

# Chapter VII

## Computer Mediated Learning

### Applying Burke's Pentad

**Alson Ruth**

*Griffith University, Australia*

#### **ABSTRACT**

*This chapter proposes that Burke's (1969) dramatisic analysis using the Pentad (act, scene, agent, agency, purpose) is a valuable methodological tool for investigating how learning theory offers a better understanding of mediated learning environments. It is argued that this framework provides a coherent and comprehensive consideration of learning and communication mediated by electronic means. Research into computer mediated communication needs to acknowledge the intertwining notion of the agents, acts and agency (mediation) within a specific scene, particularly in an online learning environment. Burke's (1969) work provides a useful framework for discussing and describing a mediated environment and appears to be a valid framework within which to analyze different learning and communicative environments.*

#### **INTRODUCTION**

Computer mediated communication has become one of the foundations of work and leisure for many people. Unlike face-to-face communication, computer mediated communication (CMC) is virtual, consisting of a non-physical environment where each participant often has a unique location that is not physically visible to other participants to the dialogue. This means that individuals may seem to be physically isolated and yet connected via

technology. The computer-mediated environment has become a central feature of learning practice, with computers acting as almost ubiquitous tools for the facilitation and dissemination of educational information. For learners undertaking a course of study, CMC allows almost continuous connection to the place of study. Each individual in a class, a group, or course, thus becomes one potential point of analysis and may be very different from other students. Research into computer-mediated learning needs to be cognizant of the

potential variations in the physical environment of individual participants. This chapter deals specifically with mediated learning environments, and how to integrate both the social and the individual in an analysis of the environment. Burke's (1969) framework of Pentadic elements facilitates analyses that take into account the individual in the social framework.

Table 1 refers to a learning environment and demonstrates how Burke's Pentadic elements manifest within a computer mediated environment. Each of the five elements—act, scene, purpose, agent and agency—allows a clear illustration of different 'lens of analysis' (Rogoff, 1990). The elements, both singly and considered in pairs and triplets, provide for some deeper insights to be obtained by the learning facilitator. focus, to one of an act undertaken by an agent for a purpose.

The activity of constructing knowledge can be taken as occurring within any situation where individuals think and act (Billett, 2003), which assumes that individuals can take a more active role than simply being passive recipients of socially derived knowledge. Within different situations, individuals often use roles to define their activities. Individuals can take on the role of learner or student, which gives rise to different ways of engaging in knowledge construction. Indeed, someone engaged in learning, that is, a student, is referred to as a learner, as someone undertaking activities that may result the development of knowledge. Burke (1969, p. xv) pays specific and detailed attention to the question 'What is involved, when we say what people are doing and why they are doing it?' This is a central question addressed in this chapter—what are individuals doing (i.e., activities) in an online environment (i.e., where) and why are they doing it (i.e., purpose(s)). This includes individual interaction and engagement, and the purpose(s) for their engagement.

In this chapter, I synthesize the findings of a program of research (Ruth, 2004) and integrate it within the conceptual framework of Burke (1969), which provides a conceptual basis for

*Table 1. Description of Pentadic elements within an online learning environment*

Element	Description
Act	learning, interacting, questioning, responding
Scene	learning environment, course, computer-mediated communication,
Purpose	learning, getting degree, passing course, getting information about assignments
Agent	learner, student
Agency	computer, e-mail, Internet

describing and evaluating mediated environments and their properties. In doing so, the processes by which textually-based learning environments are enacted are examined, along with how participatory practices influence what constitutes the environment. The chapter commences this process by examining the interdependence of relationships among Burke's Pentadic elements and their application within a learning environment. The first section describes the Pentad, then explores the way in which tensions and relations among the Pentadic elements are manifested in the learning process; it proposes Burke's Framework as an appropriate, albeit novel, means to identify and elaborate these tensions. The next section demonstrates the application of the Pentad for the analysis of participatory practices in a mediated environment. The chapter concludes by discussing the implications of such an analysis for mediated environments.

## Description of the Pentad

Burke's analysis using the Pentad is a methodological tool that can be used for investigating how concepts from theories of learning offer an

understanding of electronically mediated learning thus interlinking two frames of reference to provide a potentially more robust analysis. The use of Burke's methodological framework allows one to give specific attention to, and elaboration of, individual elements such as where people are learning, who they are, what they are doing, how they are doing it and why.

Burke (1969) proposed five terms or Pentadic elements that assist in understanding 'What is involved, when we say what people are doing and why they are doing it?' These elements contribute to our understanding of the interactions learners engage in and how learning progresses through these interactions. Burke (1969) states:

Act, scene, agent, agency, purpose. ... any complete statement about motives will offer *some kind of* answer to these five questions: what was done (act), when or where it was done (scene), who did it (agent), how he did it (agency) and why (purpose) (p. xv italics in original).

