak double. Bateson offers us double logics that position us within a grammar, or a system of rules, while simultaneously offering us the means to disrupt that system. I illustrate the effects of double-speaking with an example of a paradigm shift in science, a discipline traditionally positioned outside the doubling of bodysigns. Finally, in the third section of this essay, I turn to the promise of a biorhetoric for a different way of living. A biorhetoric calls me to a double being, a mélange of what Haraway calls topos and tropos ("Promises" 296). I offer an enactment of that double living through a metalogue, a way of living writing that blurs the who, the what, and the how (see Bateson, *Steps* 1).

**Double Vision: Seeing through Bodysigns**

"May God us keep / From Single vision & Newton's sleep," William Blake wrote in a letter to Thomas Butts (qtd. in Bateson, *Sacred* 93),
seeking in his "infernal process" a fusion of word and image that transforms representation. We also require what Haraway calls the "partiality, irony, intimacy, and perversity" of a double vision (Simians 151). First, a double vision is needed so that we can recognize the ways in which we contribute to and are dependent on the status quo we wish to change. As participants in as well as creators of meaning, we automatically contribute to the constitution and the continuation of the contexts that give birth to us. Individual and institutional identity reveal as much. The very identity of women, Linda Alcoff reminds us, is constituted by women's position: "[S]he herself is part of the historicized, fluid movement, and she therefore actively contributes to the context within which her position can be delineated" (286). The paradoxical positioning of both composition studies and feminist inquiry also reflects this double-ness. "Despite the desire to reconfigure disciplinary boundaries," Jarratt perceptively points out, both feminism and composition studies "need to claim disciplinarity to achieve academic legitimacy and obtain resources (faculty members, courses, research support)" (3). To exist, composition studies and feminist inquiry organize themselves around two contradictory needs: the need to change institutional mandates and the need to honor those mandates in order to continue existing. To challenge the status quo, then, we have to see reality doubled, both our allegiance and our resistance to particular arrangements of culture.

Second, we need double sight to perceive the ways in which our discourse and our performances intertwine in systems of oppression and systems of privilege. Consider the swirl of bodysigns in the realities of nontraditional college students. In the academy, it is not institutional "edits"—or language alone—that conspire to limit our students’ (and our) ability to succeed; it is institutional "edits" constituting and constituted by material conditions. Mary Soliday points to this double conspiracy of bodies and signs. She explains that the illogic of and inequities in many of our institutional practices can be traced to deliberate efforts to render material conditions meaningless. For instance, through their policies, institutions ignore the physical reality of working-class students’ existence: the thirty- to forty-hour workweeks, the children, and the long hours commuting between home, school, and work. She ties institutional refusal to recognize such realities to the political resistance to remedial education at the City University of New York. But by dismissing the constraints of long work hours, by providing no flexible childcare, and by turning a blind eye to travel time, the institution renders those material factors an effective barrier to many students’ education. It
does so through language. Institutional mandates codify into a system the very differences the institution refuses to recognize. Language—an official language of rules and policies—is used to elide these material factors, and thus it is this language that makes these material factors significant in the academic lives of students.

Recognizing and changing material inequities requires recognizing and changing the codification of those inequities through language. It requires seeing through bodysigns. We cannot gain for our students open scheduling, childcare support, and satellite classrooms if we do not tackle both the material contexts and the policies that render the need for change invisible. To ignore the power of the word to define what constitutes “reality” in a system is to divest us of any meaningful strategies for changing that pattern. To ignore the power of material contexts to impinge on the power of the word is to divest ourselves of any meaningful way of recognizing the tyranny of institutions. We can rage at inequitable material conditions, but we will remain in the grasp of dicta without the power to change them because we have split conditions and dicta into separate categories of meaning. By privileging either discourse or materiality, we rob ourselves of any way to alter the linguistic systems that, in a paradoxical move, evoke and reify material inequities by decreeing them nonexistent.

The desire for and the difficulty of maintaining a double vision are both evident in composition studies. The struggle over basic writing offers insight into these difficulties. The temptation in composition studies, a discipline that anchors itself in language arts, is to turn to discourse—to the writing and unwriting of institutional edits—as the means by which we can perceive the need for and enact change in material conditions. The rich work of David Bartholomae reflects the importance of conceptualizing meaning and identity as textual constructs. Dedicated to students, especially those traditionally marginalized by the academy, and to the transformation of social systems that limit students’ potential, Bartholomae advocates a linguistic orientation that he hopes will open up opportunities for social change. Drawing on poststructuralist philosophies, Bartholomae argues that identity is a rhetorical construction that readers and writers configure within textual lacunae. Permeated by cultural and ideological discourses, identity does not exist prior to or outside of the discursive event. Thus, the writer outside the text is immaterial; it is the subject position, “the way the ‘writer’ is positioned within a discourse,” that is important (“Reply”123). And this subject position is in particular need of deconstruction if it is figured as first
person singular: “a figure of the writer as a free agent, as independent, self-authorizing, a-historical, a-cultural.” Our pedagogical and scholarly energies should focus on deconstructing the writer’s rhetorical manifestations, particularly those that are built on a “Jimmy Stewart/Joseph Andrews” or Marlboro Man kind of autonomy, Bartholomae argues (123). As he explains, the aim of composition pedagogy predicated on a textual stance is to destabilize the traditional Western sense of identity as an independent construct outside language and to demonstrate the way in which identity is always lodged within language (“Writing”, “Tidy”). Such a linguistic orientation offers students the opportunity to disentangle the ways in which discourse writes them, constrains their identities, and limits their opportunities for growth. Simultaneously, this perspective offers them the means to rewrite those identities.

Without a doubt, this approach holds much promise for enabling members of our culture blessed with a sense of a stable identity to ascertain the degree to which linguistic privilege underwrites their sense of a stable self. By itself, however, it cannot address the doubling of semiosis and materiality in the status quo. First, a textual orientation is a problematic position for women and other marginalized minorities, who, as Celeste Schenck points out, have never achieved “the self-possession of post-Cartesian subjects” and thus do not have “the luxury of ‘flirting with the escape from identity,’ which the deconstructed subject may enjoy” (qtd. in Synder 25). Bracketing the material individual from the textual persona can be effective only if all writers share a similar material positioning and thus share access to the same textual identities. Such is not the case. For women, their identities are already fractured; their “I” is already dismissed.

