

A Bridge between Communication and Cognitive Theories

W. Clifton Adams

From www.wca-refracted.com

© 2013

A paper presented at the 2013 convention of the
Central States Communication Association
Kansas City, Missouri

Abstract

While Korzybski(1958) used a multi-ordinal construct for *abstraction* to build his *Semantic Differential*, Hayakawa's (1949) use of the concept in his *ladders of abstraction* was single dimensional and positive. Hayakawa defined *abstraction* in terms of language's inclusiveness and his ladders ascended from more specific to more general. This specific to general variable is reflected in both cognitive theory (Rokeach, 1960, 1973 & 1986) and the Adams (2009, 2012) models of reasoning. This paper discusses the Adams models and uses them in placing the three dimensions of meaning within the Ajzen & Fishbein (1980) model to produce a comprehensive paradigm that reflects thinking and research of both communication and cognitive theorists.

[Key Words: Hayakawa, dimensions of meaning, behavioral intention, appeals, *encapsulators*]

The writer thanks Steve Beebe, Sam Cox, James Floyd, Bruce Gronbeck, David Hitchcock, Kendall Phillips and Hans Van Eemeren for discussing the concepts of abstraction, argumentation and reasoning with him and the three blind reviewers. Hopefully, he has been able to productively use their wise counsel.

Korzybski (1958) developed the *Semantic Differential* with its *levels of abstraction*. The levels reflect the nature of the distortions in a person's perception of reality. The higher the level, the more separated is the person's thought from the reality on which the thought is supposedly based. In Korzybski's system, then, *abstraction* is a variable to be understood so as to reduce its negative effects

Korzybski (1958) recognized that at each level of his differential, the word, *abstraction*, has a different meaning. He stated, "The term 'abstracting' is a multiordinal term, and hence has different meanings, depending on the order of abstractions" (p. 179).

Hayakawa was a student of Korzybski and was influenced by him. Still, Hayakawa (1942) credited many individuals for their influence on his thinking. Hayakawa (1949), then, defined *abstraction* more consistently in his *abstraction ladders*. Hayakawa defined *abstraction* in terms of inclusiveness. The more abstract the concept, the more of reality it denotes.

As used in Hayakawa's (1949) system, *abstraction* is a positive concept that needs to be understood so as to it apply it correctly. He said, "The interesting writer, the informative speaker, the accurate thinker, and well-adjusted individual, operate on all levels of the abstraction ladder, moving quickly and gracefully and in orderly fashion from higher to lower, from lower to higher ..." (p. 180).

Hayakawa (1949) developed the concept of *abstraction* in linking language to action. In his explication, people symbolize reality in an ascending order from more specific to more general. Cognitive theorists, most notably Milton Rokeach (1960, 1973 & 1986), arranged beliefs in an ascending order from more general values to more

specific attitudes. This theme of broad to particular was reflected within reasoning theory by defining deduction as moving from general to specific (see Baker, 1905; Foster, 1917; Crocker, 1944; Angell, 1963; McBurney, 1964; Eemeren, Grootendorst & Henkemans, 1996).

Adams and Cox (2008) argued that this movement between more general and more specific elements within language, cognition and reasoning was consistent with Brockreide and Ehninger's (1960) application of Toulmin's (1958) model of arguments (1958) to "rhetoric proofs" mirroring Aristotle's (Cooper, 1960) *logos*, *pathos* and *ethos* (see Figure 1).

Figure 1

Brockreide & Ehninger's Linkage of Types of Warrants to Aristotle's Proofs

Substantive	-----	Logos
Authoritative	-----	Ethos
Motivational	-----	Pathos

Adams and Cox (2008) construed Toulmin (1958) as a reflection of deductive reasoning. However, Eemeren, Grootendorst and Henkemans (1996) had already undercut this construction by the claim that there is no difference in *warrant* and *data*. While Hitchcock, D. (2003) disputed this claim, he also contended, in discussion with Adams (2011b), that the difference in *warrant* and *data* was not uniquely based on the level of abstraction. Gronbeck, in correspondence with Adams (2011a), confirmed Hitchcock's contention. It seemed likely that the conclusions of both Hitchcock and Gronbeck were colored by Korzybski's (1958) negative connotation for *abstraction*. To

avoid this uncertainty in the interpretation of Toulmin, Adams (2009, 2012) constructed his *bridge models of reasoning* and defined the terms specifically to reflect Hayakawa's (1949) system.