While each can be used to describe in detail what we refer to as a 'learning environment,' Burke also uses them to explore tensions that arise between different elements. That is, each element can be identified as being to some degree reliant on the other elements in order to fully understand their purposefulness and inherent tensions. Different combinations of Pentadic elements, particularly dyads (two interconnected elements), may provide a more comprehensive analytical framework than many other approaches.

Burke (1969) describes a number of these Pentadic interactions, particularly the scene-act, the scene-agent, and the act-agent ratio (that is, interaction), in order to elaborate how each element interacts with others. These interactions are important, because similar acts may be undertaken for different purposes and indeed by different agents such that learning for one person may be an end in itself, while for another it may be a journey of self reflection. Learning describes both acts and yet, the purpose for the acts may result in vastly different outcomes. Thus, in terms

of the scene-act ratio, the primary concern is, in effect, that the 'scene is a fit "container" for the act' (Burke, 1969, p. 3). In terms of a mediated environment, some acts have no form or possibility outside the environment. For example, sending an electronic message is premised on a mediated environment. Burke's use of the maxim, terrain determines tactics, essentially dictates that the possibilities of what an individual can do are, in part, bounded by what is available and 'doable' within the particular setting. Thus, a student in a class (i.e., an agent in a scene) may not be able to ask or answer 'authentic' questions (Nystrand, 1997, p. 38) due to the rote nature of learning encouraged in some situations or some other feature of the environment. Likewise, asking and answering questions in a textually mediated environment takes on different characteristics, which lack the spontaneity and immediacy available in a co-physical environment. This is because delays in inter-personal interactions occur which may disrupt the flow of conversations and the social cues of body language and facial expression are often absent.

The scene-agent ratio, that is, the relationship of the agent to the scene, often conflates the 'nature of the inhabitants,' that is the characteristics of the actors of a scene, with the nature of their habitation (Burke, 1969, p. 9). In this instance, an 'ideal locale,' a natural environment, for a particular kind of agent is assumed to be determined by the characteristics of the agent. A student, therefore, is assumed to be located in a classroom, library or other seemingly educative location. Likewise, those located in classrooms must be students or their co-agents, teachers. However, given the increasing emphasis on 'flexible' learning methodologies, distance and online education, the agent does not necessarily participate from an 'ideal locale' and may be found anywhere, although different constraints may apply in different locations. For the student in an online class, particularly distance students who are separated physically from the university,

the computer screen, the screenface (Ruth, 2005), becomes *the* interface for displaying the presence of others and is often the only place where this presence is felt. With increasing emphasis on computer mediation in learning, the scene in effect becomes the 'screenface' where the interaction is presented in discrete messages, text blocks, and ideas that may be formed and reformed (responded to). Each message, text block and idea can be seen to be analogous to Bakhtin's (1986) concept of the utterance given the complex chain that organizes the utterances into a particular speech genre or a conversation. This conversation, the interlinking of utterances, is the essential feature of computer-mediated learning and indeed all computer-mediated communication.

The use of Burke's Pentad, with its power of multiple perspectives, such as found in dyads (Pentadic interactions—scene-act, the scene-agent, and the act-agent ratio) becomes an explicit statement of the concerns that centre on a consideration of learning mediated by text in an online environment. This consideration proceeds from the assumption that no single perspective can provide the kind of analysis required to begin to comprehend individuals' participation in online learning environments.

## **THE PENTAD IN COMMUNICATING/LEARNING**

A review of the use of Burke's (1969) Pentad in educational settings shows that previous use of this framework appears most consistently in terms of analyzing communication processes. The framework is a tool for learning to analyze an event or narrative. Only occasionally has it been used to analyze teaching and learning processes (e.g., Freeman, 1974). In some ways, it appears that a 'terministic screen' (Burke, 1966) has been applied to the use of the Pentadic elements. Fox's interpretation of Burke's terministic screen highlights how this concept directs our attention

towards particular representations of reality and away from others (Fox, 2002). Burke (1969) argues that a particular terminology is but 'a reflection of reality,' which is therefore just a 'selection of reality' and thus is a 'deflection of reality.' This means that we see only those aspects of a problem within the terms and pre-conditions that are obvious to us.

Ironically, the 'selection' of reality to which Burke's concepts have been applied has largely deflects their application away from self-critical processes, which has limited the application of Burke's conceptualization away from learning and mediated contexts. Further, Kaplan (1995) has suggested that terministic screens are broader, encompassing both social and technological formations and draws out the parallels between terministic screens and 'what others call an ideology.' As an ideology, the use of Burke's Pentad in analyzing communication is 'good, beautiful and worthy of our attention' (Kaplan, 1995, online), but may be seen as less so when applied to educational settings. The use of the Pentad as a device for understanding communication may seem to curb its use in other ways, because of the historical conventions being applied and its apparent use for analyzing the product of that communication. Terministic screens are the way you view the world, your assumptions, which provide the basis for discussion of communication.