A second problem unresolved by a solely textual approach to reality is the question of judgment: if we are caught within competing discourses of the real, how do we determine which discourse is “true,” or as Susan Griffin asks, how do we call into question the lie that torture in Brazil never took place? We live tenuously positioned in a posthuman world, as Katherine Hayles warns us, a world that increasingly strips us of a sense of our materiality and translates us into pure discursive patterns, into exclusively semiotic beings. And within the womb of the word, we can so easily exist with no sense of what Cornel West calls “the ragged edges of necessity, of what it means to be impinged upon by structures of oppression” (277). By seeing bodies as signs, as lines of code, we can all too easily fall into the trap “of thinking that state repression that scars human bodies can be understood in terms of linguistic models,” which it
cannot (271). As West points out, "Power operates very differently in nondiscursive than in discursive ways." He warns that a culture that denies "the knowledge that we cannot not know"—the knowledge that people are starving and killing and dying, the knowledge that too many of our people live on the "ragged edges of necessity"—is a culture doomed (271).

Discourse is undeniably a primary means by which we constitute identities for ourselves and are constituted by others. But, by conceiving meaning solely as a web of textual relationships, we bracket and ignore the material flow within the entire performance, especially the loop we call writing. Bodies in specific material sites write signs just as much as signs write bodies into specific material sites (see Fleckenstein, "Writing"). As Jack Selzer points out, "Language and rhetoric have a persistent material aspect that demands acknowledgment, and material realities often (if not always) contains a rhetorical dimension that deserves attention: for language is not the only medium or material that speaks" (8). Likewise, Deborah Brandt articulates the need for a double vision in literacy studies:

> If we are going to understand better what literacy instruction represents to students in the future and how it sometimes, inexplicably, can go awry, it is especially important to know about the setting in which knowledge of reading and writing have come to them and the significance implied in those settings. We must understand better what is compelling literacy as it is lived. (477)

When bodies are conflated with signs, trapped in the single vision of the text, ethnographic studies cannot account for

> the complexities involved when a preschooler takes up writing to displace her mother's reading, or when a daughter decodes her father's burdens [budgets written in the margins of a newspaper] along with the nightly news, or when a child's first attempt at imitatio [copying her mother's signature] begins with the guilt of theft. (460)

We cannot escape place, although we can deny it and redefine it; nor can we escape the paradoxes engendered by bodysigns, although we can deny and redefine them. What happens to the myelin on a nerve sheath directly implicates a writer's identity, essayist Nancy Mairs wryly reminds us. Who would she be if she did not have multiple sclerosis, Mairs muses. "Literally, no body." Who she is as a writer is directly tied to the
demyelinated lesions in her central nervous system, to the fact that she, as someone bound to a wheelchair, is waist-high in the world. Mairs reflects, “In all likelihood, I would have become a writer. . . . But I could not conceivably have become the writer I am” (8–9).

An alluring solution to the single vision of the text is to turn to the vision of experience, to the performances of bodies in specific sites at specific moments. Breaking with the dominant textual orientation in composition studies, Kurt Spellmeyer laudably highlights in his concept of attunement the importance of experience, of being in the world (“After”; “Too”). Spellmeyer attempts to balance the overemphasis on discursivity in composition studies by emphasizing the necessary materiality in our constructions of self and other. “If the world is not a text,” he points out, “then when we treat it as one we soon lose the capacity to differentiate between actions that can lead to meaningful change and those symbolic practices that substitute for action all too easily” (“After” 893–94). What gets lost in a “semiotic universe,” Spellmeyer explains, “is the crucial distinction between ‘codes’ or ‘signs,’ which simply signify, and the living words that foster a ‘felt’ resonance between ourselves and the world” (906). Spellmeyer insists on “attunement” with the world as a balance to the focus on textuality. Given a poststructuralist orientation in composition studies and a predisposition to honor the language in “language arts,” it would be easy, temptingly so, to embrace Spellmeyer’s attunement as a means of being in (and writing about) the world that bypasses the segmentation of semiosis.

Choosing attunement over rhetoric offers us an alluring perspective, but it is still a single vision, one that, like the linguistic turn, elides the inextricability of bodysigns and the ways they mesh to craft and to contest reality. Christine De Vinne highlights the inextricability of bodysigns in a visceral way through her examination of the confluence of the cannibalism of the Donner Party trapped in the Sierras during the winter of 1846, the cannibalistic rhetoric of westward expansion, and the cannibalized narratives of the Donner Party survivors. While De Vinne’s study emphasizes the tangle of bodysigns (even at the point where bodies consume bodies), Min-Zhan Lu and Bruce Hornor warn of the danger of amputating bodies from signs and erasing signs from bodies. They argue that an exclusive focus on embodiment, such as Spellmeyer’s emphasis on attunement, posits a “polarized, hierarchical relation between experience and discourse (‘text’), valorizing experience as both prior to and greater than discursive understanding.” This stance imagines experience as beyond the “politics of representation,” or beyond semiosis. Experi-
ence, however, can never be conceptualized outside of language. We have nothing so unproblematic as direct, unmediated access to the world. What is necessary, Lu and Horner urge, is to find a relationship "between experience and discourse [that] is not polar and hierarchical but dialectical," and that dialectical relationship is not easy to enact (259).

The need to attend to both semiosis and materiality vibrates throughout feminist approaches to writing and teaching writing. Concerned with women's historical erasure in rhetoric and with their literal silencing in the classroom, feminists in and out of composition studies have worked to validate women's experiences—the performances of their lives—as a source of knowledge. Jarratt points to the limitations of a strictly rhetorical agenda. "The maxim that everything is rhetoric," she explains, "a triumphant discovery for some, leaves unspecified what must be addressed by both composition and feminism: the specificity and materiality of difference" (9). A vision of writing as a vision of experience offers egress into difference, a process that Kathleen Dixon calls exposing the underside of the political subject (257). Mary Salibrici concurs: "We do not encourage our students to take their places within the broader academic community by asking them to erase themselves from their own singular material presence" (394). Instead, "we insist on experience, especially the representation of daily activity, as a source of feminist theory in composition and rhetoric" (Phelps and Emig 410). Feminists and composition pedagogy need to honor "individuals' eloquent stories as fundamental supplements to more abstract structural information and analysis as well as sources of theoretical concepts and insights in their own right" (410). Bridwell-Bowles explicitly centers her writing pedagogy on this experiential agenda, encouraging her students to compose, as she has gradually done, in "a more personal voice, an expanded use of metaphor, a less rigid methodological framework," in an effort to privilege more personal, nonlinear, and emotional forms and processes ("Discourse" 350). Our subjectivities, Salibrici ironically points out, "our ways of reading, may of course be fictions; but, fact or fiction, we have to start with them, if we are to learn how they may or may not relate to the world at large" (394).

