While Aristotle honors masters of metaphor in the quote above, he is ambivalent about the figure of speech in *The Art of Rhetoric*, which may account for why metaphor for most of the next 2,000 years remains “detached from language” (Hawke 92). It is not until the 1960s – with the exception of Friedrich Nietzsche – that philosophers, psychologists, and linguists begin to argue fervently that metaphor plays a central role in thought, language, learning, and culture.

For this bibliography, I sought to connect metaphor theory to its application in the classroom with a specific metaphor, that of architecture and construction as a metaphor.

The bibliography is divided into three sections: history and theory of metaphors, pedagogy and classroom application of metaphors, and the metaphor of architecture and building. At first glance, the arrangement of the first section, History/Theory of Metaphors, might appear haphazard; however, it is purposeful. The first three entries are references and provide general knowledge on metaphor and its history. What follows is a chronological arrangement of rhetoricians and philosophers who have developed theories of metaphor since Aristotle. The first section is by no means a comprehensive review of metaphor theory. Considerably more has been written about metaphor’s use in poetry and literature, but my intention was to focus in this first section on the theory behind
metaphor, generally in the areas of thought, language and learning. While a handful of philosophers and theoreticians, such as Fogelin, have attempted to put metaphor back in its place (as window dressing), philosophers and linguists like Black, Lakoff, Johnson and Ritchie have advanced metaphor’s position as an essential building block in the foundation of language.

The two sections that follow, titled Pedagogy/Classroom Application and Architecture/Building/Construction Metaphors, return to alpha order. The Pedagogy/Classroom Application section covers a range of texts that discuss metaphors as applied to teaching. Surprisingly few books exist explaining how to use metaphor in the classroom or offer practical exercises for using metaphor in teaching; most of these books have only come about in the last 15 years. The final section, Architecture/Building/Construction Metaphors, focuses on a popular and pervasive metaphor, showing the breadth of application for metaphor across disciplines. For example, Kojin Karatani’s Architecture as Metaphor, a dense and wide-ranging book, situates the metaphor of architecture not only in language and philosophical thought, but also teaching and selling. Economist and construction professor Jan Bröchner identifies hundreds of construction metaphors in Aristotle’s works, highlighting that while Aristotle cautioned against the risk of using metaphor, he did not follow his own advice.

Compiling this bibliography would not have been as fruitful without the guidance and wisdom of several key people. Dr. Melody Bowdon encouraged me to be concise in my entries and also provided suggestions for reaching out to alternative resources, including members of the WPA-L list serv who were gracious in their assistance. Dr. Kimberly Murray suggested I seek out Kristie Fleckenstein’s Embodied Literacies, a beautifully
written book. John Venecek, the University of Central Florida’s research librarian, encouraged me to review Gaston Bachelard’s *Poetics of Space*, another gem that has enriched my knowledge of the meaning of space. I am also indebted to UCF instructor Lindee Owen for allowing me to watch her put metaphor into practice in the college composition classroom.

**History/Theory of Metaphor**


This article provides a brief overview of metaphor theories. The article’s author, University of Oregon philosophy professor Johnson, also is co-author of *Metaphors We Live By*, a key text in metaphor theory. Johnson describes metaphor as “one of those rare areas in which we can actually identify a monolithic conception that has dominated philosophy and literary theory for almost two thousand years” (208). Most metaphor theories remained a variation on Aristotle’s view of metaphor until I.A. Richard’s argument that metaphor is an essential aspect of human thought (209). Johnson also traces the philosophical backlash against metaphor, including empiricists like John Locke, who argued that it was simply for “‘for nothing else but to intimate wrong ideas, move the passions, and thereby mislead the judgment . . .’” (209). The article, however, does not capture recent development in metaphor theory including those of L. David Ritchie’s Context-Limited Simulators Theory.

The introduction to the *Metaphors Dictionary* provides a basic overview of different types of metaphors: mixed metaphors, extended metaphors, similes, personification, allusion, metonymy and antonomasia, which is when the name of person with certain characteristics is used as a substitute for a literal name (x). The dictionary contains 6,500 metaphors and also includes images of visual metaphors. Of particular note is the section of metaphors on “writing advice” and “writing/writers” (462-463).