However, in exercising the concept more widely, classroom learning, online learning and the screenface (Ruth, 2004, 2005) may all be seen as terministic screens—the assumptions through which to view the activities associated with what is understood as learning: individuals constructing and expanding their knowledge and ways of knowing. Constructivism, objectivism, collaborative learning, indeed nearly all forms of learning theory, can, likewise, be seen as terministic screens through which individuals build perceptions and representations of what it means to learn, of what they believe is the best way to go about working with knowledge and students,

both in the classroom and in the research setting. Now that learning is seen as a daily (constructivist) individual act (Boettcher, 2007), and the socially mediated nature of that learning is being emphasized (Rogoff, 1990; Yelland & Masters, 2007), the gap between learning processes and communication has closed. As these constructivist approaches conceive learning as an ongoing inter-psychological process (Vygotsky, 1978), it provides more salient modes of analyze such as that offered by Burke.

All this is relevant to understanding learning and processes that support it, not least because interactions between individuals are necessary for learning and become central in online learning environments mediated by computer technologies. With their widespread introduction in both higher and tertiary education, there is an urgent need to understand, and encapsulate for teachers, the pedagogic properties of online learning environments. They represent new kinds of interaction and new ways of facilitation of dialogue that both teachers and students are being asked to enact.

Burke's Pentadic framework provides a means by which the personal and situational contributions to a learning environment can be understood in terms of the scene that constitutes the setting, and the purposes and means that those acting in it are able to deploy, all of which collectively constitute the mediated learning environment. However, a salient quality of Burke's scheme is that it can elaborate and illuminate the relations among these elements. Without such an interdependent set of factors, the complexity of online learning pedagogic properties may not be adequately represented and understood.

### **Elaboration of the Elements In Learning Environments**

The research underpinning this chapter consisted of three interconnected studies that investigated students' non-mandated use of e-mail discussion lists at an Australian regional university.

In the courses investigated, students voluntarily subscribed to the learning environment, which provided an additional method of interacting for students. Study one focused on gathering student demographic data from student records, study two on the analysis of the content and frequency of messages, and study three was a survey of students, all stored electronically. Thus, to understand an online environment, three broad research areas of enquiry needed to be explored focusing on: (i) who is participating; (ii), what are they doing; and (iii), how they conceptualize and value the use of online learning environments. Taken together, these areas of inquiry provided a more complete picture of students using online environments than if each question was analyzed independently.

Collectively, the three studies permitted a deep exploration of what constitutes participation in an online learning environment, the kind of interactions that occurred and elaborated the pedagogic properties of on-line text-based courses. The investigation is contextualized within sociocultural theories and utilizes Burke's Pentad to elicit understandings of motives for engaging in online learning environments.

Elaborating Burke's terms in a text-based mediated environment of an e-mail discussion list, the act of sending an e-mail (containing an utterance) requires a computer, a keyboard, and a screen. Thus, this act is within a defined scene for the individual agent. This narrow definition of the scene inheres in the act. That is, an e-mail, generally, cannot be sent without a computing device. However, there is also the larger scene of the 'Internet' without which the act of sending an e-mail also has no meaning. The computer, the screen and the keyboard can also be defined in terms of agency, as the 'how' of communicating/interacting with others. Thus, act and agency are both partially defined by 'sending an e-mail.'

This act of sending an e-mail within an educational setting is also bound within a broader definition of an act, that of learning, because



the purpose of sending an e-mail inheres in this broader definition. Thus, learning, through sending an e-mail (i.e., asking a question), is an act with a purpose. Learning in this way comprises both an act *and* a purpose. Within this act/purpose is the act of interacting, which is bound by scene (where—the course, the institution, or the screenface) and agency (how—the computer, and the Internet). Underlying this, of course, is the agent—the student or learner.

This act of interacting is further constituted by receiving e-mail, reading e-mail, and at times, reacting and responding to (sending) e-mail. Thus, the act of interacting is constituted by many 'mini' acts—microgenetic or moment-by-moment learning processes (Rogoff, 1990), such as composing a message, reading a message and sending a message, each with varying purposes: asking a question, finding an answer, requesting elaboration. The act of learning is also constituted by a range of other microgenetic processes (reading, writing, and so on). The definition of learning and its associated activities at each point is determined by the level of focus inherent in the analysis to be undertaken, that is, interacting, reading and so on. This demonstrates the ways in which Burke's framework allows elaboration of learning interactions, or indeed any online mediated environment.