Overlapping this effort to honor material experience is the simultaneous effort to honor rhetoric. Feminists in composition studies fear that an unalloyed emphasis on materiality will lead to an essentialized or polarized gender identity, erasing the differences that the emphasis was designed to illuminate. Gesa Kirsch and Joy Ritchie struggle with this problem in their discussion of research and the importance of "a politics
of location,” a phrase they borrow from Adrienne Rich. Committed to
developing a more ethical approach to research, one that acknowledges
the position of researcher and subject, Kirsch and Ritchie urge a
problematized politics of location that is “unrelentingly self-reflective”
(10). To avoid both the essentialism implicit within personal experience
and the colonization implicit when the voice of a woman becomes the
voice of women, Kirsch and Ritchie attempt to strike a balance between
materiality and rhetoric, returning both to the web of “social relationship­
ships” and advocating an ethics of care in research practices. Jarratt seeks
a similar dialectic. Fearing that experience, faceted through no other lens
than itself, reenacts the tyranny of the autonomous subject, the autono­
mous experience, Jarratt argues for a materiality framed by the social/
historical context within which it is born (4–9). Acknowledging the
necessity and the limits of personal voice, Jarratt borrows from Spivak the
concept of double rhetoric: “rhetoric understood as a dual process of
representation—as both a figurative and political act—gives names to
language that articulates difference while exposing the power rela­
tions at work in acts of naming” (9). Thus, voice is not only positioned
materially, it is also positioned within the social and historical
discourses that infuse it.

What continues to struggle for survival in this experiential/rhetorical
doubling, however, is the nature of the experiential/rhetorical cusp.
When grappling with life along the diagonal slash between experience
and rhetoric, a line that is neither rhetorical nor material but both, the
temptation is to hail the material into the realm of the rhetorical. Kirsch
and Ritchie’s “social relationships” are discursively crafted, shaped by
language. What remains unclear is how social relationships—including
bodies, places, and performances—shape language. Similarly, Jarratt’s
reliance on double rhetoric suggests that bodies are texts, but not that texts
are bodies. As Jarratt explains,

Examining rhetorical configurations keeps at bay any universal subject
(man or woman), shifting the discursive grounds for authority. In other
words, the “we” of my title cannot be known in any way distinct from the
“were saying,” and no claim of “as”—signifying either resemblance or
simultaneity—will stand unchallenged by the continuing generation of
other words. (10)

This leads Jarratt to focus on the “were saying.” As she explains in the
introduction to Feminism and Composition Studies, the goal of the
collection of essays, as the subtitle indicates, is to “examine new strate­
gies, 'other words,' for writing, teaching and learning at the productive spaces where the two fields meet and diverge,” a process that may double rhetoric but still relegate materiality to the formative realm of the sign without choreographing what Michel de Certeau calls the dance of “the word when it is spoken, that is, when it is caught in the ambiguity of an actualization” (Jarratt 4; de Certeau 117).

Without naming it as such, feminists’ efforts in composition manifest a commitment to the bodysigns of a biorhetoric. But those efforts also reflect the difficulties of just such an agenda, for it requires a positioning where the edges between materiality and semiosis blur. Meaning is not material; it is not semiotic: it is both at the same time. Citing her Catholic upbringing as well as her training in molecular biology, Donna Haraway notes that “biochemistry and language just don’t feel that different to me” (How 86). She explains, “The first thing I’d say is that words are intensely physical for me. I find words and language more closely related to flesh than to ideas” (85). Meaning relies on and implies the existence of material potential. But it also relies on and implies a semiotic marking or segmenting of that potential, for without that segmentation, potential remains unknowable. Without a doubt, we need Foucault’s biopolitics, the insight that the material details of life—such as what we wear, how we sit, and where we eat—all conspire to maintain the dominance of a particular discursive arrangement of culture. As de Certeau observes, “There is no law that is not inscribed on bodies. Every law has a hold on the body. . . . It engraves itself on parchments made from the skin of its subjects. It articulates them in a juridical corpus. It makes its book out of them” (139–40). But we also need Antonio Gramsci’s contradictory insight that material experiences—experience in and of the world—will always contend with the ideological apparatus implicit within a culture’s dominant discourses (324–27). A biorhetoric offers a double lens that is neither the product of language nor the product of materiality but the confluence of both. Lurking within this double way of seeing is a double way of speaking, a new vocabulary of metaphors that Richard Rorty claims is necessary for any change: “a tool for doing something which could not have been envisaged prior to the development of a particular set of descriptions, those which it itself helps to provide” (74). It is this double way of speaking that I address next.

Double Tongues: Speaking through Bodysigns
As Rorty points out in “The Contingency of Language,” a new way of seeing cannot be separated from a new way of speaking; to see double, we
also need to speak double. But, as feminist writing teachers have discovered, the difficulty of double speaking a double vision frequently results in the loss of body or of sign, a process that slips us back into single vision, a single voice. For Rorty, double speaking rests in a concept of language as metaphor, a connection he briefly explores. In this section, I extend the possibilities of metaphor’s double tongues by reshaping Gregory Bateson’s theory of double logics in meaning. To illustrate the transformative power of double logics, I turn to Galileo. Rorty claims that scientists such as Galileo offer examples of change via a new way of speaking; he argues that Galileo’s “discoveries” could not have been conceptualized without a vocabulary of metaphors that transformed the dominant ways of seeing implicit within the dominant language. I elaborate on Rorty’s claim by tracing the radical effects of one instance of double speaking in the evolution of Galileo’s theorem $v=gt$.