As with Adams and Cox (2008), but substituting the Adams models for Toulmin's, this paper advances Brockreide and Ehninger (1960) particularly in terms of *pathos*. In so doing, it bridges their fundamental work in communication to traditional cognitive theory reflected in Rokeach (1960, 1973 & 1986), and in Fishbein and Ajzen (Fishbein, 1967; Fishbein and Ajzen, 1975; and Ajzen and Fishbein 1980). The resulting paradigm, then, provides a more comprehensive view that illustrates the processing of meaning.

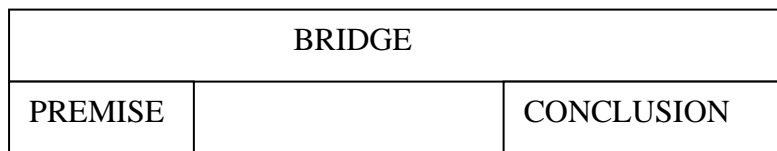
To make this view clearly consistent with Hayakawa (1949) and Rokeach (1960, 1973; 1986), the paper first explicates the Adams (2009) models of reasoning. Next, it posits an association of (1) *logos* and (2) *ethos* with *the* modern dimensions of meaning, (1) *reality* (or content) and (2) *relationship* (see for example Bateson, 1972, Adams, 1973; Ekman & Friesen, 1975, Mehrabian, 1981, Devito, 1988) and, similar to Cronkhrite (1969) with his motivational concept, suggests a third dimension, *goal*. While this third dimension corresponds in the triad with *pathos*, it does not encompass all emotions; instead emotional elements reside in all three dimensions. This view, then, mirrors such authors as Allport (1961) and Minnick (1968) who identify the breath of emotions' impacts beyond emotional appeals (see also Bettinghaus & Cody 1987; Cooper, 1992).

Adams Models of Reasoning

In the Adams models (2009), the *bridge* is the most abstract of three essential parts and serves to connect (by encompassing) the other two parts (see Figure 2). The *bridge* corresponds to the major premise of a deductive syllogism. At the simplest

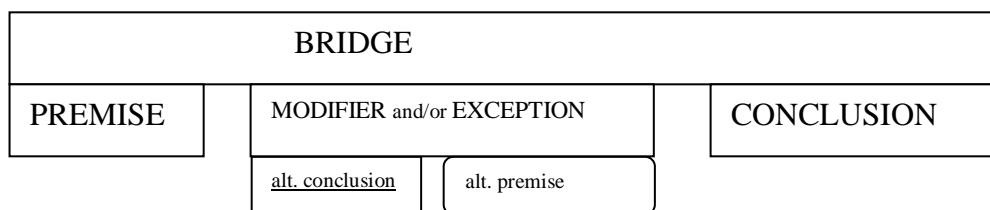
representation of reasoning, a person uses the more abstract *bridge* to move, cognitively, from what she or he believes to be true, the *premise*, to accept a *conclusion*. A germane but simple example: the person may think, “Ice cream gives me comfort (*bridge*). I need comfort (premise). I need some ice cream (conclusion).”

Figure 2
The Basic Adams Bridge Model



In a slightly more complex model, limitations to the general link provided by the *bridge* are permitted with *modifier* and *exception* (see Figure 3). A *modifier* is a term (e.g., some) or a phrase (e. g., most of the time) which allows the recognition that the general principle of the *bridge* may not always be true. The *exception* actually states a condition under which the *bridge* would not apply. The person in the example may think: “Ice cream usually (*modifier*) gives me comfort unless it’s freezing outside (*reservation*). I need comfort. I want some ice cream.”