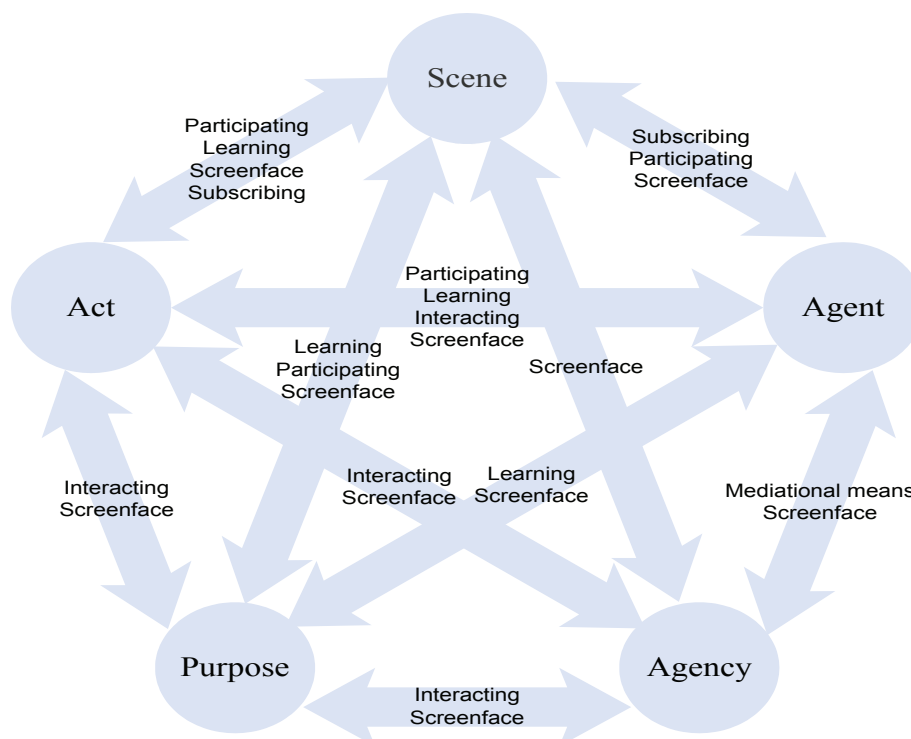
A key strength of Burke's framework is not only that it furnishes the five elements through which to describe a particular situation, but that this description extends to illuminating how these elements are in tension with one another. As stated previously, each element can be seen as being reliant on the other elements in order to fully elaborate that element. Radney (1996, online) describes these tensions and Burke's purpose in utilizing them emphasizing the desire to 'understand why people do what they do.' This elaboration includes the agent's relationship to the scene 'now as acting,' now as 'acted upon' (Radney, 1996).

For instance, the elements in dyads for ex-

ample, the scene-agent ratio, provide greater insights into what motivates people to undertake an activity, because it is through the elaboration of the tensions between the act and the scene, for instance, that the meaning of the act is further illuminated through an elaboration of other elements. Each element, even when discussed individually, that is, through attention to each term as a single element, still requires other elements to assist in its definition. In this way, the understanding of educational motivations is illuminated, because the purpose for engagement, for instance, is highlighted by how individuals engage with the scene (agency). Given the utility of the framework as demonstrated here, the surprising aspect is that this scheme (Burke's Pentad) has not, to date, been utilized extensively for understanding learning environments.

In summary, Burke's (1969) work provides a framework for examining and describing situations and this framework can be applied to computer mediated communication in an online learning environment. The use of Burke's Pentadic elements ensures that all aspects of an environment, whether physical or computer-mediated are viewed. This means that attention is paid to the agent, the individual undertaking the act; the act itself; the method by which the act is undertaken (agency); the purpose for the act; and the location or scene of the act. Using Burke's terms provides a clearer definition of the elements and allows the elaboration of interactions between the elements. In this way, it becomes clearer that the act, whether learning or interacting, cannot take place independently from the location or scene in which it occurs. Similarly, the act is dependent for its execution on the actor or agent. Wertsch (1998) uses Burke's Pentad in this manner, to allow him to consider tensions between elements. However, he focuses on two specific elements, namely (i) agent and (ii) mediational means (agency) using 'mediated action' as the key feature of investigation. These elements are favored by Wertsch because the sociocultural

Figure 1. Burke's Pentadic elements with concepts of learning superimposed (From Ruth, 2004)



approach he uses explicates the 'relationships between human *action*, on the one hand, and the cultural, institutional, and historical contexts in which this action occurs, on the other' (Wertsch, 1998, Wertsch & Toma, 1995).