Key to the evolution of cyborg subjectivities through his work with cybernetics, Bateson offers a theory of communication founded on the double play of materiality and pattern in meaning (see also Balsamo; Haraway, *Modest*; Hayles). Discarding as pathological a dualistic epistemology that splits mind and body, Bateson reconceptualizes evolution, embryogenesis, and thought as ecologies in which physical reality and pattern cannot be separated without destroying the entire web of life. Meaning exists because of and through the multileveled interweaving of materiality (an ontic reality that seemingly exists “out there”) and of “language” (any systematic way of parsing material potential into organized pattern). Bateson stresses that neither materiality nor semiosis exists apart from the other. What is “out there” is simply not knowable to us except through our attempts to organize it meaningfully. Furthermore, the very patterns that we use to punctuate or mark the potentialities of reality—such as DNA, art, ritual, and language—are constrained by and created from the material reality in the first place (Bateson and Bateson 13). Language evolves out of materiality, then reverberates back on that pool of potentiality, molding it to reflect an organized image that does not exist until so patterned. These material-semiotic systems comprise a complex network of feedback and feedforward loops, all of which create, disrupt, and re-create the other.

Semiosis and materiality, although mutually constitutive and mutually necessary, are not the same. According to Bateson, we constantly shift back and forth between a logic that makes distinctions (semiosis) and a logic that unmakes distinctions (materiality). In human culture, language is the dominant ordering system that parses and arranges
material potential into distinctive units, into names and “not” names. To do this, language relies on an *as-if* logic, the categorical logic of absence. A word or name is treated *as if* it were real. But it is not real. It is, instead, merely a point within an interlaced network of points. Language is predicated on and simultaneously creates the absence of “not”: a *loaf of bread* is not. When we think of *bread*, we do not have loaves in our heads, butter dripping from our ears. *As-if* logic allows us to conceptualize materiality without materiality—to have our bread and eat it, too. Quoting general semanticist Alfred Korzybski, Bateson explains that language is the map, not the territory, although he goes even further than Korzybski, contending that the territory is not even the territory, an assertion in terms of which he attempts to capture the fluid potential of materiality (*Steps* 454–71). Names are arbitrary classifications, modes of punctuating or marking the flux of reality made relevant through a networked system of rules. The differences that dictate what should become a point within the network of points—that is, what should become *bread*—are determined both by the rules established by the network in the first place (its habits) and by the materiality out of which the network constructs itself.

Within the material/semiotic nexus, we shuttle constantly between the markings and the potential itself, refining our sense of the markings, guided by our perceptions of differences to determine what should be named. The *as-if* logic of language functions in tandem with the *is* logic of materiality, which both grounds and unmakes *as-if* distinctions. Semiotic partitions are significant to only part of the brain (and the body). To this part of the brain, the bread used in a religious ritual such as communion merely marks, or symbolizes, the body of Christ, but it is not the body. Eating the bread is not eating the body. But to the affective-iconic, nonverbal part of the brain, the bread *is* the body of Christ; therefore, as we eat it, so do we eat Christ. This is exactly the part of the brain, the logic, that is dominant (that must be dominant) during religious sacraments, for when Catholics eat the bread and drink the wine to celebrate the Eucharist, they are eating the body and blood of Christ. Sign and body fuse. *Is* logic, arising out of unconscious primary processes where verb tenses, modals, and negatives cannot function, dissolves distinctions and erases the “not,” the absence of *as-if* logic (Bateson, *Steps* 136).

As the basis for the exchange of all information in the nonverbal, biological world, *is* logic is embodied, corporeal meaning, constructed via the metaphoric logic reflected in what Bateson calls syllogism in grass: grass dies; men die; men are grass (*Sacred* 240–41; see also
Metaphoric logic concerns the ways in which the flow of reality and the marking of reality are the same, defying the as-if distinction that underlies language and thrusting us head first into the whirl of materiality. Nonverbal is logic erupts continually throughout the sinuous weave of language, manifesting itself in emotions, visceral reactions, imagery, and dreams. It is particularly evident in the irrepressibility of metaphor. Within the embrace of is logic, we can experience Holy Communion, where the bread and wine are one with body and blood. We can write to heal at the moments when the distinctions between word and flesh disappear. We can thrill to beauty when the dancer melts into the dance. We can resonate to empathy when self disappears into other.

The ability to organize physical flux into knowable segments is without a doubt crucial to our biological, psychological, and cultural existence. But the ability to dissolve those segments is also necessary. Neither as-if nor is logic can exist alone; each exists as a separate category only on the level of description. As-if logic comes into being within and because of the is logic of materiality. But is logic is meaningful only through the patterning of semiosis. We may dream via is logic, but those dreams do not “mean” except through the parsing of as-if logic. And because each is configured differently, paradox is always implicit within meaning, enabling the creation and the undoing of a system simultaneously. Anthropologist Mary Douglas neatly captures the paradox of as-if and is logic. There are no such things as natural symbols, she argues, but there are also no such things as unnatural symbols. “The social body,” she writes, “constrains the way the physical body is perceived”; however, the “physical experience of the body, always modified by the social categories through which it is known, sustains a particular view of society” (65). Sociologist John O’Neill points to a similar reciprocity: “[O]ur own bodies are the permeable ground of all social behavior; our bodies are the very flesh of society.... What we see in the mirror is what others see. Here is the incarnate bond between self and society” (22–23). The “two” bodies are mutually constitutive, mutually dependent. Materiality and semiosis, bodies and signs, are divisible only on the level of (and by means of) language (see Hayles).

Nor do the double logics of materiality and semiosis mesh in a neat dialectic with cleanly defined boundaries. The movement of logics is not a discrete, linear progression of logic building on logic, word writing on body, body dictating word. Instead, it is a contradictory web of self-constitution and self-negation in which bodies and signs, cause and effect, collapse. Like a möbius strip, flesh bleeds into words, words leak
into flesh, so that each becomes and remains by means of the other (see also Grosz’s use of the möbius strip as a metaphor for the relationship between discourse and embodiment). Materiality does not stay neatly sectioned within unconscious, autonomic, or corporeal processes; semiosis does not remain tidily cordoned off from embodiment, exchanging mutually influential information across discrete boundaries. Inside and outside become unstable designations, and the separation between word and flesh disappears. Embodiment seeps into culture; culture is always a statement about embodiment (see Hayles). We cannot designate a beginning or end to one particular level—to either body or sign—because we cannot draw a definitive boundary between the naming and the thing named. The material-semiotic dialectic is circular, messy, and contradictory. This collapse of materiality into semiosis and semiosis into materiality is clearly illustrated in embryogenesis. DNA is necessary for the physiological development of an embryo. But in and of itself DNA exists merely as a two-dimensional code capable of initiating nothing—until it is lodged with an egg that, in conjunction with the DNA, hails the DNA into existence. However, the egg itself is also a product of the DNA sequencing that it initiates. Without DNA somewhere within its looping existence, the egg wouldn’t exist to interpret anything. And without the egg, the DNA wouldn’t exist.