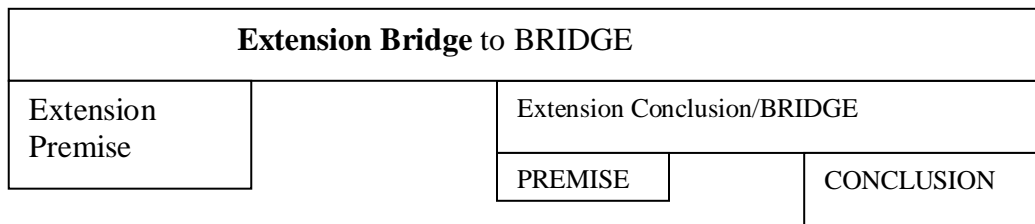
Figure 3
The Adams Model with an Extension to the Primary Bridge



Of course, in everyday life, the simplest representation of reasoning is seldom reflected in our thinking or discussions. Thoughts are more often truncated clusters that

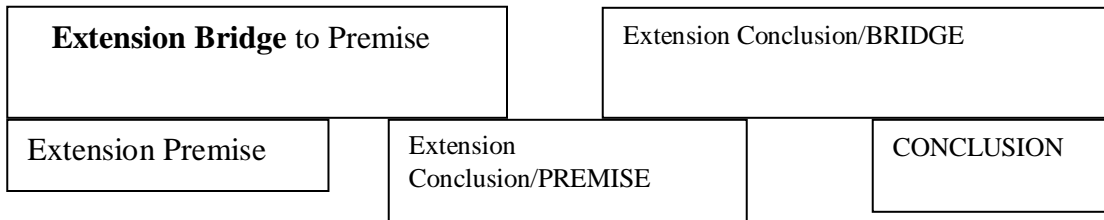
can be modeled using *extension bridges*. As illustrated in Figure 4, one extension would reflect situations where a general principle (the **extension bridge**) would supply a connection between a belief that a person accepts as true (the **extension premise**) and a belief about which the person is less certain (the **extension conclusion**). This over-arching *extension bridge* would then serve to support the basic reasoning found in the final *bridge, premise* and *conclusion*. In the above example, the person may think, “Ice cream has provided me with comfort in the past (*extension premise*). I think I’ll have some ice cream now (*conclusion*).” The person accepts without thinking the *extension bridge* (what’s worked in the past will work now) as well as the *bridge* and *premise* from the simpler example.

Figure 4
The Adams Model with an Extension to the Primary Bridge



Similarly, an **Extension Bridge** may reinforce a *premise* about which a person is uncertain (see Figure 5). Here the more abstract principle (the **Extension Bridge**) serves to increase the acceptance of the *premise* of the final part of the reasoning. In the continuing example, the person could reinforce the original *premise*, “I need comfort,” perhaps with “I feel a little depressed.”

Figure 5
The Adams Model with an Extension to the Premise



Proofs Translated to Dimensions of Meaning

Allport (1961) in particular has demonstrated how emotion permeates human interaction, necessitating *pathos* as a broader concept than *motivational warrants* ascribed to it by Brockreide and Ehninger's (1960). This thesis is advanced by considering three (primary) dimensions of the symbolic process that operate both within speech and cognitions (Adams & Cox, 2008).

The **Reality** dimension: The denotative meanings in this area reference objects and events in the world that exists independent of the individual giving meaning to the symbols. This dimension includes all the broad areas of science, art, history, geography, religion, etc. Although we think of these referents as being objective, they and the symbols that represent them do evoke attitudes within individuals. These attitudes contain all three components: cognitive, affective and behavioral (Rosenberg & Hovland, 1960). Thus, the symbols evoking the reality dimension do have connotations and do evoke varying degrees of emotions. This *reality dimension* has been discussed often in the past using terms such as "substantive treatment," "content dimension," and "object concept." However, the term *reality* may avoid the suggestion that the other dimensions don't have substance or content.

The **Social** dimension: The denotative meanings within this dimension reference the relationships of other people to the person assigning meaning to these symbols. This dimension includes associations connected with business, family, fellowship, romance and the like. Stress in this dimension has typically been on its connotative aspects. As such, variables such as power, trust, and attractiveness have been studied. In symbolic form, its meaning is predominately found in nonverbal components (see for example Bateson, 1972; Adams, 1973; Ekman & Friesen, 1975; Mehrabian, 1981; Devito, 1988) This dimension includes all those areas previously covered by “credibility,” as expanded by Trenholm (1989).