### Application of the Framework

In this section, the Pentad is applied to the computer-mediated interactions undertaken by students in an online learning environment. The particular environment consists of e-mail discussion lists in a regional Australian university. The research setting was chosen as it allowed investigation of individuals who were co-located as well as individuals who were at a distance from the university. This fragments the scene into multiple versions of the same environment, now together, now apart.

The application of the framework allows many of the concepts used to describe relationships within learning environments to be explored. Figure 1 depicts many of the concepts principally in terms of dyads as elaborated by Ruth (2004), in which each of the five elements is represented. The interconnections between the elements depict the dyadic relationships that arise from the analysis. Using this figure, it is possible to identify how certain concepts, which are often used to discuss learning, such as participating and interacting, are depicted multiple times within the Pentad, in effect picking up the interrelationships among three or more elements. It shows that each of these concepts requires viewing from multiple perspectives to understand their contribution to a learning environment. The interplay of elements within dyads illuminates how each element contributes to the definition of learning and associated activities.

In this figure, the act of participation is located in at least four dyadic relations, specifically: (i) scene-act; (ii) scene-agent; (iii) scene-agency and (iv) scene-purpose. According to this conceptual representation, participating is an act in a scene, (one that agents in the scene undertake, through the agency of accessing the scene), and is the purpose for accessing the scene. Consequently, agents constitute the virtual scene through the acts they undertake using the computer to participate. In other words, agents assist in defining the scene through their presence. The scene is constituted by the number of students populating the scene, their gender and their mode of study (that is, part time or full time, on campus or distant); the scene, on the other hand, assists in defining the agent through the roles the agents may take and their modes of engagement, as participants or browsers/lurkers (i.e., the agency employed to access the scene). Their purpose, such as asking a question as a 'full' participant or browsing the collected messages as a 'lurker,' indicates their mode of engagement. Thus participation is defined by the agents accessing the scene, by the act being undertaken in the scene, by the agency through which the scene is accessed and finally the purpose for which the scene is accessed. The elements interact in multiple ways to describe what participating means. The implication of this is that discussions of learning utilizing these dyadic relations are clearer and focused on the elaboration of learning *processes*.

Interaction, likewise, is positioned between at least four dyads in Figure 1, specifically: (i) act-agent; (ii) act-agency; (iii) act-purpose and (iv) agency-purpose. Thus, these relations suggest that interacting is an act done by an agent, with agency, for a purpose. In this way, the act of interacting is constituted by the agent (i.e., students), in the modes of their participation as browser or more visible and active participant, through their agency via the computer or screenface, and through their purposes for learning, gaining assistance or simply to pass the course. This highlights

one of the distinctions between interacting and participating. Interacting is more reliant on the definition of agency, while participation reflects a scenic constraint. Participation occurs in a location; interaction occurs between agents. This distinction may have important consequences for assessment as students assessed on 'participation,' particularly in face-to-face situations, often view attendance as equivalent to participation. Thus, they participate (vicariously) without necessarily actively interacting in a way that others (i.e., their teachers) would recognize as interaction.

Learning (Figure 1) in this way can also be understood using multiple dyads, specifically: (i) act-scene; (ii) scene-purpose; (iii) agent-purpose and (iv) act-agent. This can be described as the way an agent (i.e., student) undertakes acts in a scene for specific purposes. So, for instance, a student subscribes to a discussion list in order to participate in interactions to support their learning. In some ways, the agent cannot act in specific ways unless a part of the scene. For example, a student cannot undertake the learning activities without being subscribed and, at least, reading a message. The agent is only part of the scene because of their purpose for acting. This suggests the importance of the learners' 'intentionalities' when engaging in a learning environment. This intentionality can have diverse bases and consequences for engagement and learning. Consider, for instance, those who merely subscribe to a discussion list, compared with those who engage actively, monitor responses, and/or generate questions and responses to other's questions. Their intentionality differs yet their purposes for being subscribed, that is, to facilitate their learning, are similar.

The screenface (the specific location and mode of work for individuals) illustrates the tensions arising among all Pentadic elements (Figure 1). This is because the screenface is the scene of the agent's (i.e., student's) acts; it is the focus of their agency through which the agent acts, and permits the purpose for which the individual acts



to be accomplished. The screenface is, in sum, the agency, which affords the fulfillment of the purpose for which the agent acts in the scene.

Subscribing as shown on Figure 1, is a 'once-off' act in an e-mail discussion list. Conversely, Web-based interactions, in effect, require multiple decisions to participate based upon frequency of access. Subscription, therefore, is located on two dyads, as subscribing is an act that places the agent in the scene, albeit a minor act in the overall learning process in these courses. However, in an e-mail discussion list, this initial act is essential to allow other acts to follow, for the potential of the learning environment to be realized. Its importance is, in some ways, negated by its simplicity. However, the outcome of the act of subscribing is for the agent to gain access to the scene. The interaction between the agent and the scene allows ways of making distinctions between learning environments such as workplaces and classrooms. Both act and scene inhere in these situations.

