

Beyond Communities of Practice

Language, Power and Social Context

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Semiotic Social Spaces and Affinity Spaces

From The Age of Mythology to Today's Schools

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INTRODUCTION: FROM GROUPS TO SPACES

In this paper, I consider an alternative to the notion of a "community of practice" (Lave and Wenger 1991; Wenger 1998). 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 the notion of what I will later call an "affinity space" is a particularly important contemporary social configuration with implications for the future of schools and schooling.

The notion of a "community of practice" has been a fruitful one. However, it has given rise to several problems, some of which are:

- 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.
- 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.
- While Wenger (see Wenger, McDermott and 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 trees for the forest.

In my view, the key problem with notions like "community of practice", and related ones like "communities of learners", is that they make it look like we are attempting to label a group of people. Once this is done, we face vexatious 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 cannot go any further until we have defined who is in and who is not, since otherwise we cannot identify the community. Yet it is often issues of participation, membership and boundaries that are problematic in the first place.

Take for example my own discipline of linguistics and try to construe it as a community of practice. Should we separate out applied linguistics, sociolinguistics, historical linguistics, theoretical linguistics and so forth as separate communities of practice? How long is the list? Or can we just treat linguistics as one big category? Is a person with a degree outside linguistics working on linguistic problems a linguist or not? Is a person with a Ph.D. in linguistics working on issues tangential to linguistics a linguist? Which of the many practices which linguists engage should we select to begin answering such questions? Is the matter of who is a linguist settled by negotiations within moment-to-moment social interactions, by larger institutional realities or by the opinions of certain "insiders"?

Or 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. The spaces I want to start with are what I will call "semiotic social spaces" (I will use "SSS" singular, "SSSs" plural for short) because what I am concerned with about these spaces is the way in which people get and give meanings to signs within them.

Before I say what a SSS is, 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).

Of course, I do not 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 website or a chat room. People interacting with each other about a specific disease on a patient empowerment website 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 interacting 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 the idea of SSSs. Rather, it is to discuss a particular type of SSS that I will call an "affinity space". I will first define what I mean by SSSs 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 SSS through one concrete example, an example that also happens to be an affinity space. This will allow me to characterise what makes this example a SSS and then turn to what makes it an affinity space.

SEMIOTIC SOCIAL SPACES: AoM

To define what I mean by a SSS, I will use as my illustrative example the SSS of "real-time strategy" computer games, 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). In a real-time strategy game, the player builds buildings, settlements, towns and/or cities for a given "civilisation", using workers to collect gold, farm land, cut wood and hunt animals to gain the necessary resources for building and sustaining his or her civilisation. 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 (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 civilisations 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 "civilisations" one can play are ancient Greeks, Romans or Norse, building buildings from these ancient civilisations and eventually gaining, for example, various types of Greek soldiers, heroes, military apparatus and mythological figures to fight other civilisations. On the other hand, in *Galactic Battlegrounds* (a *Star*

Wars game), the "civilisations" 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 "civilisation" 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 SSS step by step. To define any SSS, we need first to start with some *content*, something for the space to be "about" (remember, it's a *semiotic* social space). I will call this a *generator* for the SSS. In the case of real-time strategy games, one of the generators of the signs that make up the content of the space are actual games like AoM. Such games offer up a characteristic set of multimodal signs 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: "civilisations", warriors and heroes, buildings and real-time competition.

Once we have one or more generators, we have a set of signs. Now, we can look at these signs in two different ways, internally and externally (Gee 2003). Another way to put this is to say that the SSS has two aspects, an internal aspect and an external aspect. Any SSS can be viewed internally as a set of signs (a type of content) or externally in terms of the individual and social practices in which people engage in respect to the set of signs.

We have already seen above some of the signs or content made available for meaning making in AoM and other real-time strategy games. If we point out that, in such games the player must in a real-time competition collect resources to build buildings from which the player can generate various types of virtual actors (e.g., warriors and heroes), we are talking about the internal aspect of the SSS.

On the other hand, people actually play real-time strategy games in the world, sometimes 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. They are aware that certain people are more adept at playing such games than are others. They are also aware that people who are "into" such games may take on a certain identity, at least when they are involved with

those games. For example, it is unlikely that people "into" such games are going to object to warfare in games, though, of course, they may object to war in the real world. When we talk about how people organise their own behaviours and their interactions with other people in regard to real-time strategy games (actually the signs these games make available for meaning making), we are viewing the SSS externally.