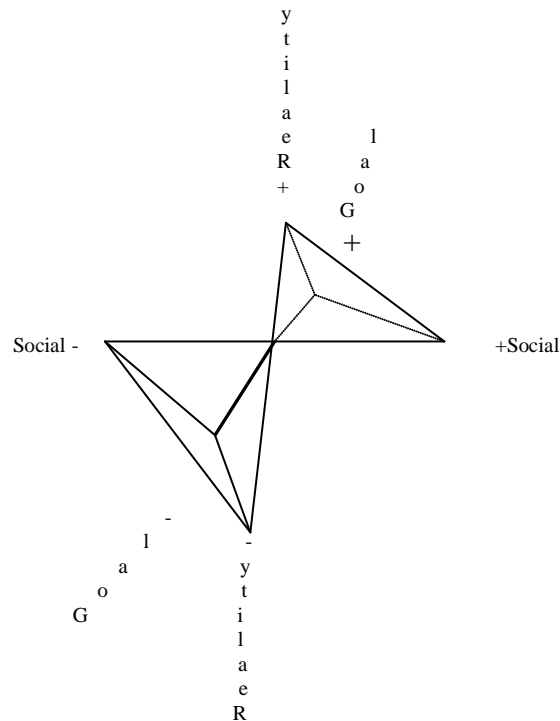
The **Goal** dimension: The meanings within this dimension are all internal. They relate to all aspects of our lives. The denotative meanings are in our hopes, aspirations and dreams. As discussed above, this dimension relates to motives that provide the drives and the emotional empowerment that supply the energy for the potential obtainment of our goals. This dimension is most associated with that previously covered by “motivational appeal,” but focuses on meanings within cognitions and symbols as opposed to appeals because appeals use two dimensions (Adams & Cox, 2008). Cronkhite’s (1969) *motivational concepts* clearly spoke to this dimension.

These three dimensions are interactive. A major proportion of empirical research into the nature of attitudes has investigated these interrelationships. Typically, measures within the *reality dimension* served as the dependent variable to gauge the impact of either credibility or motivation. McGuire (1960), with his “wishful thinking” illustrated the impact of motivation on logic. Cronkhite (1969) simply overlaid *motivational concept* on Toulmin’s system. Most relevant, perhaps, are the studies

establishing the *congruity principle* (Osgood, Suci, & Tannenbaum, 1957). The essence of this principle probably accounts for the resolution of messages containing perceived inconsistencies between and among these three dimensions. Our cognitive world could then be represented as a *pyramid of predominant meaning*, as shown in Figure 7, defined by these three dimensions with any imbalance being resolved by shifts in meaning within the pyramid (Adams & Cox, 2008).

Figure 7

Pyramids of Predominant Meaning
(presented here with permission)



While individuals process messages by using all three dimensions in an interactive way, Adams' (2009) system can be helpful in understanding this process. Ajzen and Fishbein (1980) suggested a basis in reasoning by naming their analysis, "a theory of reasoned action" (p.1).

Bridge to Fishbein and Ajzen

Given this recasting of meanings, Adams' model (2009) can be applied to cognitive theory. Fundamental to this application is the recognition that the symbolic process is similar both in thought and in speech. This correspondence was identified by Aristotle in his *Rhetoric* even as it relates to our focus of *pathos*. For example, Leighton (1996), Cooper (1996), Frede (1996), Striker (1996), and Nussbaum (1996) all confirm the cognitive dimensions of *pathos*. It is also reflected in Rokeach's (1960, 1973, 1986) extensive empirical analysis. In his system, cognitions are built from most abstract values to specific attitudes, resembling the nature of Hayakawa's (1949) abstraction ladder. Given the general to specific structure, it seems likely that the formation of belief systems does reflect characteristics of deductive reasoning from values to attitudes.

Certainly within the attitude area, a preponderance of empirical support from cognitive-balance theories illustrated the human need for consistency (see for example Heider, 1959; Osgood, Suci & Tanenbaum, 1957; and Festinger, 1957). While the means of maintaining consistency may contain distortions, people believe themselves to be reasonable. The individual's reasoning process, even with the distortions, should be amenable to analysis using Adams' (2009) models.

