

ferent ways. They will have found key items in different orders. They will have made different choices of what strategies to use and what equipment to wear and use. This is to say that each player will have enacted a different *trajectory* through the game.

What allows us to feel and recognize a different trajectory in a game like *Castlevania* is the story-elements. We can recognize that one distinctive event (e.g., Alucard killed his first Sword Lord) happened before or after another distinctive event (Alucard found the gold ring). Story-elements give the player a way to mark time and against this marking each player comes to see that they have enacted a unique trajectory through the game space.

This trajectory has an important consequence. Your Alucard is different from mine. Yours had a different trajectory from mine. The hero is, thus, not Alucard from the designer's story, nor you the real-world player. It is "Alucard-you," a melding of the virtual character, Alucard, and you, the real-world player who has steered Alucard on a unique trajectory through the game.

This trajectory is the second story. Since it is a story produced jointly by the real-world player and the virtual-world character, I call it the real-virtual story (Gee 2005). This is the important story in *Castlevania*. It is to this story that players attach their fantasies and desires. This trajectory is personal and individual in a game like *Castlevania*; it is personal and social in a multiplayer game like *World of Warcraft*.

This proactive production by players of story elements, a visual-motoric-auditory-decision-making symphony, and a unique real-virtual story produces a new form of performance art co-produced by players and game-designers. We have as yet no useful tools for analyzing the elements that make up this art form. But it is a form that has the potential to integrate pleasure, learning, reflection, and expanded living in ways that we expect from art.

Affinity Spaces

From *Age of Mythology* to Today's Schools

Introduction: From groups to spaces

A wide body of research, applied to schools and workplaces, has used the notion of a "community of practice" (Lave 1996; Lave and Wenger 1991; Rogoff 1990; Wenger 1998). In this paper I consider an alternative notion. This alternative focuses on the idea of a space in which people interact, rather than on membership in a community. I want to consider this alternative because I believe that what I will call "affinity spaces" are particularly important contemporary social configurations with implications for the future of schools and schooling.

The notion of a "community of practice" has been a fruitful one and there are certainly many cases where the term is apt (see Wenger, McDermott, and Snyder 2002 for a clear demarcation of what is and what is not a community of practice). However, it has given rise to several problems, some of which are:

- a The idea of “community” can carry connotations of “belongingness” and close-knit personal ties among people which do not necessarily always fit classrooms, workplaces, or other sites where the notion of a community of practice has been used. As an anonymous reviewer of an earlier version of this chapter pointed out, the notion of “community” tends to project a warm sense of peaceful relations among members, which we know is often not the case in schools or workplaces, and “does not only miss the reality of schools and schooling but also misleads research and practices in that it may direct people to the wrong places looking for solutions and improvements.”
- b The idea of “community” seems to bring with it the notion of people being “members.” However, “membership” means such different things across different sorts of communities of practice and there are so many different ways and degrees of being a member in some communities of practice that it is not clear that membership is a truly helpful notion. Again, an anonymous reviewer of an earlier version of this work pointed out that while “community” assumes a sense of collective purpose or group goals, this is often not the case in school, where “individuals actually have different views of why they are in school or in a class and consequently their goals are different.”
- c While Wenger (see Wenger, McDermott, & Snyder 2002) has tried to be careful in delineating just what is and what is not a community of practice, distinguishing it from other sorts of affiliations, the notion has been used by others to cover such a wide array of social forms that we may be missing the forest for the trees.

In my view, the key problem with notions like “community of practice” is that that they make it look like we are attempting to label a group of people. Once this is done, we face vexing issues over which people are in and which are out of the group, how far they are in or out, and when they are in or out. The answers to these questions vary (even their very answerability varies) greatly across different social groupings. If we start with the notion of a “community” we can’t go any further until we have defined who is in and who is not, since otherwise we can’t identify the community. Yet it is often issues of participation, membership, and boundaries that are problematic in the first place.

Take a high-school science class. Johnny and Janie are both in the class. Janie is proactively attempting to engage with the science in the class, but Johnny is “playing the game” for a passing grade. Are they in the same community of practice or is Janie in a school-science community of practice and Johnny

in a “doing school” community of practice. What sense does it make to say all the students in this class are in some (one?) community of practice just because they are all contained by the same four walls? Or if we think beyond those four walls, if some parents are helping their children in science, are they in the community of practice too? What about the principal, the other science teachers, the reading specialist who comes into the class once a week, the author of the textbook, or for that matter the curriculum specialists and policy makers who help shape the classroom’s practices in regard to science and schooling more generally?