Learning is constituted by the place it is undertaken and indeed, many different theoretical frameworks have been developed which take into account the different locations of learning (e.g., Lave & Wenger's situated learning (1991), Billett's co-participation at work (2002), and Wertsch and Toma's sociocultural approach to classroom learning (1995)). Each of these frameworks takes scene into account, using scene as a defining characteristic of learning situations. Thus scene, an important aspect of learning, is sublimated to other influences but is sometimes inadvertently used to define learning. Burke's Pentad allows this aspect to be emphasized and allows distinctions between learning frames and processes of learning to be made.

## **IMPLICATIONS FOR LEARNING**

A key contribution of Burke's scheme is an elaboration of how learning and knowledge construction

occurs through the interplay between human intentionality and the settings in which they engage. Wertsch states that Burke 'envisioned the Pentad as a tool for conducting enquiry about human action and motives' (Wertsch, 1998, p. 14). As such, it allows a more inclusive analysis of a human activity environment, which includes people and artifacts. Yet, the relationships between humans and artifacts are complex and have been examined, in relation to learning, from numerous perspectives.

Wertsch's (1998) notion of the irreducible tension between the agent and the mediational means is important, because it sits at the heart of the interaction between the individual and the social. In effect, the analysis becomes one of agency, which cannot be wholly separated, nor fully discussed without reference to at least one of the other Pentadic terms. In this way, agency, or the mediational means, underscores all aspects of the learning environment. Simply put, the 'how' of learning is essential to discussing other aspects because without this clarification, the number of variables, which can affect the outcome, are vast and may be very different for each environment. This parallels other discussions of learning, which are often referred to as 'classroom' learning, for instance. The classroom is not only a 'where' but a 'how.' The classroom defines how we can teach and/or learn, and appropriate methods and the communication mode defines the potentialities of the communicative acts. Many examples of this tension are evident in discussions of learning, although there appears to be an unstated assumption about the effect of the scene. In other words, each of the elements, while allowing specific information about the environment, incorporates both stated and unstated assumptions about other elements.

The delineation of the terms of Burke's (1969) Pentad together with the understanding generated by Wertsch (1998), Bakhtin (1986), Nystrand (1997), Rogoff (1990) and others affirms that aspects of learning/communication are often in

tension, being both act and purpose. These are used here to investigate the tensions between the agent and the mediational means, as elaborated by Wertsch (1991, 1998), as well as tensions between other Pentadic elements, most notably the scene, because this is a defining aspect of the environment for the individual agent and varies between agents.

Wertsch, Tulviste, and Hagstrom (1993) elaborate this concern further by focusing on the 'irreducible aggregate of individual[s] ... *together with mediational means*' (p. 341, italics in original) rather than an isolated individual. A coherent and comprehensive consideration of learning mediated by electronic means needs to acknowledge this intertwined notion of the agents and mediational means within a specific scene, particularly in an online learning environment. This is because both the agent and the means with which they engage become almost a conjoined entity, for without the computer, the Internet and other paraphernalia of the environment, the agent cannot act. Such a consideration takes as its central concern the interaction between individuals, and extends to how the computer mediates between the individuals. Interactions are also socially mediated (Rogoff, 1990) and different understandings of interactions (both the technological and the social) lead to the implementation of different kinds of activities. The dialogic properties of the interactions, particularly the textual nature of mediated environments, is an important part of any analysis of a mediated environment, given that interaction occurs through computer-mediated text where the individuals may never meet.

Thus, an analysis of a learning environment requires analyses of 'scenic' and 'purposive' aspects, attention to the agent, the agency, and the act/s because each of these elements provides a differing lens through which to view the interactions. Interactions allow individuals to participate in activities that may be impossible for them to complete alone, 'using cultural tools that themselves must be adapted to the specific practical

activities at hand, and thus both passed on to and transformed by new members of the culture' (Rogoff, 1990 p. 16). Thus, the individual, their social partners and the sociocultural context become 'differing angles of analysis of an integrated process' rather than 'independent "influences" or factors of development' (Rogoff, 1990 p. 26). The integrated nature of these differing angles, similar to Burke's Pentadic elements, must ultimately be accounted for even when focus is placed on one or another process.

## IMPLICATIONS FOR TEACHING

Burke's Pentad (i.e., scene, agent, act, agency and purpose) may be deployed to analyze how online learning environments, with particular focus on asynchronous communication, work for the student and the instructor and assist in the identification and establishment of pre-conditions, which must be met for teaching online to result in learning online. This provides a different lens through which the pedagogic possibilities of engaging and interacting in an online environment may be viewed.

