

# Contents

Foreword <i>Peter M. Senge</i>	vii
Preface to the Trilogy <i>Arthur L. Costa and Rosemarie M. Liebmann</i>	xiii
Preface to <i>The Process-Centered School</i> <i>Arthur L. Costa and Rosemarie M. Liebmann</i>	xxi
Acknowledgments	xxv
About the Authors	xxvii
<b>1. Constructing the Metaphors for Process</b> <i>Diane P. Zimmerman</i>	<b>1</b>
<b>2. Spreading the Good Word: Communicating With the School Community to Support Change</b> <i>Alison Preece</i>	<b>10</b>
<b>3. Organizational Learning: The Essential Journey</b> <i>Laura Lipton and Robert Melamede</i>	<b>30</b>
<b>4. Designing Learning for a New Work Environment: Key Values and Skills</b> <i>Michael A. Pennella</i>	<b>54</b>
<b>5. Staff Development: A Process Approach</b> <i>Fred H. Wood</i>	<b>70</b>

<b>6. Preparing New Teachers: Process as Curriculum</b> <i>Gloria Appelt Slick</i>	<b>86</b>
<b>7. Developing Adaptive Schools in a Quantum Universe</b> <i>Robert J. Garmston and Bruce Wellman</i>	<b>101</b>
<b>8. The Norms of Collaboration: Attaining Communicative Competence</b> <i>William Baker, Arthur L. Costa, and Stanley Shalit</i>	<b>119</b>
<b>9. The Process of Coaching: Mediating Growth Toward Holonomy</b> <i>Arthur L. Costa and Robert J. Garmston</i>	<b>143</b>
<b>10. Developing a Scoring Rubric for a Process School</b> <i>Charles Lavaroni</i>	<b>159</b>
<b>11. Capturing the Spirit: Process Pervades the Organization</b> <i>Joseph M. Saban</i>	<b>172</b>
<b>12. Searching for Evidence: Toward a Renaissance Community</b> <i>Arthur L. Costa and Rosemarie M. Liebmann</i>	<b>189</b>
<b>13. Change: The Journey Begins</b> <i>Arthur L. Costa and Rosemarie M. Liebmann</i>	<b>201</b>
The Essence: Process as Content <i>Louis Rubin</i>	<b>207</b>
Index	<b>213</b>

# 1

## Constructing the Metaphors for Process

Diane P. Zimmerman

The clause “when process is content” haunts the rational mind. The juxtaposition of the words—*process* and *content*—confuses the boundaries of meaning. To understand this clause, each word must be thought of in the context of the other—as if they were oscillators, each reflecting the other. Coupled oscillators start out as separate and distinct, and as they move into synchrony, they gain a collective identity that can be as simple as a tuning fork or as complex as a thousand fireflies creating an orchestra of light. Considering the two words in tandem creates a synchrony in which new meanings and understandings about a larger context for learning and knowing become evident. Understanding this flexible interdependence allows one to generate the meaning needed to finish the sentence. This chapter explores how metaphor can finish the sentence in the context of a learning community.

The pairing of process and content invites new metaphors for learning and adapting. Metaphors from both the arts and the sciences will be drawn on to explore the relationship of process to content in community. In the arts, process learning is dependent on production for full expression. The artist improvises to explore new mediums and to produce something that speaks from the inner self. Improvisation cannot be understood without attention to process. For most art, the process defines the content. The first part of this chapter explores how the process of improvisation creates the content.

Metaphors from quantum physics have turned the rational mind on its head. Instead of neat Newtonian containers created by the logic of *either/or*, concepts viewed in relationship require the logic of *both/and*. The wave-particle duality and nonlocal correlations provide analogs for a multiplex view of reality—a way of considering process as content in complex organizational systems. In the quantum world, words once considered distinct can no longer be considered in isolation. Finally, the notion of process as content suggests a new way of considering concepts often taken for granted. Synectic instructional strategies have taught that when dissimilar words are juxtaposed, a creative tension arises, generating a rich mix of information. Complexity theorists have joined together to study exactly what happens when rich pools of information reach the edge of chaos. It is the optimal state of creative growth and adaptation. The conclusion of this chapter explores ways in which practitioners might operate in this new world of *both/and* to find the creative potential needed in an adaptive organization.

### Assumptions

First, it is appropriate to review some of the assumptions about the construction of meaning and the use of metaphor that underlie this work. The process of understanding or meaning making finds its epistemological roots in constructivist theories about learning and knowing. Piaget (1952), who described himself as a genetic epistemologist, concerned himself with how the child constructs cognitive structures on a developmental continuum. The development of cognitive structures comes from a child's quest for equilibrium when confronted with contradictions. Vygotsky (1978) defined the ways in which knowledge is as much a social construction as a personal construction. Later, Chomsky (1977) and Bruner (1986) reinforced the theory that language and experience are closely associated with the construction of new structures and understandings. Kegan (1982) extended Piaget's stage theory to adults through the integration of meaning making and social development as essential elements in the development of later stages. Kegan states that "meaning is, in its origins, a physical activity (grasping, seeing), a social activity (it requires another), a survival activity (in doing it, we live). Meaning understood in this way, is the primary human motion, irreducible" (pp. 18-19). In other words, meaning making is process, and it is through process that one comes to understand content. Mikhail Bakhtin, a great Russian cultural theorist, redefined the relationship of self and others in the process of coming to know. Watson (1993) explains this redefinition as follows: "Self and others cannot be divided or separated, they can only be distinguished or pointed out, and even then only with great difficulty, because they are so intertwined within the community" (p. 8). This description is not unlike quantum theorists' explanation of the wave-particle duality discussed later in this chapter. The underlying assumption in this chapter is that coming to know through language is a socially constructed process.