I suggest that the problem here is trying to start with a label (like community of practice) which looks like a label for a group of people, a group which must then be identified in terms of its “members.” What I want to suggest, instead, is that (at least, sometimes) we start with “spaces” and not groups.

Let me start with an analogy. It is hard to say who is and who is not an “American” (I mean by this not who is officially a “citizen” or not, but who is in “American culture,” whatever that may mean. There are people who are not citizens who impress me as very “American” and there are citizens who impress me as not very “American”). For some purposes, it may be easier to draw the boundaries of the United States as a geographical space on a map and then look at how different sorts of people use that space, i.e., what they do there and what they get from that space (e.g., import or export from it). In the case of Johnny and Janie in the science class, the two students are taking quite different things from the space.

If we start by talking about spaces, rather than “communities,” we can then go on and ask to what extent the people interacting within a space, or some sub-group of them, do or do not actually form a community. That is, rather than assume a community at the outset, we can ask of given spaces whether or not the people interacting within them are communities and in what sense. The answer will be different in different cases. Even if the people interacting within a space do not constitute a community in any real sense, they still may get a good deal from their interactions with others and share a good deal with them. Indeed, some people interacting within a space may see themselves as sharing a “community” with others in that space, while other people view their interactions in the space differently. In any case, creating spaces wherein diverse sorts of people can interact is a leitmotif of the modern world (Gee 2000–2001; Gee 2003; Rifkin 2000).

I don’t want to talk just about physical or geographical spaces. Just as people can enter a physical space like the United States, they can enter a virtual space like a web site or a chat room. People interacting with each other about a specific disease on a patient empowerment web site are in a virtual space together. There are spaces that are mixtures of the real and the virtual, such as a meeting in which some people are physically together in a room and others are interact-

ing with the group via the Internet or over a video conferencing system. People who play chess with each other by sending moves via email or letters are interacting, at a distance, in a space created by email or the postal service. Modern technologies allow the creation of more and more spaces where people can enter and interact with others (and with objects and tools) at a distance. So when I talk about “spaces” I don’t mean just physical spaces.

My goal, however, is not just or primarily to introduce this idea of spaces. Rather, it is to discuss a particular type of space that I will call an “affinity space.” I will first define what I mean by a space generally and then define what I mean by an affinity space in particular. When I get to affinity spaces, I will argue that they capture one characteristically modern and important form of social affiliation, one that can fruitfully be compared and contrasted with other forms (Gee 2000–2001). I will define what I mean by a space through one concrete example, an example that also happens to be an affinity space. This will allow me to characterize what makes this example a space and then turn to what makes it an affinity space.

Before we start in earnest, let me take up two methodological questions. First, is the “So What?” question: How does my analysis matter for people interested in schooling and learning? I want to offer a new analytic lens with which to look at classrooms and other learning sites. Affinity spaces are an important form of social affiliation today, places where effective learning occurs (Gee 2003). They are a form with which young people today are particularly familiar. These young people are in a position to compare and contrast how learning works in such spaces and how it works in schools, not always to the credit of schools. I believe that educators ought to do the same.

I also believe that each of the features that I offer as definitive of an affinity space can be present in a school curriculum or not. Thus, these features can be used as a sort of checklist of how much a given classroom verges on being an affinity space or not. While not every reader will accept my value system in terms of which affinity spaces are a good, effective, and modern way to organize learning, nonetheless, the features of affinity spaces are similar to the core features that some educational reformers, on wholly other grounds, have argued are crucial for deep learning (e.g., Brown 1994; Brown, Collins, and Duguid 1989; diSessa 2000).

Finally, I believe that the notion of affinity spaces can do lots of the sorts of work we have asked the notion of a “community of practice” to do, but without some of the baggage that “community” carries. The notion of affinity spaces can lead us to ask some new questions about classroom learning or ask some old ones in new ways.

The second question concerns the empirical status of my analysis. I am not offering an empirical study of today’s classrooms, many of which are returning to “skill-and-drill” and decontextualized content, as compared to affinity spaces. There are lots of empirical descriptions of different sorts of classrooms already available and readers can and should compare and contrast these to what I say about the particular affinity space I use as my key example below. My account offers a close analysis of the semiotic features of one particular affinity space so as to generate a general description of affinity spaces. In this sense, it is akin to a discourse analysis (see, e.g., Gee 1999, especially the material on validity in Chapter 5). Readers can check on the “trustworthiness” of my analysis by looking at and interacting with the materials I use as my data.