To take an internal view of the SSS of real-time strategy games is to ask about the design of such games. To take an external view of the SSS of real-time strategy games is to ask about the ways in which people organise their thoughts, beliefs, values, actions and social interactions in relation to the signs made available in such games.

Let us say, then, that every SSS has an "internal grammar" (namely, the design of its sign and their relationships) and an "external grammar" (namely, the organisation of people's thoughts, beliefs, values, actions and social interactions in regard to the signs and their relationships). I use "grammar" here for phenomena that are emergent (actually real grammars for languages are emergent too). The internal design of a game emerges from the work of designers as this work interacts with players' desires, skills, actions and interactions. The external organisation of people's thoughts, deeds and interactions with the signs that compose a game type (e.g., real-time strategy games) or a specific game (e.g., AoM) emerges from people's actions and interactions as these begin to take on some (however loose) regularity or patterning.

Thus, game designers and producers determine what counts as recognisable content (the internal grammar) for real-time strategy games by actually making such games. Over time, as they apply certain principles, patterns and procedures to the construction of such games, and pay attention to what players think about such games and do with them, the content of real-time strategy games comes to have a recognisable shape such that people not only say things like "Oh, yeah, that's a real-time strategy game" or "No, that's not one", but also "Oh, yeah, that's a typical real-time strategy game" or "Oh, no, that's a groundbreaking real-time strategy game."

On the other hand, people who play, review and discuss such games, as well as those who design and produce them, shape the external grammar of the SSS of real-time strategy games through

their ongoing social interactions. It is their ongoing social interactions that determine the (changing) universe of possible (and emergently routine) ways in which people can think about, value, act and interact around real-time strategy games in general and AoM in particular.

And, of course, the acts of people helping to form the external grammar of the SSS as a set of social practices and typical identities can rebound on the acts of those helping to design the internal grammar of the SSS as content, since the internal designers must react to the pleasures and displeasures of the people interacting with the semiotic domain. At the same time, the acts of those designing the internal grammar of the SSS in terms of content rebound on the acts of those helping to organise the external grammar as a set of social practices and identities, since that content shapes and transforms (though by no means fully determines) those practices and identities.

So an SSS is composed of one or more generators (of signs and their possible relationships), an emergent internal grammar and an emergent external grammar. But one more thing is needed to define a SSS, namely one or more *portals* with which to enter the SSS (remember, it's a type of space, not a group of people). A portal is anything that gives access to the signs of the SSS and to ways of interacting with those signs, 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 in 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. There are many others. Of course, the space one enters when entering an AoM portal is a subspace of the larger space of real-time strategy games (this is apparent on some Internet sites devoted to the game, which list links to the sites for other real-time strategy games).

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

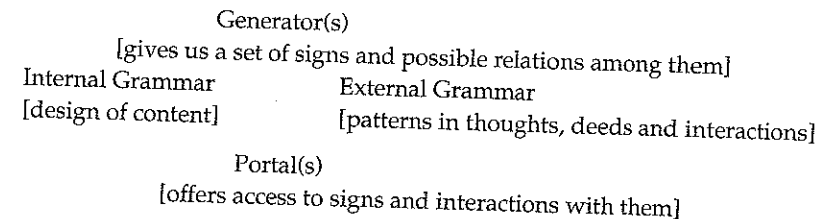
other generators have generated. So, for example, it is common on game sites on the Internet for fans to use software that comes with AoM, or other sorts of software, to build new maps (new environments within which to play the game) or to make up whole new episodes for the game. In this case, the portal is also a generator.

Likewise, a generator can also be a portal, though this need not always be the case. 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.

Given that we can always ask whether a given generator is also a portal or a given portal is also a generator (and for whom), it is sometimes helpful to talk about a core or original generator for a SSS. In the case of AoM, the game is both a core and original generator. Some portals generate additions and supplements to the signs generated by this core and original generator. Furthermore, as the company patches or expands the game, the core generator is changed in response to feedback of many different types from the users of various portals.

Below I summarise in a diagram the definition of a SSS:

SEMIOTIC SOCIAL SPACE



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, in terms of both their internal relationships and who designed them. This is to ask about the internal grammar of the signs. 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 external grammar of the signs.