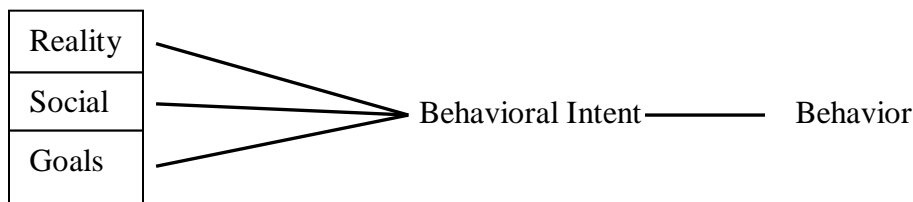
Within their attitude system, Fishbein and Ajzen’s (Fishbein, 1967; Fishbein & Ajzen, 1975; and Ajzen & Fishbein 1980) added the variable of *behavioral intentions*. *Behavioral intentions* are triggers to behavior, given the correct stimuli. Fishbein and Ajzen (1975) did include a consideration of *norms* within their calculations (pp. 301-307). This inclusion of a *social* dimension brings us back to the modern correspondence of Aristotle’s proofs.

Attitudes, containing an affect component, then, are the basis for *behavioral intention*, a predictor of behavior. The affect component in Fishbain and Ajzen’s (1975) model recognizes an element of emotion within cognitions. Indeed, their model is a base from which we can reflect the impact of emotion within the cognitive domain. We need to adapt their model in two ways to accomplish this end.

The first modification would reflect three dimensions of meaning (see Figure 8). The three dimensions, then, contribute to intention. The *affect* component would be the strongest component in both *social* and *goal* dimensions. Plus, the *goal* component would contain the motives that justify the *behavioral intentions*. Thus, this area releases the emotional energy needed both to make the resolution to act and to act at the appropriate time. So, this addition adds considerably to the emotional source from which *pathos* receives its power.

Figure 8
Adaptations to Fishbein and Ajzen

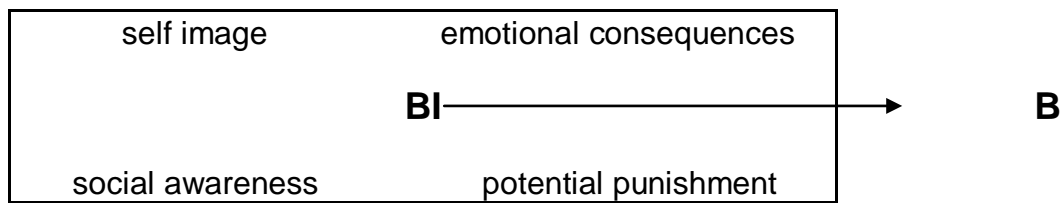
Cognitive Dimensions



The second adjustment would start with Fishbein and Ajzen’s (1975) recognition of the role of norms in affecting behavior. Action, particularly that involving change, requires energy to overcome resistance to act and to change (Allport, 1961). The resistance does come from norms within our social attitudes. In addition, the resistance comes from other factors often associated with persuasibility (see Janis & Hovland, 1959 and Trenholm, 1989). With normative constraints, these factors encapsulate our intentions to act; thus, Adams and Cox (2008) called them *encapsulators* (see Figure 9). These *encapsulators* sometimes facilitate action, but more often they inhibit it.

Figure 9

Encapsulators of Behavioral Intent
(used here with permission)

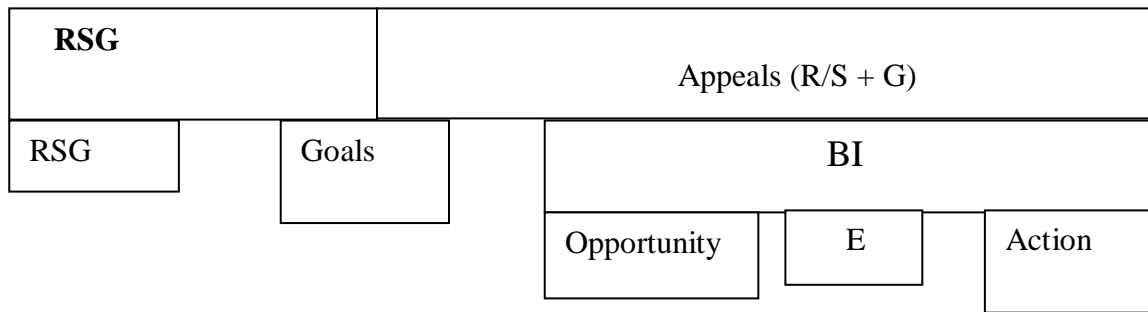


Application of Adams

In Adams’ terms, *behavioral intentions* are *bridges*. They embed appeals that have been accepted. The person has accepted a means of satisfying a particular desire and is simply waiting for the appropriate opportunity to act. Within the context of a network of attitudes that are built from general to specific, *the behavioral intentions* are the most specific *bridges/beliefs* in any series of chained reasoning. The surrounding *encapsulators* then serve as *exceptions* (see Figure 10). The application of the *pathos*, thus, involves both the appropriate use of appeals to heighten listeners