Of course, a next step from here would be to engage in research that compares affinity spaces and classrooms of different sorts at a micro-analytic level. But we cannot engage in such research until we have developed the analytical apparatus necessary for carrying out such research. This chapter is meant to contribute to that purpose.

Social spaces: AoM

To define what I mean by a space, I will use “real-time strategy” computer games as the basis for an illustrative example, using the game *Age of Mythology* (“AoM” for short) as a paradigmatic instance of such a game (see http://www.microsoft.com/games/ageofmythology/greek_home.asp). Computer and video games come in many different types (genres). They are usually long—they can take up to 50 or more hours in play in some cases—complex, and difficult. There are games where players roam around a virtual world solving problems and shooting or sneaking past enemies (e.g., *Return to Castle Wolfenstein*, *Metal Gear Solid*), games where they build simulated worlds or businesses and run them (e.g., *The Sims*, *RollerCoaster Tycoon*), games where they build, organize, and develop civilizations through historical time (e.g., *Civilization III*, *Rise of Nations*), games where they role-play a fantasy character making decisions that shape that character’s life, skills, and personality (e.g., *The Elder Scrolls III: Morrowind*, *Baldur’s Gate*), games that involve fast action, jumping, running, and shooting through a wealth of obstacles (e.g., *Mario Sunshine*, *Sonic Adventure*) and many more.

Players can play alone against the computer or with and against other human players. Whether they play alone or together, the enterprise is social since almost all players need to get and share information about the games in order to become

adept at playing them. Furthermore, since many games involve building, interacting with, and progressively shaping a simulated world, they are not unlike some forms of cutting-edge science where scientists build simulations of complex systems like cells, ecological systems, weather systems, or the universe so that they can test various hypotheses about relationships and emergent properties within the system.

In a real-time strategy game of the sort we will look at here (i.e., *Age of Mythology*), the player builds buildings, settlements, towns, and/or cities for a given “civilization,” using workers to collect gold, farm land, cut wood, and hunt animals to gain the necessary resources for building and sustaining his or her civilization. As the player builds various types of buildings, he or she can use the buildings to construct or train different types of warriors and military apparatus, as well as other types of actors such as priests or scientists (e.g., in *AoM* one can use a Temple to gain mythological figures, an Academy to train Hoplites, an Archery Range to train archers, a Stable to train cavalry, a Fortress to train heroes, a Dock to build various types of boats, a Town Center to get more villagers, etc., through many other choices).

Eventually, the player goes off with his or her “army” to fight one or more other players (real people or the computer) who have also been building up their civilizations during the same time. If the player waits too long, the opponent may be too strong, if the player does not take enough time to build up properly, he or she may be too weak to fight well. Timing is important and so are the decisions about what and where to build (and there are always a great many options).

In *AoM* the “civilizations” one can play are ancient Greeks, Romans, or Norse, building buildings from these ancient civilizations and eventually gaining, for example, various types of Greek soldiers, heroes, military apparatus, and mythological figures to fight other civilizations. On the other hand, in *Galactic Battlegrounds* (a *Star Wars* game), the “civilizations” one can play are the Trade Federation, Gungans, Royal Naboo, Rebel Alliance, Galactic Empire, or Wookies—all groups from the *Star Wars* universe. In *Galactic Battlegrounds*, the buildings, soldiers, heroes and apparatus are all specific to one of these groups. For each “civilization” in this game there are over 160 choices about what to build or train—each choice having consequences for the other choices one makes. This is typical of the level of complexity in real-time strategy games.

Now I will define a space step-by-step. To define any space, we need first to start with some **content**, something for the space to be “about.” Whatever gives the space some content, I will call a **generator**. In the case of real-time strategy games, one of the generators of the content is, of course, an actual game like *AoM*.

Such games offer up a characteristic set of multi-modal signs (words, images, graphs, etc.) to which people can give specific sorts of meanings and with which they can interact in various ways. We have seen some of these above: “civilizations,” warriors and heroes, buildings, and real-time competition. In a cooking club, the cookbooks and shared recipes are generators.