We are simultaneously initiator of and participant in meaning, a dialectic created out of the dialectic that creates us as we create it. A biorhetoric, then, is not just about speaking minds or speaking cultures. It is about speaking bodies in culture; it is about speaking minds in bodies. Because double logics are both necessary for meaning but are not the same, meaning always includes the seeds of its own undoing. There are always gaps in meaning and in life where the strictures of one logic can be undone by the strictures of the other. There is always a “negating relationship” between materiality and semiosis, French philosopher Michèle Le Dœuff writes, “a sign that something important and troubling is seeking utterance—something that cannot be acknowledged, yet is keenly cherished” (12). The border play of mutually constituting, mutually contradicting logics keeps meaning on the edge of chaos, keeps the network of relationships open to change.

Given the reciprocity and resistance of double logics, how might we evolve from it a double speaking, one that catalyzes change through a vocabulary of metaphors? Rorty cites as an example of transformation through a new way of speaking the work of such “poets” as Galileo, and Le Dœuff illustrates the evolution of Galileo’s vocabulary of metaphors.
Le Dœuff argues that Galileo’s formulation $v=gt$, an equation setting forth the constant relationship between the velocity of a falling body and the time elapsed, “constitutes a reduced model or a component of a cultural mutation” (40). What is revolutionary about Galileo’s equation is not his hypothesizing the constancy of velocity but his use of time rather than distance as a parameter of that velocity (30). “To make time a parameter of speed meant breaking with solidly rooted mental structures,” Le Dœuff argues, and that paradigmatic change is situated not in the scientific abstraction of discursive as-if logic, the logic that permeates mathematical equations as well as language; rather, that process is situated in the merger of the material is logic, manifested in metaphor and imagery, with discursive as-if logic.

Le Dœuff sketches the upheaval entailed by the equation $v=gt$ by describing the socio-cultural milieu of Galileo’s day. To treat velocity as relative to time not to space meant completely overturning the conceptual schemes—the rules of the game—dominant at the time. Galileo, Le Dœuff explains, was bucking “the double tradition of a negative valuation of time and a positive valuation of space” that had been in place since the classical ages (30). Space was privileged as the principle of order and intelligibility in large part because of the existence of Euclidean geometry, which “imposes one definite model of space against the chaotic plurality of representations of different spaces” (34). Time was conceptualized as that which “undoes what is,” a paradoxical unintelligibility since we cannot say what it is without saying what it is not. Within Galileo’s socio-cultural milieu, it would have been natural to evolve an equation that posited velocity as a function of the distance a body fell, not the time a body fell. Galileo’s revelation marked a complete break with the rules by which the system defined its reality and his identity within that reality. It was a transformative change.

But this rewriting of a socio-cultural meaning did not result from rigorous scientific thinking. Instead, Le Dœuff argues, it was born in the chaos and confusion of is logic fusing with as-if logic: “A revolutionary scientific idea may, precisely because of its unfamiliarity, be born among metaphors and confusion and attain its ‘fine abstract pointing’ only afterwards” (38).4 She ties the evolution of this systemic shift to the means by which Galileo initially framed his equation: with the logic of the alchemical notion of affinity. Galileo tapped the mysticism of alchemy, which is founded on the is logic permeating the doctrine of signatures, correspondences, and metaphor. A discovery that “went against a millennial system of representations” did not just use alchemical lan-
language as trope; it “demanded the logic latent within that occult vocabulary,” Le Dœuff argues (38). In alchemy, affinity is a two-sided notion that includes both analogy and combination. Members of different classes (such as the classes of planets, metals, and physiological organs) are simultaneously analogous (like/as-if) and the same (is), reflecting a shifting between traditional prepositional logic manifested in discursive codes and the *is* logic of Bateson’s syllogism in grass. According to affinity, then, members of different classes can be distinct from one another and thus can be *like* one another; at the same time, they can be the *same* as one another: the sun gives life; the heart gives life; the sun is the heart.

Le Dœuff explains this doubleness: “Things unite by analogy [*as-if* logic] because like attracts like [*is* logic],” reflecting the conflation of *is* logic with *as-if* logic. It is this fused logic that Galileo initially uses to frame his equation of \( v = gt \). A stone that falls starting from rest and acquires additional increases in speed moves in a manner “we will easily understand if we fix our attention on the *extreme affinity of time and movement,*” Galileo says, depending on the nonscientific concept of affinity to effect a revolutionary shift in scientific thinking (qtd. and trans. in Le Dœuff 37). “The idea was so impossible to fit into the mental structures of the time that one can understand its having been formulated in a vocabulary bordering on the mystical,” Le Dœuff notes (38). Without a double speaking of material and semiotic logics, the transformation effected by \( v = gt \) could not have taken place.

The dance of double logics enabled Galileo to dream in new ways, to initiate new ways of thinking and being through double speaking. Mysticism permeates mathematic formula so that meaning becomes the melting point between signs and bodies, “when the bones know / they are hollow & the word / splits & doubles & speaks / the truth & the body / itself becomes a mouth” (Atwood 2299). Rorty refers to scientists such as Galileo, Copernicus, and others, as “poets,” and this same osmotic swirl of double logics is at the heart of Adrienne Rich’s poetry. Citing Muriel Rukeyser, Rich describes two kinds of poetry: one that emerges from dreams, sexuality, and subjectivity; and one that emerges from literal historical accounts. Rich explains that in her poetry she attempts to combine the two, “not separating dream from history,” but she does not find it easy (*What* 21). “We’re unable to write love,” she reminds us, “as we much wish to do without writing politics” (23). Double speaking enables her to say both, enables Galileo to see and speak in new ways. An implicit reliance on double logics is also evident in the work of feminist
writing teachers. “To be successful, “Bridwell Bowles reminds us, “we need to teach our students conventional forms and better analytical skills, but also we need to encourage them to dream, to think in new cycles and to have visions of the future that are hopeful” (“Freedom” 47). She invites us “to use writing to dream about transformations for all of us” (60). It is the dream, the is logic of metaphoric thinking, in play with the as-if logic of categorical, proposition thinking that opens up gaps for us to pry apart a visceral response, an institutional mandate, a gender role, a racial designation and to reorganize it into a different reality. Double vision and double speaking provide a template for a double way of living, a topic that I address next.