desire to act under the correct circumstances and well tailored communication that will enable the person to act regardless of norms and personal inhibitions to the contrary.

Figure 10
Cognitions, Appeals, Behavioral Intent and Encapsulators
Within Adams' System



(RSG = weighted attitudes within the Reality, Social and Goal dimensions of cognitions, BI = Behavioral Intention and E = Encapsulators that serve as exceptions. Similar to Cronkhite (1969), this network would extent outward to the left and downward as arguments are chained in *backing*. The bottom RSG is larger to indicate a higher level of abstraction.)

Discussion

Similar to Adams and Cox (2008), this paper uses reasoning concepts to advance the work of Brockreide and Ehninger (1960) particularly in terms of *pathos*. In so doing, it bridges their fundamental work in communication with traditional cognitive theory reflected in Rokeach (1960, 1973 and 1986) and in Fishbein and Ajzen (Fishbein, 1967; Fishbein and Ajzen, 1975; and Ajzen and Fishbein 1980). The reasoning concepts used for this bridge came from Adams (2009 and 2012). The resulting model, then, provides a comprehensive view that illustrates the processing of meaning, cognitively, within its three dimensions to establish an intention to act.

By identifying Hayakawa's (1949) *abstraction* as a commonality, the present paper has associated the formulations resulting from major research efforts. To the extent that the identification of the commonality is valid, each separate formulation is strengthened by the research of the others. Still, the resulting understanding invites inquiry anew. One clear expectation is that new explorations will be initiated into the cognitive nature of emotions. Probably, the presupposition which most invites further research is that the three dimensions of meaning are interactive. To the extent that the insights here serve to increase the understanding of communication, they should also advance research.

The present paper complements Adams (2013), "A Theory of Appeals." Together, they provide a foundation for understanding how appeals are made and how listeners process appeals within their inner world of goals.

References

- Adams, W. C. (2013). A theory of appeals. Retrieved Jan. 20, 2013 from www.wca-refracted.com.
- Adams, W. C. (2012). The model of reasoning. *Public Speaking: An Idea Focus*. Retrieved Jan. 30, 2013 from <http://www.wca-refracted.com>.
- Adams, W. C. (2011a). Discussions with Bruce Gronbeck. Retrieved Sept. 31, 2012, from www.wca-refracted.com.
- Adams, W. C. (2011b). Discussions with David Hitchcock. Retrieved Sept. 31, 2012, from Retrieved Sept. 31, 2012, from www.wca-refracted.com.
- Adams, W. C. (2009, March). *Teaching thinking: The core competency of critical thinking*. Workshop presented at the annual convention of the International Listening Association, Milwaukee, WI. Retrieved Sept. 31, 2012, from www.wca-refracted.com.
- Adams, W.C. (1973). The effect of various channels of feedback on the communication of information. *Speech Monographs*, 40, 147-150.
- Adams, W. C. & Cox, E. S. (2008, Nov.). *Two views on motive appeals: Which should be unconventional?* Paper presented at the annual convention of the National Communication Association, San Diego, CA. Retrieved Oct. 2, 2012, from www.wca-refracted.com.
- Ajzen, I. & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Allport, G. (1961). *Pattern and growth in personality*. NY: Holt, Rinehart & Winston.
- Angell, R. B. (1964). *Reasoning and logic*. NY: Appleton-Century-Corfts.
- Baker, G. P. (1905). *Principles of argumentation*. Boston: Ginn & Co
- Bateson, G. (1972). *Steps to an ecology of mind*. NY: Ballantine Books.
- Bennett, D. J. (2004). *Logic Made Easy*. NY: W. W. Norton & Co.
- Bettinghaus, E. P. & Cody, M. J. (1987). *Persuasive communication*. NY: Holt, Rinehart, and Winston.
- Brockriede, W. & Ehninger, D. (1960). Toulmin on argument. *Quarterly Journal of Speech*, 46, 44-58.
- Brown, R. (1970). *Psycholinguistics: Selected papers by Roger Brown*. NY: The Free Press.
- Cattell, R. B. (1988). The nature of the inductive-hypothetico-deductive (IHD) method in science. In J. R. Nesselrode & R. B. Cattell (Eds), *Handbook of multivariate experimental psychology*. (pp. 12-18). NY: Plenum Press.
- Cooper, J. M. (1996). An Aristotelian view of the emotions. In A. O. Rorty (Ed.) *Essays on Aristotle's rhetoric*. Berkely: U of California P. pp. 238-257.
- Cooper, L. Trans. [1932] 1960. *The rhetoric of Aristotle*. London: Prentice-Hall.
- Crocker, L. B. (1944). *Argumentation and debate*. New York: American Book Co.
- Cronkhite, G. (1969). *Persuasion: Speech and behavioral change*. Indianapolis: Bobs Merrill.
- Devito, J. A. (1988). *Human communication: The basic course*, (4th edition). NY: Harper and Row.