Shibles’ bibliography on metaphor is comprehensive, covering theories of metaphor in philosophy of language, psychology and literature. The product of several years’ research, the book covers major articles, books, dissertations and more from around the world (xiii). Shibles’ introduction provides a useful overview of metaphor across the spectrum, particularly in poetry. However, the book is less useful as it was published in the early 1970s and, thus, misses major advances later in metaphor theory from social and cognitive perspectives.


Hawkes’ *Metaphor* presents a brief survey of the history of metaphor from Aristotle to Quintilian to Samuel Coleridge to I.A. Richards. In the book, only 100 pages, Hawkes sets out to describe two views of metaphor – a *classical* view of metaphor in which metaphor is “detachable from language” and a *Romantic* view of the trope in which it is “inseparable from language” (92). In the classical view of metaphor, it simply “adds charm, and distinction, to clarity” (9). In other words, metaphor is artifice, and as poetic language is separate from ordinary language. In the Romantic view of metaphor,
“We live in a world of metaphors of the world, out of which we construct myths” (Hawkes 55). Hawkes outlines the Romantic view of metaphor by discussing Coleridge’s efforts to place “metaphor at the centre of human concern” (56). Hawkes draws a sharp distinction between the classical and Romantic views of metaphor. Metaphor is a socially constructed aspect of language that is integral to human thought for the Romantics, while the classical view reduces metaphor to “one of a group of tropes” (14). Hawkes not only draws from the field of rhetoric and poetry to explicate these two views of metaphor, but also looks to philosophy, anthropology, science, and linguistics, in particular, to highlight how metaphor is embedded in language and learning (70-80). Because Hawkes book was written in the early 1970s, it does not capture trends in activity theory that arise in the early 1990s from cognitive and social construction theories of learning that expand on metaphor’s importance to the theory of transfer of learning. Regardless, the book is a useful overview of the history of metaphor theory.


Aristotle describes his view of the appropriate use of metaphor and simile in rhetoric. Metaphors and similes are best suited to poetry and should only be used in “small doses” outside of that realm, according to Aristotle (224). He notes the four subtypes of metaphor but focuses on analogy as the “most celebrated” and provides a sampling of these figures of speech (236). The Greek rhetorician’s discussion of metaphors dominated Western philosophical thought until the 1970s with, perhaps, the lone exception of Friedrich Nietzsche, according to *The Encyclopedia of Aesthetics* (Johnson 208).
In his *Poetics*, Aristotle defines metaphor as “the application of a noun which properly applies to something else” (34). He divides metaphors into four subcategories: from genus to species, from species to genus, species to species, and by analogy (34). While Aristotle cautions in *The Art of Rhetoric* against overuse of metaphor as it can lead to absurd phrases, he writes in *Poetics* that, “the most important thing is to be good at using metaphor. This is the one thing that cannot be learnt from someone else, and is a sign of natural talent; for the successful use of metaphors is a matter of perceiving similarities” (37). Though Aristotle elevated metaphor to king of the figures, Aristotle’s successors, such as Cicero, further solidified the metaphor as an “optional rhetorical or stylistic device” (Johnson 208-209).


In this classic essay, Nietzsche writes about how metaphor influences truth and the perception of truth in thought and language. Nietzsche argues that truth is a “mobile army of metaphors” (5). Pure truth, he writes, is unattainable as it is built by metaphor upon metaphor (4). He argues that, “‘Thing-in-itself’ (it is just this which would be the pure ineffective truth) is also quite incomprehensible to the creator of language and not worth making any great endeavour to obtain” (4). Nietzsche’s essay is among the first to argue that metaphor is more than a simple comparison or tool in the Aristotelian sense. Metaphor is a “fundamental impulse of man” and is essential to the perception of ideas (Nietzsche 10).

Cornell University professor of philosophy Max Black imbues his discussion of metaphor in philosophy with humor. He writes that in philosophy: “Addiction to metaphor is held to be illicit [. . .] Yet the nature of the offense is unclear. [. . .] [Literary critics], at least, do not accept the commandment, ‘Thou shalt not commit metaphor,’ or assume that metaphor is incompatible with serious thought” (25). Black is noted by metaphor historians as one of the first to argue for an interaction theory of metaphors, that is, a “metaphor is a cross-domain interaction between the ‘systems of associated commonplaces’ that define each of the domains” (Johnson 210). Black’s theory is heavily influenced by I.A. Richards; however, it is Black who is credited with inspiring a revival of philosophical inquiry into metaphor (Johnson 209).