Double Being: Living through Bodysigns
Recognizing the need for change and evolving strategies of change all require double vision and double tongues. But ensuring the continuance of change requires double living. Human societies and human lives possess amazing elasticity. Each can absorb an instrument of change and recast it so that it supports the system it was designed to undermine. To forestall co-optation, radical change requires of us a different way of being, as well as a different way of seeing and speaking. We have to “make ourselves anew,” bell hooks tells us, or our change will be preempted and rendered transient: “In that vacant space after one has resisted there is still the necessity to become—to make oneself anew” with “new, alternative habits of being” (17). A biorhetoric offers an invitation to a new kind of living, a kind of double being in which we precariously poise ourselves within the swirl of bodysigns. In that swirl, the edges between who, what, and how we exist blur. In this last section, I turn to my teaching as a site of that precarious double living.

To teach and write so that “the truth & the body / itself becomes a mouth” requires a reconfiguration of the web of meaning within which I am woven and a reconfiguration of who I am in that web. A flaw of critical pedagogy as manifested in cultural studies approaches to composition is the belief that students require transformation and that the teacher as catalyst is outside the venue of that change (see Spellmeyer, “Out”). But lodged within the maelstrom of double speaking and weighed with double logics, it can never be students who change and teachers who elicit that change. Instead, it can only be the teacher-student-cum-classroom that changes. From the perspective of a biorhetoric, I cannot separate myself as writer or teacher from the meanings and the sites I create as they create me. I cannot separate myself from any radical change I hope to initiate.
I, too, must be transformed. As a bodysign among bodysigns, I can no longer teach safe in the assumption that my identity stops at the end of a text or at the boundaries of my skin. A biorhetorical identity exceeds both bodies and sentences. As Haraway so wisely asks, "Why should our bodies end at the skin, or include at best other beings encapsulated by skin?" (Simians 178).

My student Eileen and I offer an illustration of a biorhetoric that blurs the comfortable divisions among who, what, and how. I chose to focus the readings of a first-semester composition course on the problematics of gender. That topic also served as the starting point for students’ writing. On the first day of class, Eileen, a poised eighteen-year-old, asked if she could select another topic because gender just did not interest her. When I refused her request, she acquiesced gracefully. The first draft of her first paper was built on her experiences babysitting children in two families. In both families, mother and father pursued active and demanding careers. Concerned about the welfare of the children, Eileen argued that the mothers in both situations needed to reorder their priorities because they were jeopardizing their "womanhood" in their efforts to prove their equality to men. My comments on her first draft focused on the need to balance her representation of family responsibilities; otherwise, I warned, she risked alienating the very audience she was addressing: career women. Eileen responded in a detailed e-mail, concluding with a single paragraph set off from the rest of her response: "First, I don’t want to write what you want to hear. My audience is not you. I’m not about to turn this into a totally feminist paper."

It would be easy (temptingly so) to interpret this conflict as a problem of rhetorical perspective: Eileen’s problem, Eileen’s perspective, Eileen’s rhetoric. My role, then, would be heroic: to leap into the gaps created by the paradoxes rife in her message and use that position to leverage open—to transform—Eileen’s thinking. I would rescue her from her own lack of critical sensitivity. This patriarchal figuration of teacher as heroic rescuer is the dominant stance, the dominant way of being, in composition studies. Kirk Branch claims that the central metaphor framing literacy efforts, including those predicated on narrow interpretations of Paulo Freire’s work, is that of the hero. The literacy worker is cast in the role of one who “knows what students need, gives it to them, and thus enables their transformation,” but the worker remains unaffected by that transformation (207). Quoting Lyotard, Beth Daniell calls this the “emancipation narrative” in which we assume the role of “heroes of liberty” (401). Within the context of the patriarchal hero narrative, the unit of power is
that of the individual agent, bounded by discrete frontiers, interacting but not transacting. As hero, I inhabit a site of power outside of the process of change that I demand of my students, serving as a catalyst rather than as a participant in their sea change. But in separating myself from my students, I see with a single vision and speak with a single voice, barring myself from the site of that transformation and thus barring myself and my students from any lasting change.

To believe that I am outside the transformation I wish to initiate in my writing and my teaching is to remain tied to a single way of seeing, a single way of speaking, and a single way of being. Eileen’s choice of topic and perspective are not the product of “Eileen”; they are the product of “Eileen-and-me” joined into a complex web of mutually constituting relationships, including the physical weight of a technology-rich classroom with an avowed feminist teacher. “Her” paper is a contextual effort, the outgrowth of an overlap of bodysigns within which participants—me, Eileen, the children she cares for, my children whom I care for—struggle for identity. At work here is not merely a difference in philosophical or rhetorical perspective, a difference arising out of as-if logic. It is a difference ensuing from the contradictory and complementary loops of a biorhetoric. As Bateson explains, “[I]n the world of ideas, it takes a relationship, either between two parts or between one part at time one and the same part at time two to activate some third component which we may call the receiver,” and which we may also call identity (Mind 106).

Neither Eileen nor I “exist” prior to those constituting relationships. The paper (the e-mail) written by Eileen-and-teacher is merely a linguistic manifestation of the looping web of logics permeating it. It is a statement about those logics. And as such it requires not that I rescue Eileen but that we rescue each other. To reprise metaphoric logic: Eileen writes. I write. Eileen is I.