In terms of achieving appropriate pedagogical strategies, Burke's analysis brings to the forefront the interaction between learner and their world of learning, the agent and the scene. Yet, it also elaborates and brings into focus the mediational means (agent-agency interaction) through which learning arises, as highlighted by Wertsch (1998). Here, mediational means is taken as the agent-acting-with-cultural-tools, which merges agent and agency. Classroom learning tends to privilege the scene, the agents within the scene (i.e., students and teachers), and the interaction of their agencies. However, the agency of the student may be subordinate to or in contestation with the agency of the teacher, giving rise to a form of tension in the scene, between agents. Computer mediated environments, on the other hand, privilege the student and where they are, that is the agent and

the scene. For instance, the agent (i.e., student) acts with mediational means (i.e., the computer) at the computer (i.e., the scene or at least one aspect of it), with the degree of independence and interdependence that may be distinct from the differently constrained environment of the classroom.

Distance learning is inherently outside the physical educational institutional setting, that is, it is generally undertaken by an individual isolated from both the university and any community of practice; the learner is removed from peers and teachers and often from many of the contextualizing features of the environment. The nature of an online environment is to re-establish some of the contexts through which peers and teachers can interact, albeit in a somewhat de-contextualized setting, that is, the online learning environment. Burke's Pentad accommodates and privileges intentionalities and motives leading to individual activity. The Pentad elaborates to what degree an activity is contextualized and whether there exists a community of individuals operating within a specific environment. Through a Pentadic analysis, a more contextualized and embodied outcome is possible via electronic communication because attention is paid to where a student engages (that is, the scene) providing a physicality to the analysis that is all but ignored when focusing on text alone.

This provides instructors with additional insights into learning at a distance and allows specific attention to how engagement with learning materials is enacted. While instructors may provide online access to allow students to 'participate,' students often engage vicariously, that is, by being a background part of the scene. By being part of the scene, students are exposed to a more dynamic aspect of learning. However, without active interaction between learners, the scene may not facilitate learning. Thus a distinction between participating and interacting becomes clear. The scene must be constructed in a way which allows active interaction between learners,

and between learners and instructors, as well as the more vicarious participation.

## **FUTURE TRENDS**

While e-mail discussion lists have, to some extent, faded to the background as a principle method of conducting learning via mediated environments, its origins and historic use has established them and e-mail itself as a foundational method of computer mediated communication. As highlighted in this chapter, Burke's Pentad provides a solid foundation for analyzing online learning and computer mediated environments and provides the kind of comprehensive analysis necessary for the further development of pedagogically sustainable learning processes. The Pentad provides a simple heuristic for analyzing processes that are central to learning activities. The holistic nature of the Pentadic elements ensures comprehensive attention to components of the learning environment that may be neglected using other frameworks. Further research may include similar analyses of online forums and of electronic systems that are used to manage learning (i.e., Blackboard). These analyses may find similar patterns to those found here, although the implications for students and instructors may well be fundamentally different. These differences and similarities may provide bases for the effective implementation of a learning environment for specific disciplines and diverse student groups. Focuses for the future include conducting similarly framed research on learning environments that rely more heavily on proprietary software. These analyses may further extend understanding of online learning environments.

## **CONCLUSION**

This chapter has argued that Burke's Pentad is a valid framework within which to analyze mediated environments. It prescribes a specific focus

on the location in which an activity takes place, as well as the individuals, the means of mediation of the activities, the activities and interactions that occur, and the purpose for which the individuals are participating in the activities. In this way, Burke's conceptual framework goes beyond many current educational and communication theories that emphasize situational factors. The inclusion of the kinds of interactions which not only occur in the active constitution of a mediated environment, means that this framework represents a more encompassing explanation of these environments than those privileging the physicality or the activities of the particular setting (e.g., communities of practice and activity systems). This holistic approach provides insights that may not be available using other frameworks. The applicability of the Pentad for analyzing virtual environments is apt, particularly as the scenic element in almost ignored in other frameworks.

Comparisons between environments are facilitated by a Pentadic analysis, because each environment can be viewed using the same framework. The framework can be applied to different environments providing clearer evidence of what processes and configuration of the environment best supports learning and interaction for a particular cohort. Research into computer mediated communication using the Pentad may constitute a new framework for analyzing online learning environments, which all differ in their implementation. However, the speed with which technology evolves means an increasing need to establish those aspects that *do* facilitate student learning. This analysis of e-mail discussion lists—using Burke's (1969) elements—is arguably a solid foundation upon which to build a comparative analysis of learning environments for distinct groups of students in disparate disciplines. As one of the inferences of this study was that not all scenes provide equal opportunity for agents to act, further analyses are possible, which build upon the current knowledge of online and other learning environments. Thus, beyond its utility

in describing communication processes, Burke's Pentadic scheme provides a means of describing learning environments and illuminating their pedagogic possibilities and practices. While this has been positively appraised in its efficacy of illuminating online learning environments, it is postulated to have a wider application, such as in face-to-face teaching.