Divided into eight study areas, *The Rule of Metaphor* was developed from Ricouer’s lectures at the University of Toronto (3). His discussion of metaphor theory is an extension of Max Black’s interaction theory of metaphor. Ricouer defines metaphor as constituting “a displacement and an extension of the meaning of words; its explanation is grounded in a theory of substitution” (3). Ricouer describes metaphor in the context of the decline of rhetoric from the mid-nineteenth century on, which, in his view, occurred as a result of the field separating itself from two major parts (argument and composition) by emphasizing style (45). He traces the decline of rhetoric to the reduction of metaphor
to a “mere ornament” (45). Ultimately, Ricouer’s purpose is to place metaphor firmly in the discourse of philosophy.


Davidson argues that metaphors should be read literally but qualifies this statement by saying his view should not be confused with the traditionalist sense of metaphor. Unlike the traditionalist/comparitivist view of metaphor, Davidson states that metaphor has “cognitive content” and is valuable for serious inquiry in philosophy, law, literature and science (32-33). For Davidson, a University of Chicago philosophy professor, “all meaning is literal” (Johnson 210). In this article, Davidson also discusses the theory of elliptical simile but distances his argument from this theory as he does from traditionalists saying that the theory is too “simplistic” arguing that, “if metaphors are elliptical similes, they say explicitly what similes say for ellipsis is a form of abbreviation, not paraphrase” (39).


In their groundbreaking book, Lakoff and Johnson assert that metaphors are “pervasive in everyday life and thought” (ix). The authors divide metaphors into three major types: structural (“where one metaphor is structured in terms of another”), ontological (those metaphors based on our experiences with “physical objects [especially our own bodies]) and orientational (those that use spatial descriptions such as “up-down” and “in-out”) (14, 25). Expanding on the arguments set forth by Nietzsche in his essay, “On Truth and Falsity in an Extramoral Sense,” Lakoff and Johnson build on the their
definitions and explanations of different types of metaphors and how they function in
daily communications to argue that, “Truth is always relative to understanding” (226-27)
and that no such thing as “absolute truth” exists (159). Yale-educated philosopher Robert
Fogelin provides a counterargument to Lakoff and Johnson in his 1988 book *Figuratively
Speaking*.


As his title suggests, MacCormac explains metaphor as a cognitive process and
describes his theory through the metaphor of a “computational process” (9). MacCormac
frames a metatheory of metaphor that operates on three levels – culture, semantics and
syntax, and cognition – serves as a “mediating device among mind, brain, and the
external world” (21). However, MacCormac differs from other metaphor theorists in that
he believes claims there are clear distinctions between ordinary language and
metaphorical language (78). He argues against Lakoff and Johnson’s theory of conceptual
metaphors and charges that their attempt to differentiate between the nonmetaphorical
and metaphorical is circular and, thus, incorrect (69). MacCormac asserts that all
metaphors are true to an extent and that “truth value arises from the new possibilities and
new insights that metaphors provide” (225).

Fogelin, Robert J. *Figuratively Speaking*. New Haven and London: Yale University

Fogelin, a Yale University-educated philosopher, defends the comparitivist view
of metaphor, arguing that Aristotle’s view of metaphor has been misinterpreted (26).
Published in the late 1980s, *Figuratively Speaking* is a response to interactional metaphor
theorists, such as Max Black, who argue that both the primary and secondary subjects of
the metaphor interact to affect the metaphor’s meaning. The 120-page book focuses only
a handful of figures of speech – those “figures of thought,” such as irony, as opposed to
“figures of sound,” such as anaphora (25). To Fogelin, metaphors are simply “elliptical
similes” (25). Fogelin desconstructs criticisms against the comparativist view of
metaphor in an attempt to argue that there is no reason to “abandon the traditional view”
(77). He dismisses Lakoff and Johnson as misguided; however, the prominence of their
theories suggests Fogelin’s effort to restore the traditional comparativist metaphor theory
to prominence was unsuccessful.