Here is the site of my double living. If I put Eileen outside of “me,” if I set myself as authority and author of her transformation, if I claim all knowledge, insight, and enlightenment for myself and render Eileen clay to be molded—passive, ill-formed, inert—then she remains mine to exploit, mine to change, while I remain, like God, changeless. The patriarchal hero narrative that defines me as a transformer prevents me from achieving any lasting transformation. Under the threat of the grade, a student submits to “redemption”—for sixteen weeks, until another class and another round of messianic pedagogy. The old single way of thinking co-opts my strategies and makes them serve the system of oppression (and privilege) that I wish to transform.
Spaces and gaps are not enough, as hooks reminds me. Alternative ways of being are required, and a biorhetoric—the swirl of double logics in which bodies and signs merge—provides a framework by means of which I can rethink transformation as an enactment of relationships, a performance of bodysigns. From the perspective of a biorhetoric, individuals exist only within the spirals of a particular network of logics joined at a particular moment. They live double: as a single loop but one that constitutes and is constituted by the intricate array of loops within which it is immanent. Transformative pedagogy and transformative writing must trace, not efface, the relevant pathways of logics swirling together. My individual identity exists lodged within the whorls comprising my body and in the convolutions of logics that destabilize the boundaries of my skin—ergo, Eileen is I. I cannot separate Eileen from me, nor can Eileen separate herself from me, without risking ethical disaster in which transformation is rendered coercion and change is absorbed back into the system. Bateson warns me that if I set myself outside of my environment I will see the world around me as “mindless and therefore not entitled to moral or ethical consideration” (Steps 468). In reducing my “survival unit” to that of the discrete individual, I make the world, my classrooms, and my students mine to exploit.

Rather than the hero’s quest, a biorhetoric suggests for me a different narrative—the alchemist’s fable—one that evokes a double way of being (see Keller). Hermetic wisdom is predicated on the double logics of a biorhetoric. Central to alchemy is the paradoxical notion that knowledge occurs via a union of subject and object: the identification of the self and the not self at the point of knowing yields the object to be known. Reality is innately contradictory to an alchemist, both real and metaphoric at the same time, a paradox that worked so powerfully for Galileo. Thus, the medieval alchemist could not engage in any transmutation of base metal into gold without simultaneously transmuting himself because self and base metal are the same. Material transformation and spiritual transformation must, therefore, be reciprocal processes. The alchemist can never stand outside of the process of radical change. Guided by the idea that the metaphorical is the logic of the doctrine of correspondences, alchemy recasts individual as androgyne, a hermaphroditic figure that joins male and female into a composite of opposites. To alter one element of the androgyne requires altering the entire being because the two are fused in the one (see Serres xv-xvii).

Galileo challenged Aristotle’s dictum that light bodies and heavy bodies fall at different rates by doubling the language of alchemy and the
language of science. Perhaps the patriarchal hero in composition can be re-sited within an alchemy of pedagogy. I do not wish to disregard or lose the value of the hero, of individual agency for myself or my students. What I wish to do is move my sense of reality from one that relies on an individual unit of power to one that privileges the play of relationships. In Daniell’s words, I want to shift from “the grand narrative where we get to be heroes of an economic revolution [to] a grander narrative that calls us to be laborers in the vineyard” (403). Situated here, in the vineyard, any transformation I effect will affect me as well. I can never be outside of that transformation; therefore, I must take responsibility for that transformation. I want, in Haraway’s words, to take “pleasure in the confusion of boundaries and responsibility for their construction” (Simians 150). Transmutation for an alchemist is, after all, a material as well as a spiritual event. Daniell suggests a similar correspondence as a goal for composition pedagogy. She reminds me that Freire’s critical pedagogy offers two articles of faith: one, the difference between imparting knowledge and sharing knowledge; two, the reminder that “we teach out of relationship” (405). “What is missing in most North American accounts of Freire’s methods is the intense I-thou relation he calls for between teacher and student,” Daniell argues (402). She explains that for Freire, education is an act of love, a view that grows out of his Catholicism as much as out of his Marxism, both of which provide a necessary “spiritual perspective on the teaching of literacy” (402). That intense I-thou relation is impossible for the hero, who is always separate from the humans the hero saves; but that I-thou relation is a constituent part of the alchemist’s identity. Within an alchemical pedagogy, the crucial focus is on the constitutive loops of double logics, on the relationships among bodysigns on multiple levels. Teacher and student are merely reciprocal coils within the spirals of double logics out of which the identity of the system as a whole shapes and is shaped.

As an alchemical rather than a heroic quest, transformation is not something that happens to an “other,” an “Eileen” who is defined as deficient in some way that “I” am not. Instead, transformation happens to an “us,” happens by means of a biorhetoric inherent in that system called “us.” Thus, if what I want to change (or understand) is Eileen’s thinking and behavior, then the unit of consideration is not Eileen; it is the androgyne Eileen-and-I-in-the-classroom, an androgyne embedded within loops of mutually constituting androgynes. The relevant pathways include Eileen’s visceral reactions, her intellectual aversion to the vision of feminist as the destroyer of family values, her habits of mind as well as
her habits of body. Those pathways include the classroom where Eileen sits in front of a computer in the midst of her classmates. It includes her social activism with an on-campus Catholic youth group and her family history of civic participation. And I am a part of those transacting pathways as well: my visceral and intellectual aversion to the vision of my daughters trapped in the role of keeper of the family flame, my visceral and intellectual realization that I enact that role on a daily basis. The androgyne encompasses my position of power within the classroom beyond my students' computers, in front of the master computer that can both control and interrupt theirs, and it also encompasses the limits of that power. Changing Eileen requires that I join in that change because I am a part of what constitutes Eileen, a part of the system that gives her meaning at that moment. My identity and meaning are also embodied, also implanted within the classroom, also complicit with its technology, its chemistry, its space, its time. “The most important task today,” Bateson warns, “is, perhaps, to learn to think in [this] new way” (Steps 468).

The difficulties of teaching and writing from and with a biorhetoric are legion. Bateson himself admits that such a position is difficult to maintain for one trained in the dualistic thinking privileged in the West (Steps 469). But perhaps those difficulties are necessary. Here I sit, at sea within the bodysigns that constitute me. As I type I, I struggle to remember that I do not write, just as I do not teach. Rather, the who-what-how is comprised of keyboard, room, and child stretched out on the floor whispering over her collection of Pokémon cards, intermittently demanding my attention. It is comprised of the white, heterosexual, middle-class privilege that supports this warm, well-lit room serviced by the Internet that connects me to a wider network for intellectual work. It is comprised of the privilege of a tenure-line academic position that encourages/ expects intellectual work, a position uneasily supported by the labor of part-time and contract faculty members. The androgyne—of which I am merely a single loop—writes. And I resist its chaos, for I fear the instability of a biorhetoric that shifts as the currents of double logics shift. But it is only by living within the midst of this chaos that I can begin to incorporate into this discursive loop “the reality that one cannot not know.