Once we have one or more generators, we have some content, something for the space to be “about.” Given this content, we can look at the space in two different ways. First, we can look at it directly in terms of *content*, i.e., what signs does it have and how are they organized. Second, we can look at it in terms of how people *interact* with that content or with each other over that content.

The same distinction can be made for a painting. We can view a painting as content, that is, as a work of art designed in a certain way. Notice that content always brings up the issue of design, since someone has to design the content. Or we can view the painting in terms of how people react to, use, or interact with the painting and with each other over the painting. To say of a Monet painting that “It is made up of a myriad of pastel dabs” or “It depicts a hayfield in the early morning light” is to comment on its content (and the design of that content). To say that the painting “Makes people feel they are present in the field” or that “Most people appreciate the painting best when they stand at a fair distance from it” or that “People strongly disagree in terms of how realistic they think the painting is” is to comment on how people interact with the painting or with each other over the painting.

We have already seen above some of the content in *AoM* and other real-time strategy games. If we point out that in such games there are trees, farms, and gold that can be collected and used as resources with which to build buildings, we are talking about the content of the space. Indeed, this is just part of the basic content of all real-time strategy games.

On the other hand, people actually play real-time strategy games in the world. Different players use different strategies. People sometimes play such games alone and sometimes with other people on the Internet. They may also talk to other players about such games and read magazines and Internet sites devoted to them. When we talk about how people play such games and how they organize their own behaviors and their interactions with other people in regard to real-time strategy games, we are talking about the space in interactional terms.

To take a content view of the space of real-time strategy games is to ask about the design of such games. To take an interactional view of the space of real-time strategy games is to ask about the ways in which people organize their thoughts, beliefs, values, actions, and social interactions in relation to the signs made available in such games.

What is wonderful about computer and video games is that people can interact so directly with the content of the game. In a real-time strategy game, a virtual "citizen" goes out and farms or collects wood. But the human player manipulates the virtual citizen—i.e., moves him or her to the farm or the forest. Here content and interaction come directly together, because the virtual character is part of the content of the game, but the manipulation of the character is an interaction made by the human player. Of course, interaction goes much further than this, however, since people can interact with the game and each other in regard to the game in a myriad of different ways.

Let us say, then, that every space has a "content organization" (that is, how its content is designed or organized) and an "interactional organization" (namely, how people organize their thoughts, beliefs, values, actions, and social interactions in regard to those signs and their relationships). The content organization of a game emerges from the work of designers. The interactional organization emerges from people's actions and interactions with and over the space (in this case, AoM) as these begin to take on some (however loose) regularity or patterning.

And, of course, the acts of people helping to form the interactional organization of the space as a set of social practices and typical identities can rebound on the acts of those helping to design the content of the space, since the designers must react to the pleasures and displeasures of the people interacting with the content they have designed. At the same time, the acts of those designing the content rebound on the acts of those helping to organize the interaction organization as a set of social practices and identities, since that content shapes and transforms (though by no means fully determines) those practices and identities.

But one more thing is needed to define a space, namely one or more *portals* that people can use to enter the space (remember, it's a type of space, not a group of people). A portal is anything that gives access to the content and to ways of interacting with that content, by oneself or with other people.

For AoM, there are a number of different portals. The disk on which the game comes, slipped into a computer so that one can play the game by oneself, is one such portal. An Internet site on which a player can play the game against other players is another portal. An Internet site in which players discuss the game or download content about the game is another portal. The strategy guide for AoM, which one can purchase (a book replete with information about the game, recommended strategies, and a complete walkthrough of the single-player campaign), is also a portal. Each of these portals gives one access to the signs (content) used in AoM. There are many others.

Portals are places where people get access to interact with the content generators generate. But portals can also be or become generators themselves (though this is not always the case), if they allow people to add to content or change the

content other generators have generated. So, for example, it is common on game sites on the Internet for fans to offer others new maps on which to play the game or to allow others to access recordings of games they have played to learn how to play better. In this case, the portal is also a generator, since people (who are not the game's designers) are making new content for others.

Likewise, a generator can also be a portal, though this need not always be the case (think of a teacher's manual that students never see; it is a generator, but not a portal, for the students, though it is a portal for the teacher). As we have said, the game disk is both a generator (it offers up the signs or content) and a portal, since one can use it to play the game and thereby interact with the signs.