Ritchie, a professor of communications at Portland State University, attempts to
synthesize existing theories of metaphors into a new and more complete theory of
metaphor called Context-Limited Simulators Theory (1-13, 125). Ritchie bases his
argument on recent findings in cognitive psychology. Rather than solely being social
constructed, Ritchie notes that there is “evidence that some fundamental metaphorical
connections may be innate, part of the way the brain itself is organized” (4). He devotes a
chapter to each of the existing theories of metaphor including attributional and relations
models, conceptual metaphor theory, conceptual blending theory, and relevance theory in
an effort to show their circularity. Ritchie argues that conceptual fields in metaphor are
interconnected and provides a comparison of the metaphors “argument is war” and
“argument is building” in that conceptual fields of the metaphor are not oppositional,
rather the “root metaphor is identical” (151-152). He writes:
Even though it requires destructive activity and frequently results in near chaos, war is conducted or at least planned as an orderly process. The competent general prepares a careful ‘blueprint’ for a battle and ‘follows it step-by-step,’ hoping to ‘build on his successes.’ (152)

While Ritchie’s argument is primarily based in cognitive linguistic theory, he also affirms the role of context and its impact on metaphor and meaning.

**Pedagogy/Classroom Application**


Playing off the title of Lakoff and Johnson’s *Metaphors We Live By*, Boehm presents the findings of a study involving 27 students taking the Advanced Placement English Literature and Composition exam. Boehm analyzed student essays for metaphor recognition, metaphor explanation, and metaphor production in evaluating problem-solving and critical thinking skills(iii). He presents a quantitative account of student responses to prompts on different parts of the exam, including poetry, drama, and prose fiction. The study finds that among this small sample metaphor production provided the highest frequency count while metaphor recognition was the lowest scoring frequency count among student responses. He also provides some analysis of gender differences in recognizing metaphor. For example, females outproduced males in metaphor recognition by 24 percent overall (113).


In *Embodied Literacies*, Florida State University professor Fleckenstein claims that images and words are “melded in meaning” to form her central concept,
“imageword” (4). Fleckenstein intersperses examples and experiences from the classroom and her home interactions with her daughter to build her literary theory of discourse. Her intention is to develop a “poetics of meaning” and, in turn, a “poetics of teaching” for readers (7). Fleckenstein references Gaston Bachelard’s Poetics of Space and how the self is tied closely with concepts of spaces. Fleckenstein argues that imageword is able to dissolve “the boundaries of place [. . .] through the external imagery of place, the geography and architecture of public places” (63). In addition, she quotes sociologist Richard Sennett as to how “rhetoric and architecture are inextricable” (63). She is concerned with explain how imageword can help students bridge the geographies of home and classroom. Fleckenstein’s strength is in her ability to merge personal narrative from home and the classroom with theory and pedagogical direction. The book received the 2005 Conference on College Composition and Communication Outstanding Book of the Year Award.


Aimed at language arts teachers, the book describes theories of metaphor: comparative theory, interactional theory, relevance theory, and cognitive theory. Comparative theory holds that “metaphor is a comparison between two terms that is made in order to explore the nature of one” (1). Interactional theory “sees metaphor as a being about two subjects: ‘a primary’ and a ‘secondary’ one. The adoption of the idea of two subjects raises the key point that both parts of the metaphor contribute to the kind of meaning that is created” (4). Holme draws on philosopher H.P. Grice to explain relevance theory. He writes that, “For Grice, the principles that govern our use of language could be
formulated. He therefore deduced the co-operative maxims that allow meaningful
communication between individuals. Two central co-operative maxims are *truthfulness*
and *relevance* (7-8). Holme, whose main research interest is in the application of
cognitive linguistics to language learning, dedicates the bulk of his introduction to the
study of metaphor explaining the cognitive view of metaphor or the “image-schematic
view of metaphor processing.” In particular, Holme argues toward a “cognitive blend
theory” mixing language theory and learning theory. Holme, an associate professor of
English at the Hong Kong Institute of Education, describes a set of principles for the
cognitive blend theory. These principles include, “1.) The use of implicit and explicit
knowledge in combination” and “3.) learners make use of their [first language] in order to
acquire [the second language]. A knowledge of [a first language] can impede the mastery
of the [second language]” (209). Holme emphasizes the cognitive view “before social
relevance” and a “participatory” model of pedagogy over a “facilitative” model (xiv).

Holme provides numerous examples of how metaphor, analogy and allegory can
be used in teaching abstract concepts, first languages, and second languages. *Mind,
Metaphor and Language Teaching* provides educators with thorough theoretical
background, useful pedagogical examples for the classroom, and a persuasive argument
for a cognitive theory of metaphor.