## ACKNOWLEDGMENTS

My thanks to the students who participated in the research study and to Professor Michelle Barker and Associate Professor Stephen Billet for their assistance in the development of the conceptual basis for my research. Thanks also to Dr. Sara Hammer for her comments on the draft of this chapter and the Tuesday Publication Syndicate of the GBS for further assistance in improving this chapter.

## REFERENCES

- Bakhtin, M. M. (1986). *Speech genres and other late essays*. Austin: University of Texas Press.
- Billett, S. (2002). *Co-participation at work: Understanding learning through work*. Symposium on International Perspective on Learning through Work: American Education Research Association's annual meeting, New Orleans.
- Billett, S. (2003). Sociogeneses, activity and ontogeny. *Culture and Psychology* 9(2): 133-169
- Boettcher, J. (2007). Ten Core Principles for Designing Effective Learning Environments: Insights from Brain Research and Pedagogical Theory. *Innovate* 3(3). Retrieved May 28, 2007 from <http://www.innovateonline.info/index.php?view=article&id=54>
- Burke, K. (1966). *Language as symbolic action : essays on life, literature, and method*. Berkeley,

CA: University of California Press.

Burke, K. (1969). *A grammar of motives*. Berkeley: University of California Press.

Fox, C. (2002). Beyond the "tyranny of the real:" revisiting Burke's pentad as research method for professional communication. *Technical Communication Quarterly*, 11(4), 365-388

Freeman, J. (1974). *A Burkean Analysis of the Classroom*. American Educational Research Association Annual Meeting, Chicago, Illinois.

Kaplan, N. (1995). Politexts, hypertexts, and other cultural formations in the late age of print. *Computer-Mediated Communication Magazine* 2 (3), Online <http://www.ibiblio.org/cmc/mag/1995/mar/kaplan.html>

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Nystrand, M. (1997). *Opening dialogue: understanding the dynamics of language and learning in the English classroom*. New York: Teachers College Press.

Radney, J. R. (1996). Some contributions of Kenneth Burke's A grammar of motives to the humanities. In *Other Words: A Lexicon of the Humanities (online site)*. J. R. Radney and L. Hung, SIL International. <http://www.sil.org/~radneyr/humanities/rhetoric/KBPapr.htm>

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press.

Ruth, A. (2004). *Learning at the screenface: A pentadic analysis of e-mail discussion lists*, unpublished doctoral thesis. Brisbane: Griffith University.

Ruth, A. (2005, November 23-25) The Screenface: Interfacial issues of mediating interaction, *QualIT 2005: Challenges for Qualitative Research*

conference, Brisbane.

Vygotsky, L. S. (1978). *Mind in society—the development of higher psychological processes*. Cambridge: Harvard University Press.

Wertsch, J. V. (1991). *Voices of the mind: a sociocultural approach to mediated action*. New York: Harvester Wheatsheaf.

Wertsch, J. V. (1998). *Mind as Action*. New York: Oxford University Press.

Wertsch, J. V., & Toma, C. (1995). Discourse and Learning in the Classroom: A Sociocultural Approach. In L. P. Steffe & J. Gale (Eds.), *Constructivism in education* (pp. 159-174). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Wertsch, J. V., Tulviste, P., & Hagstrom, F. (1993). A sociocultural approach to agency. In E. A. Forman, N. Minick & C. A. Stone (Eds.), *Contexts for learning: Sociocultural dynamics in children's development* (pp. 336-356). New York: Oxford University Press.

Yelland, N., & Masters, J. (2007) Rethinking scaffolding in the information age, *Computers & Education*, 48(3), 362-382.

## KEY TERMS

**Agency:** The means by which an individual undertakes an act, one of the Pentadic elements.

**Agent:** The individual undertaking an act in a scene, one of the Pentadic elements.

**Act:** That which is done with in a scene, one of the Pentadic elements.

**Pentad:** Five interlinking elements (described above) which, when combined, provide a cohesive framework for analyzing a situation.

**Purpose:** The reason an individual undertakes



an act in a scene, one of the Pentadic elements.

**Scene:** The location of an activity, where some-

thing occurs, one of the Pentadic elements.

**Screenface:** The learning relationship an individual develops through mastery and appropriation of the computer. Analogous to the 'chalkface' to describe the activity of teaching.