Let us pause a moment to ask how these terms would apply to a science classroom and what sorts of questions they would lead us to ask. We first have to ask what is the generator that is the (or a) source of the sign system (content) that the classroom is interacting with. In the classroom, this might be the textbook, the teacher, lab materials, and/or other things. For analytical purposes, we could restrict ourselves to one generator or consider several at a time. We also might (or might not) find that the textbook functions as the core or original generator.

We can then ask questions about how the signs generated by the generator are designed to communicate a certain content. This is to ask about the content organization of the space. In turn, we can ask questions about what sorts of thoughts, values, deeds, interactions, and identities people take up in regard to these signs. This is to ask about the interactional organization of the space.

We can also ask questions about how the content and interactional organizations reflexively shape each other, if indeed they do, i.e., how does the content (and its design) shape thought, deed, and practice and how do thought, deed, and practice shape and re-shape (re-design) content (e.g., Does the teacher rethink the content based on student beliefs, actions, and interactions? Do new editions of the textbook change, based on changing beliefs, values, and practices? Do new generators or revisions of old ones change people's thoughts, deeds, and interactions?).

We can also ask about portals, that is, what gives students access to interactions with the signs, either by themselves or with others. The generator is often a portal (e.g., the textbook), but there are other portals, as well. For example, one portal may be small group discussions, another might be question and answer sessions between the teacher and the class, another might be lab work. Of course, we would want to know who uses each portal and how, as well as the ways in which the portal shapes thought and interaction.

Finally, we can ask whether a generator is also a portal. Of course, if the

students have a textbook and use it, this generator is also a portal. However, as mentioned earlier, if the teacher is following a teacher's manual that the students never see, this is a generator that is not, in fact, a portal for the students (though it is for the teacher). And, we can ask, as well, if portals ever become themselves also generators. For example, can students through, say, their group work on a project change the sign system (content) with which the class is interacting in any serious way? Can they add new signs, subtract signs, or change the relationship among the signs that the class is interacting with? If so, the portal of the group project is also a generator; otherwise it is not.

Let me hasten to add that it is degrees that are often of most importance here, not simply binary distinctions. We really want to know, for instance, how strong a generator a given portal is, not just whether it is one or not (perhaps, it is a very weak one). We want to know whether content organization and interactional organization reflexively shape each other in strong or weak ways, not just whether they do or not.

Affinity spaces

I want now to turn to a particular type of space that I will call an "affinity space." Affinity spaces are a particularly common and important form today in our high-tech new-capitalist world. It is instructive to compare affinity spaces to the sorts of spaces that are typical in schools, which usually do not have the features of affinity spaces. As previously noted, this comparison is particularly important because many young people today have lots of experience with affinity spaces and, thus, have the opportunity to compare and contrast their experiences with these to their experiences in classrooms.

Let's return to *Age of Mythology*. The core generator for AoM as a space (remember this is a sub-space of the larger real-time strategy game space) is, of course, the game itself. Its content organization is typical of real-time strategy games, a form that has been shaped quite strongly by the demands, pleasures, and displeasures of players. This is true not only over time, as real-time strategy games change in response to player reactions, but also in the present. Games like AoM offer players (sometimes repeated) "patches" over the Internet to correct problems of many sorts players have discovered. Thus, this core generator is continually updated; the content organization is continually transformed by the interactional organization of the space.

The portals to AoM as a space are, of course, the game (single-player and multi-player), but also strategy guides, official web sites and fan web sites. These por-

als, as we will see below, are also all fairly strong generators, too, adding to and changing the relationships among the signs generated by the AoM core generator (i.e., the game).

To define AoM as not just a space, but also an affinity space, I want to look at just one of its portals, namely the web site AoM Heaven (<http://AoM.heavenengames.com>), a fan produced web site. It would take several hundred pages to print this site out (not counting its many links to other sites) and it is updated every day. Some of the many things one can access from this site are:

- **The latest news** about AoM, the company that made the game, what players are doing, and when and where they can play games against each other;
- **Polls** that take votes on various questions and issues (e.g., "Have you played any custom scenarios for AoM?," "What do you think is the most useful classical age myth unit?," or "What aspect of the Norse culture impresses you most?");
- **Previews and reviews** of AoM and other real-time strategy games;
- **Interviews** with people about AoM and related matters;
- **Forums** (discussion groups) to which one can contribute, each devoted to a different topic germane to AoM, including general discussions, strategy, the new expansion pack, technical issues, scenario design, mythology, clan discussions (a clan is a group that plays together), and other topics;
- **Links** to other sites of interest to people interested in AoM or other real-time strategy games;
- **Ladder forums** that give the rankings and scores of players who play against others on the Internet;
- **FAQs** (frequently asked questions) that explain various aspects of the game and give players help with the game;
- **Strategy guides and walkthroughs** for "newbies" (new players);
- **General information about and pictures** of a new expansion of AoM that will appear soon (*Titans X-Pack*);
- **Game information** which gives technical details and statistics about all aspects of the game (e.g., how long it takes to build each type of building);
- **Images** from the game and artwork, including art by fans, inspired by the game;
- **Downloads** of many different sorts, including new maps and scenarios made by players, recorded instances of multi-player games, and even improvements players have made to different parts of the game's "AI" (artificial intelligence), for example, improvements to the "AI" used

on maps with a lot of water or even programs players can use to adjust the AI in different ways each time they play the game.

This portal to the AoM space has a set of features that are definitive of what I will call an “affinity space.” I describe each of these features below. Together they constitute a definition of an affinity space. Let me make it clear here, though, that what people have an affinity with (or for) in an affinity space is not first and foremost the other people using the space, but the endeavor or interest around which the space is organized, in this case the real-time strategy game AoM. This is why the sorts of romantic notions of people bonding to each other that are carried by the term “community” do not apply here. In affinity spaces people “bond” first and foremost to an endeavor or interest and secondarily, if at all, to each other. We do not have to see an affinity space as an all or nothing thing. Rather, we can say that any space that has more of these features than another is more of an affinity space than the other or is closer to being a paradigmatic affinity space. The features defining an affinity space (eleven in all)—as these are exemplified by AoM—are as follows:

- 1 **Common endeavor, not race, class, gender, or disability, is primary.** In an affinity space, people relate to each other primarily in terms of common interests, endeavors, goals, or practices, not primarily in terms of race, gender, age, disability, or social class. These latter variables are backgrounded, though they can be used (or not) strategically by people if and when they choose to use them for their own purposes. This feature is particularly enabled and enhanced in AoM Heaven because people enter this and other AoM portals with an identity (and name) of their own choosing. They can make up any name they like and give any information (fictional or not) about themselves they wish to. This identity need not—and usually does not—foreground the person’s race, gender, age, disability, or social class.
- 2 **Newbies and masters and everyone else share common space.** This portal does not segregate newcomers (“newbies”) from masters. The whole continua of people from new to experienced, from unskilled to highly skilled, from minorly interested to addicted, and everything in-between, is accommodated in the same space. They each can get different things out of the space—based on their own choices, purposes, and identities—and still mingle with others as they wish, learning from them when and where they choose (even “lurking” on advanced forums where they may be too unskilled to do anything but listen in on the experts). Affinity

spaces may have portals where people with more expertise are segregated from people with less (e.g., players usually choose who they will play against on multi-player game sites in terms of their level of expertise), but they also have ones where such segregation does not occur.

- 3 **Some portals are strong generators.** The portal allows people to generate new signs and relationships among signs for the AoM space. That is, the portal is also a major generator. Fans create new maps, new scenarios for the single-player and multi-player games, adjust or redesign the technical aspects of the game, create new artwork, and even give tutorials on mythology as it exists in the game or outside the game world.
- 4 **Content organization is transformed by interactional organization.** Based on what the players do and say on sites like AoM Heaven, the core original generator (the game) is changed via patches, new content, and new expansions offered by the company that makes the game. That is, the content of AoM as a space is transformed by the actions and interactions of players acting and interacting on sites like AoM Heaven.
- 5 **Encourages intensive and extensive knowledge.** The portal encourages and enables people who use it to gain and spread both intensive knowledge and extensive knowledge. They can readily develop and display specialized knowledge (intensive knowledge), in one or more areas, for example, learning how to tweak the game’s AI and advising others in this area. At the same time, the portal encourages and enables people to gain a good deal of broader, less specialized, knowledge about many aspects of the space (extensive knowledge), which they share with a great many others who use the portal or otherwise use the AoM space. Intensive knowledge is specialized, extensive knowledge is less specialized, broader, and more widely shared. This creates people who share lots of knowledge, but each has something special to offer.
- 6 **Encourages individual and distributed knowledge.** The portal also encourages and enables people to gain both individual knowledge (stored in their heads) and to learn to use and contribute to distributed knowledge. Distributed knowledge is knowledge that exists in other people, material on the site (or links to other sites), or in mediating devices (various tools, artifacts, and technologies) and to which people can connect or “network” their own individual knowledge. Such knowledge allows people to know and do more than they could on their own. People are encouraged and enabled to act with others and with various mediating devices (e.g., level editors, routines for tweaking the AI of the