Nilsen, Don L. F. “Clichés, Trite Sayings, Dead Metaphors and Stale Figures of
Speech in Composition Instruction.” *College Composition and

Nilsen suggests college composition teachers not be so quick in criticizing
students’ uses of “dead metaphors,” trite sayings or clichés (278). In fact, he argues dead
metaphors often serve a valid purpose in students gaining understanding of unfamiliar concepts as easily with dead metaphors as with live ones (279-280). In addition to peppering his article with examples of cliché metaphors, he inserts an anecdote about the introduction of the automobile to Apaches. The story serves to demonstrate how bodily functions and organs were used to translate the parts of the automobile to the Apache language, which had no word for fender; instead, Apaches used the word “chin” for the front bumper (280).


In their discussion of transfer of learning, Perkins and Salomon note that one condition of transfer includes metaphor. They write, “Transfer is facilitated when new material is studied in light of previously learned material that serves as an analogy or metaphor. [. . .] For example, students may initially understand the idea of an atom better by thinking of it as a small solar system, or how the heart works by thinking of it as a pump. Of course, most such analogies are limited and need elaboration and qualification” (par. 20). This article is important to educators as it describes a crucial concept in learning theory. Perkins, a Harvard University professor of education, and Salomon, a Stanford University-trained professor of education, note that research shows that transfer is hard to come by in education. Educators who learn and apply the pedagogical techniques of “hugging” and “bridging” together, Perkins and Salomon imply, may improve their students’ ability to transfer abstract concepts and later apply these concepts in practical situations.

Pugh, Sharon L., Jean Wolph Hicks, and Marcia Davis. *Metaphorical Ways of*

Written for primary and secondary school teachers, the book offers a “theoretical basis for using metaphor as a way of knowing” (vii). The authors argue that humans are more “poet than information processor” and metaphors are key concepts for learning (3). Pugh et al. explore metaphorical concepts and classroom exercises through the metaphor of a map. The book provides instructors with a variety of classroom exercises. For example, one activity shows teachers how to teach students to use metaphors in persuasive writing. These exercises explore metaphor through a variety of means, including sensory perceptions, cultural perceptions, and abstract concepts, such as time and change.


Russell’s article explains activity theory as it relates to general writing skills instructions – those often found in first-year composition courses. In describing activity theory in this context, he uses the metaphor of a ball game to illustrate that activity systems in activity theory are “inherently social” (55). He writes:

Ways of using a ball (ball handling, if you will) are ‘generalizable’ to the extent that in two or more games the tool (ball) is used in similar ways for similar objects. A good croquet player might learn to putt or a good tennis player learn squash. However, there is no autonomous, generalizable skill called ball using or ball handling that can be learned and then applied to ball games. (57)
Russell, an Iowa State University professor of rhetoric, uses this extended metaphor to highlight that few, if any, generalizable skills exist in writing and first-year writing courses. Russell’s article, read with Perkins and Salomon’s article on transfer of learning, highlights the value of metaphor for making connections between the few generalizable writing skills across the curriculum.


Geared toward primary and secondary school educators across the disciplines, *Metaphors & Analogies* provides practical classroom exercises and side-by-side comparisons of students explaining abstract concepts such as photosynthesis with and without using metaphor (20-21). He also includes many classroom examples of metaphors in teaching from instructors. Wormeli, who has authored several books on secondary education, provides educators and students with scales and checklists to evaluate the effectiveness of metaphors for learning abstract concepts. Within this evaluation of metaphors, Wormeli cautions educators about the ethnic implications of choosing the wrong metaphor (24). Furthermore, he suggests instructors use metaphors for “formative assessments” or, in other words, test students on their ability to explain a concept in figurative language (26-31). While his book is primarily focused on providing examples and practical tools for the classroom, he does discuss Lakoff and Johnson’s theory of conceptual metaphor and touch on Nietzsche’s contribution to metaphor theory when explaining how metaphors can fail or “break down” (121). Wormeli’s book is one of the few available texts with actual classroom examples.

*Architecture/Construction/Building Metaphors*

The French philosopher explores the phenomenology (study of structures in consciousness) of space. In his book, he “reads” the rooms of several authors to analyze the use of place and space in writing, including Victor Hugo, Henry David Thoreau and Paul Valery. Bachelard writes that, “All great, simple images reveal a psychic state. The house, even more than the landscape is a ‘psychic state,’ and even when reproduced as it appears from the outside, it bespeaks intimacy” (72). He differentiates between metaphor and image and downplays the importance of metaphor as “fabricated image” (75).

Bachelard not only evaluates the symbol of house, but also delves into the implications of other spaces such as nests, corners and chests.