. . .The ragged edges of the Real, of Necessity, not being able to eat, not having shelter, not having health care, all this is something that one cannot not know” (C. West 277). For Eileen-and-me, the reality “one cannot not know” includes the children she babysits, the children who write letters with their babysitter to their absent parents, the children she desires, the
social inequities she actively seeks to address. It includes my daughters, whom I passionately hope will define themselves according to something more than the cult of “true womanhood” that confuses is logic with as-if logic.

My own account of the Eileen-and-I web, then, is fraught with necessary contradictions that destabilize meaning as it creates that meaning. As I write those words, I inevitably court the ambiguities and the pitfalls of mutually constitutive, mutually disruptive double lives because in writing Eileen, I write in the absence of Eileen. I do not write tangled in the intranet of my networked virtual classroom or even in the material classroom with Eileen murmuring in my ear, her fingers positioned over mine, guiding me as I simultaneously guide her. Instead, I configure and erode her presence here in my words twisted by her absence, by her invisible corporeality, and by her silent discursivity. Even if she had chosen to speak within this context, responded to my invitation and encouragement to do so, it would have been my invitation, my encouragement. The “she” therein evoked would have been shaped by this unfamiliar process, the uncertainty of her position within a system of meaning where she identifies herself as interloper, as one who lacks privilege. Metaphoric is logic breaks down, and I am left with the resounding “not” of language, the “not” of Eileen, the “not” of I. So I write, struggling not to reduce Eileen or my children to tropes. I write, struggling to configure an I that does not become another rhetorical flourish but, instead, a biorhetorical enactment. What is at stake in that struggle is a meaning that consciously attends to the discursive and the nondiscursive, a meaning that is never outside its own system, but always and inevitably a part of it.

Drawing on Robert Frost, Louise Smith argues that all metaphors break down, that that is the beauty of them. Within metaphors, we are required to leap between the words, girded in the as-if logic of classifications, and across the “is” that marks a linguistic structure as a metaphor rather than a “tamed down” simile. That “is” negates the as-if logic of its own identity, trapping us in a feedback loop between the “is” and the “is not.” Linguistic metaphors tie us to the contradictions of is and is not, and in so doing they break down. However, Smith points out that this breakdown is not a tragedy of failed meaning. Instead, it is an enigma that opens up to us the possibility of new meaning. The cracking of a linguistic metaphor is the site of its writability, the site of new insight. Thus, within the metaphoric writing of Eileen, daughters, and I, I break down—as well I should, for in writing I must shuttle between the contradictions in my
own system, the contradictions of bodysigns. Therein lies a biorhetoric that might rescue me, even as it endangers me, for it requires that I remain always poised uncertainly in the moment when corporeality and rhetoricality blur. It requires that I write to the paradox, in the paradox, for in writing Eileen, I also write myself, my daughters, and a world for us to live in. This is the knowledge that I cannot not know as teacher, as mother, as writer. Living within the swirl of bodysigns is the double living required if I wish to write and teach for transformation. Rich writes,

remember: the body's pain and the pain on the streets
are not the same but you can learn
from the edges that blur O you who love clear edges
more than anything watch the edges that blur ("No. 29" 9-12)

Here is the site of bodysigns, of a biorhetoric for change.6

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Notes

1. Because of the constraints of space, I present transformation as an unproblematic goal. However, transformation is always value-laden, never ethically neutral. What might be seen as a desirable move by one segment of the population (or the classroom) need not be seen as desirable by another. The boundary between transformation voluntarily pursued and transformation imposed is a narrow and vitally important line.

2. See Fleckenstein "Resistance" for an analysis of the androcentric bias in Bartholomae's approach to subjectivity.

3. For the past two decades, Lakoff and Johnson have argued in various published studies for the dominance of embodied metaphor in human communication. Lakoff asserts that the basic level categories serving as linchpins to human cognition are in part embodied metaphors and reflect fused rather than parsed cognition (51). We structure our reality through our images and motor interactions with our physiological and ecological worlds. The nature of our material existence pervades the nature of our semiotic existence. Similarly, Yaeger argues that because metaphors function differently than theory they exercise a formative and a transformative power on the identity of women as writers. To open up avenues of identity and expression, women need to alter the metaphors undergirding their conceptualizing of writing agency. In contrast, Battersby argues that Lakoff and Johnson's embodied philosophy, while laudable in theory, rests on the embodiment of men, not women. In support of this argument, she analyzes both Lakoff's and Johnson's focus on the body as "container," a metaphor more appropriate to Western men than to women.
Kristie S. Fleckenstein offers a material metaphysics in which the body of the reproducing woman is taken as the norm. Finally, Quinn challenges the premise that metaphors are embodied, arguing, instead, that they are cultural.

4. Studies in scientific creativity have emphasized the degree to which scientific advances are predicated not on “rational” thinking, but on dreams, visions, and images (see Feldman; C. West).

5. Spellmeyer, in a scathing review of a Left Margins: Cultural Studies and Composition Pedagogy, an anthology of essays on teaching composition as cultural studies, highlights the problem of separating teachers from the changes they hope to effect in their students and their classrooms. Spellmeyer claims that the authors in the anthology represent and share a major characteristic of the “strong” cultural studies position: “a scarcely veiled contempt for their own students, whom they represent as deeply ‘atomized’ and ‘mystified’” (“Out” 427). These scholar-teachers inhabit the moral and ethical high ground of their own critical enlightenment; their mission is to rescue their students from the morass of their uncritical thinking. In response, France, a co-editor of the anthology, contends that Spellmeyer “writes from a position largely incurious about its own cultural and historical formation, from what might be called an autobiographical position” (284).

6. I would like to thank Nancy Myers and Sue Hum for their patience, tolerance, and detailed responses to multiple drafts of this essay. Such collaboration highlights the richness and the intimacy of a biorhetoric.

Works Cited


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**Nominations Solicited**

The W. Ross Winterowd Award is given for the most outstanding scholarly book published in composition theory each year. The award was generously endowed by Professor Winterowd, who has presented it to each year’s recipient at the annual CCCC Convention since 1989. *JAC* readers are invited to nominate books for this award by sending a letter of nomination to Gary A. Olson; ATAC President; Department of English; University of South Florida; Tampa, FL 33620-5550.

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