- Eemeren, F. H. van, Grootendorst, R. & Kruiger, T. (1984). *The study of argumentation*. New York: Irvington.
- Eemeren, F. H. van, Grootendorst, R. & Henkemans, A. F. S. (1996) *Fundamentals of argumentation theory: A handbook of historical backgrounds and contemporary developments*. Mahwah, NJ: Lawrence Erlbaum. Chapter 5, pp. 129-160.
- Ehninger, D. (1974) *Influence, belief, and argument: An introduction to responsible persuasion*. Glenview, IL: Scott Foresman.
- Ehninger, D. & Brockriede, W. (1978). *Decision by debate* (2nd ed.). New York: Harper & Row.
- Ekman, P. & Friesen, W. V. (1975). *Unmasking the face*. Englewood Cliffs, NJ: Prentice-Hall.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Fishbein, M. (1967). Attitude and the prediction of behavior. In M. Fishbein (Ed.), *Readings in attitude theory & measurement*. New York: John Wiley & Sons, 477-492.
- Fishbein, M. & Ajzen, I. (1975) *Belief, attitude, intention, and behavior : An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Foster, W. T. (1917). *Argumentation and debating*. Boston: Houghton Mifflin.
- Frede, D. (1996). Mixed Feelings in Aristotle's Rhetoric. In A. O. Rorty (Ed.) *Essays on Aristotle's Rhetoric*. Berkely: U of California P. pp. 258-285.
- Freeley, A. J. (1990). *Argumentation and debate: Critical thinking for reasoned decision making* (7th ed.). Belmont, CA: Wadsworth.
- Hayakawa S. I. (1949). *Language in thought and action*. NY: Harcourt, Brace and Company.
- Heider, F. (1959). *On perception, event structure, and psychological environment; selected papers*. NY: International U Press.
- Hitchcock, D. (2003). Toulmin's warrants. In F. H. van Eemeren, J. A. Blair, C.A. Williard & A. F. S. Henekemans (Eds.), *Anyone Who Has a View: Theoretical Contributions to the Study of Argumentation* (pp. 69-82). Dordrecht: The Netherlands: Kluwer Academic.
- Jaffe, C. I. (2001) *Public speaking: Concepts and skills for a diverse society*. Belmont, CA: Wadsworth.
- Janis, I. L. & Hovland, C. I. (1959). An overview of persuasibility research. In C.I. Hovland & I. L. Janis (Eds.) *Yale Studies in Attitude and Communication*, Vol. 2, New Haven:Yale U Press. pp. 1-28.
- Knepprath, T. & Clevenger, Jr., T. (1965). Reasoned discourse and motive appeals in selected political speeches. *Quarterly Journal of Speech*, 51, 152-157.
- Korzybski, A. (1958). *Science and Sanity* Korzybski, A. (1958). *Science and Sanity*. Fort Worth, TX: The Institution of General Semantics.
- Kruger, A. N. (1960). *Modern debate*. NY: Mcgraw-Hill.
- Leighton, S. R. (1996). Aristotle and the emotions. In A. O. Rorty (Ed.) *Essays on Aristotle's rhetoric*. Berkely: U of California P. pp. 206-237.
- Maslow, A. H. (1970). *Motivation and personality*. NY: Harper & Row.
- McBurney, J. H. (1964). *Argumentation and debate: Techniques of a free society*. New York: Macmillian.