Bereiter and Scardamalia use the metaphor of construction/building in introducing their article on competence in writing skills. They describe writing an essay as “probably the most complex constructive act that most human beings are every expected to perform” (20). Few people are expected to design or build buildings, but “school and society seem to expect that just about everyone should be able to produce a coherent four-thousand-word essay on a topic,” which can be as complex as architecture (20). The authors, however, abandon the construction metaphor and, instead, use the metaphor of ‘learning as a journey’ to highlight problems in learning.

Bröchner identifies hundreds of metaphorical references to construction and builders in 16 of Aristotle’s works. He surveys a handful of construction themes used by Aristotle in his writing, including construction knowledge, learning construction, construction managers, construction processes, purpose-driven construction, and demolition. Bröchner concludes that Aristotle used the construction metaphor when concepts were particularly difficult and abstract (522). He asserts that Aristotle chose construction and building as a metaphor because “in his time, [it was] the only easily observable type of production where there was a clear difference between managers and works (522).


Karatani’s *Architecture as Metaphor* surveys the use of architecture as a metaphor throughout philosophical thought and language theory, including structuralism, post-structuralism, deconstruction and formalism theories. Karatani, a member of the Yale School of deconstructionists and highly regarded Japanese philosopher and literary critic, begins his book by discussing how Plato, Descartes, Hegel and Kierkegaard, among others, ground their theories in architectural metaphors. Karatani writes, “Among Greeks, architecture was considered not merely a skill of craftsmen but an art practiced by those who possess a principal knowledge and mastery of all technologies, and who therefore plan projects and lead other craftsmen” (5-6). The metaphor of the city planning also
applies to Karatani’s discussion of the use of structures and architecture as a metaphor for thought construction. *Architecture as Metaphor* is an amalgamation of the metaphor in economics, linguistics, philosophy and teaching. Karantani also spends considerable time referencing Wittgenstein who left philosophy for a time to study and work as an architect. In quoting Wittgenstein and his influence on mathematics, Karatani refers to architecture as a form of communication, “and this communication is conditioned to take place without common rules because it takes place with the other, who does not follow a commensurable set of rules” (127). In the third and final section of the book, Karatani discusses rules of grammar in language and argues that rules are, in fact, regulations of grammar. A contradiction within formalism that Karatani explores is the “undecidability” of language or “self-referential” nature of communication (74-75). In discussing this linguistic concept, Karatani manages to deftly weave relevant examples from both pop culture and abnormal psychology. While Karatani’s book contains many gems of information about formalist and structuralist theories, he digresses in his final section and making the weakest link to these theories through a discussion of Marxist economics.


<http://cogsci.berkeley.edu/lakoff/>.

University of California-Berkeley linguistics professor George Lakoff created the Conceptual Metaphor Home Page. The site indexes hundreds of conceptual metaphors, such as “Theories are constructed objects.” Within this section, Lakoff lists many metaphors that use construction as a metaphor; for example, he lists, “They assembled a theory,” “His early results resembled the building blocks of his theory,” and “they
constructed this theory from the ground up.” The purpose of the page is to allow researchers to trace the links between metaphors and their original “source” ideas.


Though geared toward computer programmers, this article describes the metaphor of construction as it relates to planning and architecture in software design and creation. The authors visit the Lean Construction Institute, which aims to follow Toyota’s manufacturing model of efficiency. In their visit, they explain that construction involves considerable variability in tasks and task performers – a construction project can involve more than 160 “handoffs” (n. pag.). The article highlights the uselessness of master schedules to construction supervisors. Instead they rely on “short cycle, closed-loop planning.” According to the construction managers interviewed, they do not view construction as a cohesive, nonvariable process. The article may be useful to composition instructors in evaluating the construction metaphor in writing and its limits for the writing process and rigid adherence to outlines.


Ritchie and Schell discuss the role of humor and playfulness of figurative language in a conversation among scientists in their article. They hone in on the metaphor of the ivory tower and highlight how scientists extend and blend this metaphor from ivory
tower to support to unstable foundation sequence (100). They use the ivory tower metaphor to assert that core metaphors allow speakers to activate other metaphors to, “perhaps, incorporate them into their identities as scientists” (102). Though grounded in a serious discussion of roles of scientists, Ritchie and Schell argue that there is a metaphorical basis to humor. Figurative language advances the purpose of the conversations and affirms social status within a group (Ritchie and Schell103).