Barnes and Todd (1977) describe the phenomenon of coming to know as cycles of utterances, suggesting that meaning is created in cycles through time.

Pierce and Gilles (1993) extended the concept of cycles of meaning to the conversation that individuals and groups create through time as they discuss rich text. A premise of this chapter is that to create rich systems of learning in an organization, the conversations must be analogous to Pierce and Gilles's discussions of rich text. It is the process of discussing substantive issues or concepts that reshapes them into something new and maintains a fluidity about this learning that promotes adaptation.

Linguistic moves and language choices bring fluid form to the meaning-making process (Zimmerman, 1995). The field created by the conversation (not unlike Pierce & Gilles's [1993] cycles of meaning) serves as the medium for the reciprocal process of communicating. A few elegant linguistic moves can frame, deepen, and move the conversation to facilitate the construction of meaning. Learning to inquire and to respond to the meaning created by the group is an essential skill for the constructivist leader—a leader in process.

Inquiry has important historical roots in Western tradition. Pedagogical experience has taught that verbs are where the action is. Bloom, Engelhart, Furst, Hill, and Krathwohl (1956) are credited with developing the first verb list that has become known as Bloom's taxonomy. The genius of this list was that it created a process strategy to be used by teachers for the construction of different logical levels of meaning. Others have followed with their own lists that when used to frame questions, create new understandings (Costa & Garmston, 1994; Dilts, 1992; Taba, 1957). Asking questions from a field of information is the essence of process as content.

Responding behaviors in daily conversations are more often questions or data provided from the speaker's point of view. Summarizing or highlighting another's message is a skill not often practiced in the casual conversation. In conversations that create meaning, however, it is an essential element. The paraphrase is a linguistic skill that has received little attention in the professional literature. Costa and Garmston (1994) identify the paraphrase as an important response strategy in coaching others. Through coaching work with others, they have found the paraphrase a powerful tool for building meaning. It is through the paraphrase that ideas are amplified, redirected, or bounded.

When applying the above assumptions to group learning, one must consider the implications of constructivist views in the context of group learning and leading. Lambert (1995) has defined constructivist leadership as "the reciprocal processes which enable participants in an educational community to construct meanings which lead toward a common purpose about schooling" (p. 32). Learning communities must develop members' ability to operate in process as an essential action of a constructivist leader.

Finally, Drath and Palus (1994) define meaning making as a process of "naming, interpreting and making commitments to actions, to other people, and to values" (p. 9). They define leadership as the act of making this process happen in conjunction with practice. They identify communities of practice as groups who know how to create shared knowledge and shared ways of knowing that commit them to action.

Although metaphor or story has been used to construct and interpret reality since mythic times, the understanding of how metaphor affects meaning making has gained great popularity through the work of Lakoff. "The essence of

metaphor is understanding and experiencing one kind of thinking in terms of another" (Lakoff & Johnson, 1980, p. 5). In this landmark work, tacit metaphors are deconstructed to demonstrate how the structure of understanding is embedded in metaphor. In a later work, Lakoff (1987) extends his thinking about metaphor beyond the classical categories taken for granted in semantics. Instead, he advocates for a more natural system that he calls *radial*. His analysis of category structure finds that categories do not have hierarchical structures with a limited number of essential attributes as in classical studies but rather have a radial structure learned through social conventions. Category structure is a complicated network of resemblances, rather than defined similarities. This loose structure for meaning explains why meaning making is a fluid process. The mind can create resemblances between widely disparate things. Viewing process as content frees individuals from the defined similarities and differences and allows for the discovery of nuance and deep understanding. The first metaphor to consider in the construction of meaning for process as content comes from the arts.

### **Improvisation: When Process Is the Conversation**

The act of speaking is an improvisational act. Bateson (1989) describes the speaker's improvisational role as follows: "Each speaker learns to combine and vary familiar components to say something new to fit a particular context and evoke a particular response, sometimes something of a very great beauty or significance, but always improvisational and always adaptive" (p. 3). Improvisation is the recombining of the partly familiar in new ways. In jazz, modern dance, and conversation, the process creates the content. The musician, the dancer, and the conversationalist allow the process to ebb and flow in relationship. Even when clumsy or poorly executed, there is a sense of coherence and wholeness.

The value of the conversation to the adaptive organization is well documented (Bohm, 1990; Senge, 1990; Stacey, 1992). Whether to understand mental models, to reflect on past actions, or to generate a new idea, each of these theorists stresses process over content. The improvisational spirit of dialogue is to discover something that is yet unknown to the self or to the group, just as jazz musicians strive to find an undiscovered set of sounds. Nachmanovitch (1990) reminds us, "Every conversation is a form of jazz" (p. 17). To embark on a dialogue with no ready answers requires a spirit of improvisation. Through a process of coaching others, Costa and Garmston (1994) have learned that the skills of questioning and paraphrasing are two process skills that allow groups to improvise in a way that builds coherence. When these skills are used together with an intention to establish rapport, a powerful bond occurs in which ideas meld together and are mutually generated. The linguistic skills of generating, summarizing, and inquiring about the field become the choreography.

The way groups interact within these linguistic fields distinguishes a meaning-making community from others. Senge (1990) describes most organizations as communities of advocacy in which individuals articulate their own views and learn little from each other. This is improvisation without attention to context