- game, strategy guides, etc.) in such a way that their partial knowledge and skills become part of a bigger and smarter network of people, information, and mediating devices.
- 7 **Encourages dispersed knowledge.** The portal also encourages and enables people to use dispersed knowledge, that is knowledge that is not actually at the site itself, but at other sites or in other spaces. For example, the portal enables and encourages people to learn about mythology in general, including mythological facts and systems that go well beyond AoM as a game. Much of this information is not directly in the AoM Heaven site, but on other sites it links to or in books or movies the site will mention or review. When a space utilizes dispersed knowledge it means that its distributed knowledge exists in a quite wide and extensive network. When knowledge is dispersed in a space, the space does not set strict boundaries around the areas from which people will draw knowledge and skills.
 - 8 **Uses and honors tacit knowledge.** The portal encourages, enables, and honors tacit knowledge—that is, knowledge players have built up in practice, but may not be able to explicate fully in words. This knowledge may be about how to play the game, how to design new maps and scenarios for the game, how to form a forum party, or a great many other things. Players pass on this tacit knowledge via joint action when they interact with others via playing the game with them or interacting with them in other spaces. At the same time, the portal offers ample opportunities for people, if they wish, to try to (learn to) articulate their tacit knowledge in words, for example, when they contribute to a forum on technical matters like how to design good maps.
 - 9 **Many different forms and routes to participation.** People can participate in AoM Heaven or other portals to the AoM space in many different ways and at many different levels. People can participate peripherally in some respects, centrally in others; patterns can change from day to day or across larger stretches of time.
 - 10 **Lots of different routes to status.** A portal like AoM Heaven, and the AoM space as a whole, allows people to achieve status, if they want it (and they may not), in many different ways. Different people can be good at different things or gain repute in a number of different ways. Of course, playing the game well can gain one status, but so can organizing forum parties, putting out guides, working to stop hackers from cheating in the multi-player game, posting to any of a number of differ-

ent forums, or a great many other things.

- 11 **Leadership is porous and leaders are resources.** A space like AoM and a portal to it like AoM Heaven do not have “bosses.” They do have various sorts of leaders—people who design the game or the website—though we have seen that the boundary between leader and follower is vague and porous, since players can generate content for the game or site. Leadership in an affinity space like AoM comprises designers, resourcers (i.e., they resource other people), and enablers (teachers). They don’t and can’t order people around or create rigid, unchanging, and impregnable hierarchies.

Affinity spaces are common today in our global high-tech new capitalist world (Gee 2000–2001; Rifkin 2000). Many businesses organize such spaces for their customers. For example, the company that makes the Saturn car creates web sites and activities (e.g., social gatherings, newsletters, Internet chat rooms) around which its customers can identify as Saturn owners. Businesses in the new capitalist era (Gee, Hull, & Lankshear 1996) of cross-functional, dispersed, networked teams and project-based work often seek to create affinity spaces to motivate, organize, and resource their “partners” (they seek to avoid the term “worker” which implies a traditional boss-worker relationship in which one party “bosses” the other).

Social activists, whether their cause be ecology, anti-globalization, or school vouchers, also often organize themselves and others in terms of affinity spaces (Beck 1999). In such spaces, people who may share little else, and even differ dramatically on other issues, affiliate around their common cause and the practices associated with espousing it via affinity spaces that have most or all of the above eleven features. Fans of everything (e.g., movies, comic books, television shows, video games, various life-style choices, etc) create and sustain affinity spaces of which AoM is, of course, just one of a great many. Scientists in many different disciplines network with colleagues, funders, policy makers, and the public across the globe via networks of activities, newsletters and other sorts of texts, web sites, computer bulletin boards, e-mail chains, and conferences in ways that have progressively taken on more and more of the features of an affinity space.