We can also ask questions about how the internal and external grammars reflexively shape each other, if indeed they do – i.e., how does internal design shape thought, deed and practice and how do thought, deed and practice shape and reshape internal design (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 access to interactions with the signs, either by oneself 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 typical 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, 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 also ask 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 internal (design) and external (behavior) grammars reflexively shape each other in strong or weak ways, not just whether they do or not.

My remarks have been, so far, pretty much just methodological. Instead of starting with, for example, the students as a "community", I am suggesting starting with, not the classroom as a physical space, but the classroom as a SSS defined by generators, an internal grammar, an external grammar and portals. This allows us to ask about what thoughts, values, actions and interactions go on in this space, by whom and with whom, without assuming any one group membership or, for that matter any membership at all. It also allows us to see whether the SSS extends beyond the four walls of the classroom. For example, email to scientists or field trips to science sites might be portals (and/or generators) in a given classroom that extends the SSS beyond those walls. A parent who is a scientist might be a portal for some students and not others.

AFFINITY SPACES

These methodological points are only a prelude to the main point I want to discuss in this paper. I want now to turn to a particular type of SSS 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 SSSs that are typical in schools, which usually do not have the features of affinity spaces. 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 *AoM*. The core generator for *AoM* as an SSS (remember this is a subspace of the larger real-time strategy game SSS) is, of course, the game itself. Its internal grammar 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 internal grammar is continually transformed by the external grammar of the SSS.

The portals to AoM as a SSS are, of course, the game (single-player and multiplayer), but also strategy guides, official websites and fan websites. These portals, as we will see, 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 SSS, but also an affinity space, I want to look at just one of its portals, namely the website AoM Heaven (<http://aom.heavengames.com>), a fan produced website. 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 SSS 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. We do not have to see an affinity space as an all-or-nothing thing. Rather, we can say that any SSS 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 endeavour, not race, class, gender or disability, is primary**
In an affinity space, people relate to each other primarily in terms of common interests, endeavours, 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 can each 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 multiplayer 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 SSS. That is, the portal is also a major generator. Fans create new maps, new scenarios for the single-player and multiplayer 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. **Internal grammar is transformed by external grammar**

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 internal grammar of AoM as a SSS is transformed by the actions and interactions (the external grammar) 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 specialised knowledge in one or more areas (intensive knowledge), 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 specialised, knowledge about many aspects of the SSS (extensive knowledge), which they share with a great many others who use the portal or otherwise use the AoM SSS. Intensive knowledge is specialised; extensive knowledge is less specialised, 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, which is knowledge that is not actually at the site itself but at other sites or in other SSSs. 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 an SSS utilises dispersed knowledge it means that its distributed knowledge exists in a quite wide and extensive network. When knowledge is dispersed in a SSS, the SSS 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 (often tacitly, without verbal explanations) pass on this tacit knowledge 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 to try to articulate their tacit knowledge in words (e.g., 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 SSS 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 SSS as a whole, allows people to achieve status, if they want it (and they may not), in many different ways. They can be good at a number of different things or gain repute in a number of different ways. Of course, playing the game well can gain one status, but so can organising forum parties, putting out guides, working to stop hackers from cheating in the multiplayer game, posting to any of a number of different forums or a great many other things.

11. **Leadership is porous and leaders are resources**

An SSS 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. Leaders in an affinity space like AoM are designers, resourcers (i.e., they resource other people) and enablers (teachers). They do not and cannot 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 organise such spaces for their customers. For example, the company that makes the Saturn car creates websites 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 and Lankshear 1996) of cross-functional, dispersed, networked teams and project-based work often seek to create affinity spaces to motivate, organise 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-globalisation or school vouchers,

also often organise themselves and others in terms of affinity spaces (Beck 1999). In such spaces, people who may share little, 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 previously described eleven features. Fans of everything (e.g., movies, comic books, television shows, video games, various lifestyle 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, websites, computer bulletin boards, email 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 idealised 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), distributed 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. At times, students taught each other, thereby taking over some of the teacher's traditional leadership role. These classrooms incorporated a number of the remaining eleven features, 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 endeavour 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 much less 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 with 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 programme 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 textbook 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 do not 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 utilise 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's 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 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?".

CONCLUSION

I have attempted here 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 organise 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, Collins and Duguid 1989, Brown 1994, 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.

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