- Mehrabian, A. (1981). *Silent messages: Implicit communication of emotions and attitudes* (2nd ed.). Belmont, CA: Wadsworth.
- Minnick, W.C. (1968). *The art of persuasion* (2nd edition). NY: Houghton Mifflin.
- Nussbaum, M. C. (1996). Aristotle on emotions and relational persuasion. In A. O. Rorty (Ed.) *Essays on Aristotle's rhetoric*. Berkely: U of California P. pp. 303-323.
- Osgood, C. E., Suci, G. J. & Tannenbaum, P.H. (1957) *The measurement of meaning*. Urbana: U. of Ill. Press.
- Pinker, S. (2007). *The Stuff of Thought: Language as a Window into Human Nature*. NYC: Viking.
- Pinker, S. (2002). *The blank slate: The modern denial of human nature*. NYC: Viking.
- Pinto, R. C. (2003). Reasons. In F. H. van Eemeren, J. A. Blair, C.A. Williard & A. F. S. Henekemans (Eds.), *Anyone who has a view: Theoretical contributions to the study of argumentation* (pp. 3-16). Dordrecht: The Netherlands: Kluwer Academic.
- Rokeach, M. (1960). *The open and closed mind*. New York: Basic Books.
- Rokeach, M. (1973). *The nature of human values*. New York: The Free Press.
- Rokeach, M. (1986). *Beliefs, attitudes, and values*. San Francisco: Jossey-Bass Publishers.
- Rosenberg, M.J. & Hovland, C.I. (1960). Cognitive, affective, and behavioral components of attitudes. In (Eds.) C.I Hovland & M.J. Rosenberg, *Attitude organization and change*, New Haven, CT: Yale U Press.
- Striker, G. (1996). Emotions in context: Aristotle's treatment of the passions in the *Rhetoric* and his moral psychology. In A. O. Rorty (Ed.), *Essays on Aristotle's rhetoric*. Berkely: U of California P. pp. 286-302.
- Toulmin, S. E. (1958). *The uses of argument*. Cambridge, England: Cambridge U Press.
- Toulmin, S. E. (1972). *Human Understanding*. Princeton, NJ: Princeton U Press.
- Toulmin, S. E. & Rieke, R. & Janik, A. (1979). *An introduction to reasoning*. NY: Macmillan.
- Trenholm, S. (1989). *Persuasion and social influence*. Englewood Cliffs, NJ: Prentice Hall.
- Wenzel, J. W. (2003). Arguer's obligations: Another perspective. In F. H. van Eemeren, J. A. Blair, C.A. Williard & A. F. S. Henekemans (Eds.), *Anyone who has a view: Theoretical contributions to the study of argumentation* (pp. 3-16). Dordrecht: The Netherlands: Kluwer Academic.
- Williams, M. R. & Cooper, M. D. (2002). *Power persuasion*. Greenwood, IN: The Educational Video Group.
- Ziegelmuller, G. W. & Dause, C. A. (1975). *Argumentation: Inquiry and advocacy*. Englewood Cliffs, NJ:
- Phillips, A. E. (1908). Effective Speaking. Also reprinted in W. N. Thompson (1975). The Process of Persuasion: Perspectives Readings. NY: Harper & Row.
- Wenzel, J. W. (2003). Arguer's obligations: Another perspective. In F. H. van Eemeren, J. A. Blair, C.A. Williard & A. F. S. Henekemans (Eds.), Anyone Who Has a View: Theoretical Contributions to the Study of Argumentation (pp. 3-16). Dordrecht: The Netherlands: Kluwer Academic.

- Williams, M. R. & Cooper, M. D. (2002). Power Persuasion. Greenwood, IN: The Educational Video Group.
- Ziegelmüller, G. W. & Dause, C. A. (1975). Argumentation: Inquiry and Advocacy. Englewood Cliffs, NJ: Prentice Hall.