There have, of course, been educators who have sought to create in classrooms something akin to an affinity space. The best known efforts here, perhaps, are Ann Brown and Joseph Campione’s classroom “learning communities” (see Brown 1994 for an overview). In my view, these “communities”—at least as they were described in idealized ways—could better be viewed as affinity spaces than as communities in any traditional sense. They involved the use of multiple sorts of mediating devices (computers and email to outside experts), distrib-

uted knowledge as students worked in teams with those mediating devices, dispersed knowledge as students drew on expertise outside the classroom, and intensive knowledge as individual students chose to “major” in some aspect of the curriculum and help other students in that respect, and extensive shared knowledge as the students taught each other different parts of a common curriculum (via the jigsaw method, Aronson 1978).

Since at times the students taught each other, they took over some of the teacher’s traditional leadership role. These classrooms incorporated a number of the remaining eleven features above, as well, and one could imagine this process (largely stopped today by our return to “the basics” and skill-and-drill under the new accountability and testing agenda) going much further (to the point where not all students would actually be in the classroom together face-to-face each day).

However, if we compare the eleven features of an affinity group to most classrooms today, we usually find that the classroom either does not have a given feature or has it much more weakly than a prototypical affinity space. In classrooms, the common endeavor (that which they are supposed to have affinity with) is often unclear (e.g., “science,” “doing school,” “school-science,” etc.) to the students, and race, class, gender, and disability are often much more foregrounded than they are in an affinity space. Furthermore, race, class, gender, and disability are often much less flexible in classrooms and serve much less as resources students can use strategically for their own purposes.

In classrooms, students are segregated by things like grade level, ability, and skills more often than they are mixed together across the whole continuum of these. Even in heterogeneous grouping the differences are small compared to the differences one can find and access in an affinity space. For example, I myself am light years away from being able to understand how to program anything that would modify the AI of a computer game, yet I can access such information and the people connected to it at AoM Heaven (and did so and actually learned a lot).

In classrooms, portals are rarely strong generators where students both interact with the signs that constitute the content of the classroom instruction and are able to modify, transform, and add to them, as well. Furthermore, rarely is the core generator (e.g., the text book or the curriculum guide) modified (“patched”) in an ongoing way based on student desires, pleasures, displeasures, actions, and interactions.

In classrooms, students are encouraged to gain pretty much the same knowledge across the board, knowledge which is often extensive and not intensive, or some students are encouraged and enabled to gain intensive knowledge, but others are not. Furthermore, when some students do gain intensive knowledge, they are rarely allowed to teach the teacher and the other students. In an affinity space, no one is stopped from gaining intensive knowledge because someone

else thinks they are “my low students” or “struggling.” Classrooms are rarely spaces where everyone shares lots of interests and knowledge (extensive knowledge), while each person has his or her own intensive knowledge to add as a potential resource for others.

Classrooms tend to encourage and reward individual knowledge stored in the head, not distributed knowledge. They don’t often allow students to network with each other and with various tools and technologies and be rewarded for doing so, rather than to be rewarded for individual achievement. Further, classrooms tend to narrowly constrain where students can gain knowledge, rather than utilize widely dispersed knowledge. Furthermore, they rarely honor, or even acknowledge, for that matter, tacit knowledge that cannot (at least for now) be verbally articulated. In turn, they usually do a poor job in giving students help and practice with learning how to articulate such tacit knowledge, when and where it can be articulated (and it cannot always be articulated).

Classrooms usually do not have multiple routes to participation, engaging their students in different ways, to different levels, in different contexts. They usually do not have multiple routes to status, rather, students get A grades for narrow reasons, the same for all. Finally, in classrooms, leadership is not usually porous where it is, at times, hard to tell who is leading and who is following, where students sometimes lead and teachers follow, and where leadership is constituted by resourcing others and designing environments where they can learn on their own terms, rather than dictating what people “need” to do, believe, say, and write.

But, one may ask: “So what? What does it matter that schools don’t use affinity spaces? Why should they?” At this point I can only state a hypothesis in answer to these questions. Young people today are confronted with and enter more and more affinity spaces. They see a different and arguably more powerful vision of learning, affiliation, and identity when they do so. Learning becomes both a personal and unique trajectory through a complex space of opportunities (i.e., a person’s own unique movement through various affinity spaces over time) and a social journey as one shares aspects of that trajectory with others (who may be very different from oneself and inhabit otherwise quite different spaces) for a shorter or longer time before moving on. What these young people see in school may pale by comparison. It may seem to lack the imagination that infuses the non-school aspects of their lives (Gee 2003). At the very least, they may demand an argument for “Why school?”

